

*art of motion*



contemporary movement education

Contemporary Pilates

---

# Pilates Essentials

## Principles & Repertoire



Congratulations, you have decided to give your own training and the training of your participants a new dimension!

The Contemporary Pilates Method is a holistic, modern movement system that considers the body and the mind as a union. Specific exercises and sequencing enhance physical, mental and energetic balance, optimize posture and allow for new, more beneficial movement patterns. An aligned body has much more natural grace and ease, greatly promoting and increasing general wellbeing. There is an inner strength that is felt, but it is also noticeable to those around you.

The beautiful thing with Contemporary Pilates is that the training is suitable for people of all ages and skill levels; it benefits a dancer or an athlete as much as a complete beginner.

Joseph Hubertus Pilates, the founder of the Method, believed strongly that fitness is much more than developing and maintaining a perfect muscular physique and improving ones endurance and performance ability. He knew that a strong, healthy body is unison of body, mind and spirit. It has been known for a long time that our thoughts and feelings greatly influence our physical wellbeing and vice versa, our physical wellbeing affects our emotional balance and the way we think. Have you noticed that you feel more attractive and fitter when you are in good spirits? I am sure you did and so have we!

The Contemporary Pilates Method is more than healthy body conditioning, it is a training that energises the body, vitalizes the mind, creates space and freedom of movement, and last but not least stretches boundaries and enlivens slumbering potential.



**art of motion training in movement® wishes you an inspiring time!**

## THANK YOU!

A very big thank you to all art of motion lecturers, back office people, editors, designers and contributors for your valuable input, loyalty and on-going support!

## PICTURE REFERENCES

Human Anatomy & Physiology, by Elaine N. Marieb – ISBN: 0-8053-9591-1  
Anatomischer Atlas des Menschen, Johannes Petrus Schadé - ISBN-13: 978-3437461408  
Manual of Structural Kinesiology, Clem W. Thompson und R.T. Floyd – ISBN-13: 978-0195052060  
Anatomy of Bewegung, Blandine Calais-Germain – ISBN-13: 978-0939616572  
Das Muskelbuch, K.-P. Valerius, A. Frank, Bernard C. Kolster - ISBN-13: 978-3830452546  
Woman's Strength Training Anatomy, Frédéric Delavier  
Gesunder Rücken, Dr. John Tanner - ISBN-13: 978-3831005406  
Entspannungstraining, Douglas A. Bernstein und Thomas D. Borkovec - ISBN-13: 978-3608890563  
Maintaining Body Balance, Flexibility and Stability, Leon Chaitrow - ISBN-13: 978-0443073519  
Diverse Literatur von Eric Franklin  
Prometheus - Allgemeine Anatomie und Bewegungssystem, Michael Schünke, Erik Schulte, Udo Schumacher - ISBN-13: 978-3131395214  
Muscles, Testing and Function with Posture and Pain, Florence Peterson Kendall – ISBN-13: 978-0-7817-4780-6  
Topographie und Function des Bewegungssystems, Michael Schünke, Thieme-Verlag, 2000  
Superbody mit Pilates, Christin Kuhnert, GU-Verlag, 2000  
Ultimate Pilates, Achieve the perfect body shape, Dreas Reyneke – ISBN 1-56170-986-7

## INTELLECTUAL PROPERTY art of motion®

1. Edition 2005-03

19. Edition 2013-03

Author: Karin Gurtner

Text Editing: Toni-Louise Gianatti

Photography: Felix Peter, Fotogigant - [www.fotogigant.ch](http://www.fotogigant.ch)

Design Cover Page & Photo Editing: Babuche Gruber, TanzArt – [www.tanzart-bern.ch](http://www.tanzart-bern.ch)

The course manual is protected by copyright.

The use of all materials, extracts included, are subject to art of motion training in movement.

Thank you for your respect!



---

 TABLE OF CONTENTS
 

---

<b>EDUCATIONAL CONTENT .....</b>	<b>6</b>
<b>APPLIED TERMINOLOGY.....</b>	<b>8</b>
CUEING TERMINOLOGY .....	8
IMAGINARY INSTRUCTIONS.....	9
TERMINOLOGY RELATING TO EXERCISE VARIATIONS .....	9
EXTEROCEPTION & PROPRIOCEPTION.....	10
LOCATION DESCRIPTIONS.....	11
CLOSED, SUDO-CLOSED & OPEN CHAIN .....	12
<b>THE PILATES METHOD .....</b>	<b>13</b>
<b>YESTERDAY &amp; TODAY .....</b>	<b>15</b>
<b>art of motion CONTEMPORARY PILATES .....</b>	<b>16</b>
<b>FUNCTIONAL ANATOMY &amp; TERMINOLOGY .....</b>	<b>18</b>
JOINT MOVEMENT .....	19
LOCATIONS & DIRECTIONS .....	20
PLANES OF MOVEMENT & AXES OF ROTATION.....	21
THE SKELETAL SYSTEM .....	23
THE MAJOR FUNCTIONS OF THE SKELETON.....	23
BONE CLASSIFICATION .....	23
THE SPINE.....	25
MOVEMENT OF THE SPINE.....	27
AXIAL ELONGATION .....	28
THE MUSCLES.....	29
<b>THE 9 KEY ELEMENTS.....</b>	<b>30</b>
CONCENTRATION & AWARENESS.....	31
BREATHING .....	32
CENTRING.....	35
CLEAR INTENTION .....	38
CONTROL & PRECISION.....	38
FLOW.....	39
DIFFERENTIATION .....	39
CONTINUITY.....	40
INTEGRATION.....	40
<b>THE MECHANICAL PILATES PRINCIPLES .....</b>	<b>41</b>
<b>PILATES ESSENTIALS RELEVANT MUSCULATURE .....</b>	<b>44</b>
ABDOMINALS.....	44
<b>PELVIC &amp; SPINE POSITIONS .....</b>	<b>49</b>
NEUTRAL LUMBAR-PELVIC POSITION .....	49
LUMBAR-PEVIC POSITIONS IN SUPINE .....	50
NEUTRAL & ELONGATED LUMBAR POSITION.....	51
NEUTRAL POSITION • ELONGATED LUMBAR POSITION • SEGMENTAL MOVEMENT .....	51



<b>PRINCIPLES OF CORE STABILIZATION TRAINING .....</b>	<b>54</b>
<b>OPTIMAL BODY POSITION DURING TRAINING .....</b>	<b>55</b>
OPTIMAL STANDING BODY POSITION & INSTRUCTIONS.....	55
OPTIMAL BODY POSITIONS & INSTRUCTIONS.....	57
<b>THE PELVIS &amp; PELVIC FLOOR.....</b>	<b>59</b>
THE PELVIS.....	59
PELVIC POSITIONS.....	60
THE PELVIC FLOOR.....	61
<b>THE SHOULDERS.....</b>	<b>63</b>
THE SHOULDER GIRLDE.....	63
SHOULDER JOINT / GLENOHUMERAL JOINT .....	64
<b>FLEXIBILITY .....</b>	<b>67</b>
<b>DISCOMFORT &amp; PAIN .....</b>	<b>69</b>
<b>IMBALANCES &amp; TRAINING .....</b>	<b>70</b>
<b>TEACHING METHODOLOGY &amp; DIDACTICS .....</b>	<b>71</b>
TEACHING PILATES .....	71
WARM UP .....	72
BREATHING INTEGRATION.....	73
FLOOR EXERCISES.....	73
LESSON PLANNING .....	74
COMMUNICATION & TEACHING.....	75
SCOPE OF PRACTICE & YOUR OWN WELLBEING .....	78
MY PILATES ESSENTIALS BODY MAINTENANCE PROGRAM .....	78
<b>THE PILATES ESSENTIALS REPERTOIRE .....</b>	<b>82</b>
<b>STANDING .....</b>	<b>83</b>
ROLL DOWN.....	83
ARM SERIES: BALLERINA ARMS & ARM CIRCLE.....	87
TIC TOC.....	91
BOW & ARROW .....	95
FOOTWORK .....	99
KNEE LIFT & AEROPLANE.....	103
<b>4-POINT KNEELING .....</b>	<b>107</b>
ARM & LEG LIFT .....	107
MOVING PUSH UP.....	111
THREAD THE NEEDLE .....	114
<b>Kneeling.....</b>	<b>117</b>
SHOULDER SEPARATION.....	117

<b>SITTING POSITIONS.....</b>	<b>120</b>
<b>SITTING .....</b>	<b>121</b>
SPINE TWIST .....	121
BASIC ROLL UP .....	124
ROLL UP .....	127
ROWING I .....	131
ROLLING LIKE A BALL.....	134
REST POSITIONS .....	137
<b>HAND, ARM, LEG &amp; FOOT POSITIONS.....</b>	<b>138</b>
HAND & ARM POSITION IN SUPINE .....	138
LEG POSITIONS IN SUPINE .....	139
FOOT & FEMUR POSITIONS .....	140
<b>SUPINE.....</b>	<b>Error! Bookmark not defined.</b>
LEG FLOAT .....	141
ARM FLOAT .....	145
DEAD BUG .....	148
PELVIC CURL .....	151
CURL UP.....	157
HUNDRED.....	161
SIDE TO SIDE .....	164
SINGLE LEG STRETCH .....	167
CRISSCROSS.....	170
DOUBLE LEG STRETCH .....	173
SINGLE LEG CIRCLE .....	175
GRAND BATTEMENT .....	179
SCISSORS.....	181
<b>ARM- AND UPPER BODY POSITIONS.....</b>	<b>184</b>
<b>SIDE LYING .....</b>	<b>185</b>
LEG LIFT SERIES.....	185
BALANCE .....	188
HOT POTATO.....	191
HIP CIRCLES.....	193
CLAM .....	195
LEG EXTENSION.....	199
<b>PRONE .....</b>	<b>201</b>
BODY TENSION.....	201
DART .....	205
ALTERNATE ARM & LEG LIFT .....	207
SWIMMING.....	209
BREAST STROKE .....	212

## EDUCATIONAL CONTENT

---

*„In 10 sessions you'll feel the difference, in 20 sessions you'll see the difference, and in 30 sessions you'll have a different body“.*

*Joseph Hubertus Pilates*

Some main topics we will thoroughly discuss during the Pilates Essentials education are functional movement anatomy, as well as the philosophical and mechanical principles of the Pilates Method. We will also look at didactics and teaching methodology in detail. The practical component, which takes up the largest portion of the course, revolves around the Pilates Essentials repertoire. The repertoire is very rich and we will spend a substantial amount of time practicing exercises at various levels, incorporating specific breathing patterns. The information gained in the theoretical part will be woven into the practical components and in return the exercise will be linked to the theory to provide uninterrupted information flow. Our goal is to give you a deep insight into the finesse of each exercise so you can eventually execute and teach with clear intention, rather than by memory, although this might be necessary in the beginning.

In this foundation education we will look at a range of fundamental classical and contemporary Pilates exercises so you can gain a clear understanding of what Joseph Pilates wanted to achieve with his method. The application however, is contemporary and holistic. Pilates is a training with many variations and at times this can be a bit confusing, therefore I want to give you as much information as possible regarding the aims, benefits and intricate technical details of the exercises. After you had time to process and embody the content, you will be able to implement the repertoire with clarity and confidence, and have a solid base to build upon.

The gained knowledge will not only help you to structure functional and enjoyable Pilates lessons that can be taught to a wide audience, but it will positively influence the effectiveness of other forms of training. Although Pilates is a very suitable group training, a group format cannot replace a personalized one-on-one lesson, especially for people with specific needs. We recommend that a person who needs special care to consult a rehabilitation trained Pilates specialist or allied health professional. The Pilates Essentials education allows you to structure and teach safe and effective classes for relatively fit and able people, who have no specific conditions that prevent them from taking part in group exercise.

Maybe this course is a completely new physical experience for you... Take your time to practice and embody what you have learned. The next 5 days are merely the beginning of this enriching movement journey! Contemporary Pilates is an art and craft, and metaphorically speaking Pilates Essentials will give you the tools to master the craft. Still keep in mind that only practice leads to mastery.

Once you have concluded the course and passed the related assessment you will be issued a certificate, which qualifies you to teach Pilates lessons in a group and one-to-one format. We recommend to practice as much as possible to gain the benefits the Pilates Method is famous for, as well as to continuously improve and deepen your understanding of this amazing training system with its many facets. Embodiment is also the key to being a skilful, authentic teacher. Every now and then treat yourself with a class or personalized session as it will help you to gain new insights into teaching, as well as your own body and movement patterns. Never stop learning, continuous education in Pilates or related fields will not only broaden your spectrum, but deepen your knowledge and appreciation for what you are practicing.

This is the first step and I am very happy to have the privilege to introduce the Contemporary Pilates Method to you. I hope you will be as inspired as we are. On behalf of all of us at art of motion a warm welcome; we are looking forward to 5 inspiring and educational days with you!

Karin Gurtner

Founder & Principal Educator

art of motion

training in movement®



EDUCATION AIMS

- Understanding and integration of the 9 Key Elements and Mechanical Principles.
- Understanding and application of fundamental biomechanical principles.
- Understanding of build up, sequencing, aims and benefits of core stabilization training.
- Competency in functional Pilates Essentials lesson planning.
- Understanding of aims, benefits, execution and variation possibilities of the Pilates Essentials repertoire.
- Competency in teaching methodology and didactics.
- Competency in customized teaching.
- Competency in the practical execution of the Pilates Essentials repertoire.

DAILY SCHEDULE

The daily schedules are flexible guidelines that can be modified by the lecturer if need be.

First Day

09.00am Introduction  
 09.30am Pilates Essentials Lesson  
 10.30am Break  
 10.45am Joseph Pilates and the Pilates Method  
 11.00am Pilates Anatomy  
 12.30am Lunch break  
 01.15pm The 9 Key Elements  
 03.00pm Break  
 05.15pm Repertoire  
 05.00pm Finish

Second Day

09.00am Revision  
 09.30am Pilates Essentials Lesson  
 10.30am Break  
 10.45am Pilates Anatomy  
           The Pelvis and the Pelvic Floor  
           Shoulder Organization  
 12.30pm Lunch break  
 01.15pm Repertoire  
 03.30pm Break  
 03.45pm Repertoire  
 05.00pm Finish

Third Day

09.00am Revision  
 09.30am Pilates Essentials Lesson  
 10.30am Break  
 10.45am Repertoire  
 12.45pm Lunch Break  
 01.30pm Repertoire  
 03.30pm Break  
 03.45pm Repertoire  
 05.00pm Finish

Fourth Day

09.00am – 05.00pm Repertoire

Fifth Day

09.00am Revision  
 09.30am Pilates Flow Warm-Up  
 10.00am Teaching Methodology and Didactics  
 10.45am Break  
 11.00am Teaching Methodology and Didactics  
 12.45pm Lunch break  
 01.30pm Lesson Planning  
 04.30pm Conclusion  
 05.00pm Finish

## APPLIED TERMINOLOGY

---

In this and all other courses we will repeatedly use Pilates and movement related terminology. Following is a list of the most commonly used terms and definitions.

### TERMS REFERRING TO LOCATION AND DIRECTION

- Bilateral: Referring to both sides.  
Unilateral: Referring to one side.  
Contralateral: A reflex response that affects the opposite side of the body from the stimulus.  
Ipsilateral: A reflex response that affects the same side as the stimulus.

### CUEING TERMINOLOGY

#### LEG LIFT



### TECHNICAL INSTRUCTIONS

Technical instructions refer to movement mechanics, proprioception, positioning of the body in space and anatomy.

#### Example: LEG LIFT

- The knees are directly underneath the hip joints and the hands directly underneath the shoulder joints.
- The spine and the pelvis are in a neutral position with the pubic bone and the hip bones on one plane.
- Your hamstrings and gluteal muscles lift the extended leg.
- The movement occurs at the hip joint.

### TACTILE INSTRUCTIONS

Tactile instructions refer to touch. Either the instructor with the participant or with oneself.

#### Example: LEG LIFT

- The instructor places her/his middle fingers lightly onto the anterior superior iliac spine (bony spine in front of the hip bone) and the thumbs close to the posterior superior iliac spine (bony spine on the back of the hip bone) to support the lumbar-pelvic stability during the leg movement.

### KINESTHETIC INSTRUCTIONS

Kinaesthetic instructions refer to body and movement awareness, and how a movement feels.

#### Example: LEG LIFT

- Let the weight slightly shift from hands to knees and from right to left. Even it out and feel how little effort is required to maintain the 4-point kneeling position; stay conscious of the even weight distribution during the exercise.
- Reach back and lengthen the leg as you lift it.
- Press the top of the supporting foot into the floor as you lift the gesture leg and feel the stability it gives you.

## IMAGERY INSTRUCTIONS

Instructions describing a body part or movement through imagery.

Imagery can be used in various ways:

- Direct – Direct reference to a body part.
- Indirect – The body part is metaphorically described.
- Inside / Outside– Imagery can be applied to the inside or outside of the body.

Example: LEG LIFT

- Direct: The thigh bone is spiralling inwards as the leg lifts.
- Indirect: Imagine your leg is like a boom gate that is lifted from the sit bone.
- Inside: Imagine your supporting hip socket is like a suction cap that sucks the thigh bone into the socket.
- Outside: Imagine your leg is suspended from the ceiling with a strap. The strap is lifting your leg as you exhale and is lowering it as you inhale.

## TERMINOLOGY RELATING TO EXERCISE VARIATIONS

Regressions, progressions and variations are useful terms that will be used frequently during the course. However, it is important to note that these terms are relative and depend on the characteristics of a person as well as the viewpoint you are adopting. A regression for one person might be a progression for someone else, or what is considered a progression in relation to base of support might be just a variation in regards to myofascial slings.

### REGRESSION

An exercise is made easier. A regressions often requires:

- Shortening a lever.
- Decreasing the range of motion and or reducing resistance.
- Increasing the base of support.

Example: DEAD BUG

- Executing the exercise in a sudo-closed chain with one foot on the floor, while the gesture leg moves from Table Top.

### PROGRESSION

An exercise is made more challenging.

- Increasing the lever length.
- Increasing the range of motion and/or resistance.
- Instable base of support.

Example: DEAD BUG

- Execute the exercise lying on a Roller.

### MODIFICATION

An exercise is adapted to suit individual or specific needs.

Example: DEAD BUG

- If the lower thoracic spine is extended a support can be placed underneath the head.



## VARIATION

The exercise mechanics stay essentially the same, however the exercise aim or focus are varied.

- Reversing the breath, varying breathing length and/or focus.
- Focusing on a different exercise benefit.
- Altering the involved musculature.
- Varying the alignment of the extremities.

### Example: DEAD BUG

- Varying breathing rhythm and functioning of the hip flexors: long exhalation and extension, slow inhalation and flexion of the leg.

## EXTEROCEPTION & PROPRIOCEPTION

### EXTEROCEPTION

Exteroception describes how we perceive the outside world. Exteroceptors in the skin give us information about our environment through touch, pressure and temperature, as well as we perceive through more complex sensory systems such as sight, hearing and smell.

- Tactile sensibility is part of exteroception; the perception through touch.
- Tactile awareness is one's sensibility to the surface.

### PROPRIOCEPTION

Latin: proprios = own + recipere = receive.

Proprioception is also known as deep sensibility or depth perception. It describes the component of awareness that is provided by the body.

### Kinaesthesia

Greek: kinein = to move oneself + aïsthesi = awareness

Kinaesthesia is the sense of body motion.

### Proprioception Contains the Following Components

- Sense of position: Provides information relating to the position of the body in space or the position of joints and of the head.
- Sense of strength: Provides information of the degree of tension in muscles and tendons.
- Sense of motion/kinaesthesia: Allows for movement awareness and recognition of direction.

Proprioceptors are the body's own receptors in the skin, joints, muscles and fascia, which monitor the position and movement of muscles and joints. They send feedback to the brain informing us about length and tension in muscles and other soft tissues, as well as the position of joints in space.

### Integration Possibilities

How can we integrate this information usefully in training programs and teaching methodology?

Step 1: Improve the sense of position.  
Use only a few, easy to understand instructions. Technical and tactile cues can be very helpful in improving one's sense of position.

Step 2: Improving the sense of strength and sense of motion.  
Tactile cues, imagery and obviously kinaesthetic instructions can be very useful to improve one's sense of effort and movement awareness.

Instructions Referring to the Sense of Position: LEG FLOAT

- The knee remains at a 90° angle.
- The movement occurs in the hip joint.
- The pelvis remains in a neutral position during the movement.
- The toes are aligned with the knee in the Table Top position.

Instructions Referring to Strength Perception: LEG FLOAT

- How would you rate the required abdominal strength on a scale from 0 to 10?
- The pelvis is heavy, the legs feel light.
- Does the right leg feel as light as the left leg?
- Imagine you have helium balloons attached to your knees; they guide and support the movement.

LOCATION DESCRIPTIONS

The terms distal and proximal are not just relating to biomechanics, but are relevant in relation to teaching.

DISTAL

- Further away from the torso or a major joint.

Beginners often relate to distal instructions easier. Distal instructions however bring the attention away from the centre, the stabilizing joint and/or the prime muscles.

Example: SINGLE LEG CIRCLE

- Imagine you have paint on your big toe and you draw a capital D onto the ceiling.
  - The attention is directed to the foot.

PROXIMAL

- Closer to the torso or a major joint.

Often proximal instructions require relatively well-developed body awareness, exercise knowledge and some basic understanding of anatomy. Proximal instructions bring the attention towards the centre, the stabilizing joint and/or the muscles directly involved in the movement.

Example: SINGLE LEG CIRCLE

- Let the thigh bone sink back into the hip socket and feel the heavy and slow rolling motion of the bone in the joint capsule.
  - The attention is on the pelvis and the hip joint and therefore the muscles involved in stabilization and movement.

---



---



---



---



---



---

## CLOSED, SUDO-CLOSED & OPEN CHAIN

The following definitions are directly relating to the Pilates matwork repertoire.

### CLOSED CHAIN

Movement against an immovable resistance/object; the distal end of the lever is in contact with the immovable or fixed object.

Example: LEG SLIDE

The feet (distal end of the lever) remain in contact with the floor (fixed object).

### SUDO-CLOSED CHAIN

Definition 1: The distal end of one lever is free in space, while the other side is in contact with a fixed object.

Example: BASIC LEG FLOAT

One foot remains in contact with the floor (fixed object), while the other leg is moving through space without support.

Definition 2: The distal end of the levers are in contact with a moveable object.

Example: DOUBLE LEG SLIDE on Roller

The feet (distal ends of levers) are placed onto the Roller (moveable object).

### OPEN CHAIN

The distal end of the levers are free in space.

Example: DEAD BUG

The feet (distal ends of levers) are moving free in space.





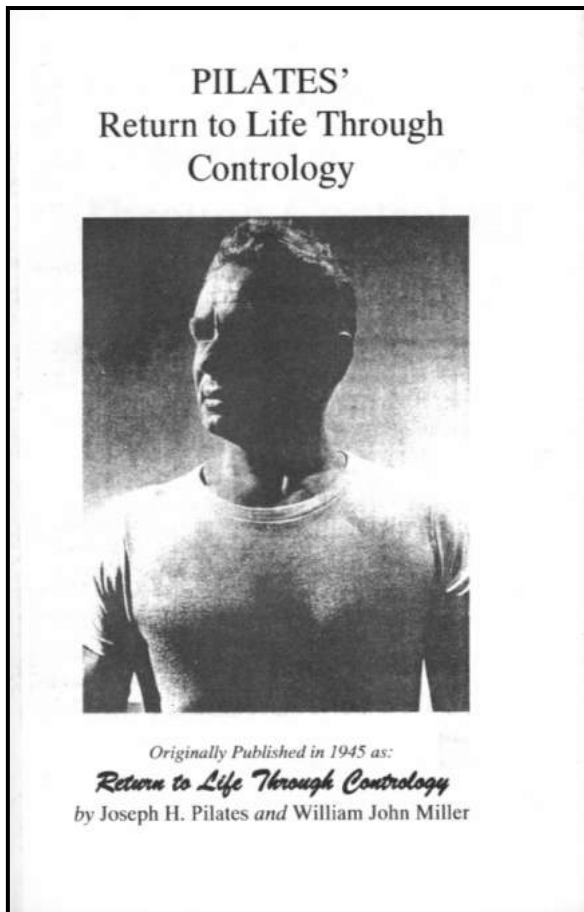
## THE PILATES METHOD

---

### JOSEPH HUBERTUS PILATES

Joseph Hubert Pilates was a weak, ailing child. This condition made him want to radically improve his health and constitution. This decision was the beginning of a life long passion for fitness, bodybuilding and yoga.

At the age of 32, Pilates decided to move to England where he earned his living as a boxer, circus performer and as a teacher of self-defence techniques. At the outbreak of World War I he was detained by the British authorities and not released until the end of the war. Pilates continued to improve his own fitness enthusiastically and developed a new concept. The new aspect of this concept was the connection of body and mind. From this time on, all of Pilates' techniques have been based on a combination of physical and mental attributes. With the simple devices, which were at his disposal, he began to train and rehabilitate his fellow detained countrymen and created the first prototype of a Reformer.



In 1923, Pilates migrated to New York. Joseph and his wife Clara, a nurse, opened their first studio. From his ability to rehabilitate dancers with back and leg injuries and help them get back on stage, Pilates established a good reputation, which attracted star dancers such as Martha Graham and George Ballanchine. Other famous clients from the world of dance who benefited from his services were Jerome Robbins, Ted Shaw, Ruth St. Denis and Suzanne Farrell. At the time of his death, Pilates had many supporters from the world of dance and entertainment.

In order to improve core stability and body control, Pilates developed a series of floor exercises called 'Contrology' which are now known as the Pilates Method.

The other Book of Joseph Hubertus Pilates

YOUR HEALTH

Joseph and Clara were an interesting couple. Ron Fletcher, Pilates Master Teacher and Pilates' trainee, made the following statement: "*Joe was moody and gruff but brilliant, but it was Clara who taught me to understand the work, to teach from the point of view of mind-breath-body-spirit.*"

Joseph Pilates was rather possessive and only educated approximately half a dozen trainers in his method. Most of the teachers who were trained around 1940 have passed away; amongst them was Eve Gentry (1910 – 1994), Ron Fletcher (1921 – 2011, Santa Fe, New Mexico), Kathleen Stanford-Grant (1921 – 2010, NYU Tisch School of Arts), and Romana Kryzanowska (1923 -2013, the original Pilates Studio in New York City). In his studio, Joseph was the only master instructor, unwilling to involve anyone else or reveal more information than necessary. There is a story where a former client of Pilates decided to teach Joe's method and open his own studio in the same neighbourhood. Inflamed with rage and with a gun in his hand, Joseph is said to have gone to the new studio and made his competitor leave the city. The studio was closed.

In 1967, Pilates died at the age of 87 at an accident in his studio. The building was burning and when Joseph tried to save some of his equipment, the floor collapsed and he was forced to stay in the burning studio for quite a long time, hanging from the ceiling. The fire brigade saved him, however, Joseph died two days later from smoke poisoning in hospital.

Clara Pilates and Hannah Sakmurda (who had been an assistant to Joseph Pilates for many years) continued to run the studio after Joseph's death. In 1972, Romana Kryzanowska took over leadership.



## YESTERDAY & TODAY

---

The Pilates Method has changed with time; however, the principles are still the same. In Pilates, every movement is performed with awareness, control and precision, in a rhythmic and focused fashion to ensure maximum effect and minimum risk of injury.

### THE TRAINING

*"Contrology develops the body uniformly, corrects wrong postures, restores physical vitality, invigorates the mind, and elevates the spirits." J. Pilates*

Contemporary Pilates aim at creating a holistic view of life. A balanced body is one of the main goals of this wonderful training method that strengthens the deep muscles of the trunk, mobilizes the spine and addresses muscular imbalances in a direct, yet gentle way. The long-term goal is inner and outer balance. Physical balance leads to wellbeing, improved alignment, ergonomic movement patterns and resilience. The harmonious interplay between functional strength and agility facilitates joy of movement that transpires into daily life.

The focus of the Pilates Essentials repertoire is on the centre and the deep muscle layers of the trunk. Movement patterns begin through inner activation, followed by spinal and/or extremity movement. It's however not a training system of copying, but one of clear intention and attention to body and breath. Only when the body and movement is perceived with awareness can the effectiveness of Pilates and its fundamental principles be truly embodied.

### CHARACTERISTICS

- Progressive improvement of breathing, core stability, core strength, shoulder organisation and extremity control.
- Optimizes balance and interplay of the different, yet connected systems of the body.
- Few repetitions (4 – 12) performed with awareness in a slow, controlled manner.
- Conducted as a personalized or semi-private training or in a group format.
- Exercises are executed on mats with or without small props, or on specific Studio Pilates equipment.
- Exercises are executed in standing, sitting, in weight bearing positions or lying.
- Studio equipment is adjustable with most pieces featuring metal springs with which resistance can be varied.
- Studio equipment includes the Reformer, Trapeze Table, Wunda Chair, Ladder - Step Barrels, Spine Corrector and Ped-a-Pul.
- Small props include but are not limited to the Magic Circle, foam rollers, exercise bands, various balls, rotator discs, balance boards and cushions.

### LEVELS

The Contemporary Pilates method can be performed at any level. Regardless of skill level and experience the training offers everybody the possibility to move within and expand their boundaries to increase their physical wellbeing and vitality without excessive demands placed on the body.

### AREAS OF APPLICATION

The method is basically useful and can be integrated into all professions and recreational areas aiming at providing their clients with more functional strength and agility, improved body awareness and wellbeing. The boundaries between movement and health promoting fields, as well as physical therapy are fluid!

## HISTORY

Joseph Pilates was ahead of his time. He didn't only develop a unique training system called 'Contrology', which blends eastern wisdom with western body conditioning, he also developed a series of specific pieces of equipment to promote accurate exercise execution and sensory feedback. The Pilates method can without a doubt be integrated wherever one chooses to demonstrate an interest in movement and body awareness. Proved and tested as a safe and effective training system for more than 80 years Pilates works, provided it is taught and executed properly.

In recent years the method has become well known for its many general benefits as well as for its rehabilitative and post-rehabilitative value. Due to this increase in popularity various styles of Pilates have formed. Adding to this development was the fact that 'Pilates' was declared general property by a federal court in the USA; hence a person or organisation cannot own the name 'Pilates'.

Reputable First Generation Pilates teachers like Romana Kryzanowska and Ron Fletcher, as well as their students maintain and promote what they consider the 'true', 'traditional' or 'classical' Pilates Method. Many established schools around the globe have adopted the same stance with great success. So you may ask "Why change the method if it still works?" A valid question worthwhile exploring.

## PATH INTO THE MODERN WORLD

It's indisputable that Joseph Pilates laid the foundation of an amazing, highly efficient and multifunctional movement system. At art of motion we value both origin and founder greatly, and treat the method with the respect it deserves. However, as a modern movement school we always remain open to progress. We embrace change and seize opportunities for further development and expansion through our own knowledge and experiences, scientific findings, as well as knowledge from some of the great movement and bodywork minds of the last century who have passed on their wisdom to us.

I believe that Joseph Pilates, like many other geniuses, had innate inner wisdom. But I also believe that the combination of inner wisdom and knowledge gained for current movement science, communication and neurological research adds an invaluable new dimension to Pilates. For us at art of motion our contemporary approach means refinement, expansion and inclusion, instead of exclusion and change for the sake of change or commercialisation.

While some Pilates inspired programs 'water down' the method, the aim of Contemporary Pilates is to enhance and enrich what Joseph Pilates created many years ago by layering in modern holistic movement and teaching aspects. As a Yoga and Gyrokinesis teacher, movement and Kinesis Myofascial Integration therapist who honours the work of Dr. Ida P. Rolf, Thomas W. Myers, Eric Franklin®, Moshé Feldenkrais and many other outstanding people who I have drawn greatly from and learned from, I feel with all that I have experienced and embodied and in collaboration with my team of innovative and highly qualified teachers we have developed a style of Pilates that is modern, holistic and accessible to everyone.

Joseph Pilates was a person who continuously developed himself and the training. Should he still be alive today, I am sure he would still be a progressive mind, seeking improvement and expansion. I feel with the Contemporary Pilates method and its continuous refinement we have developed an educational system that holds up the spirit of Pilates and its founder in a true sense.

## CONTEMPORARY PILATES

Summarizing the Contemporary Pilates method isn't easy, there is too much to say and even more to experience.....

### Contemporary Pilates

- Values and respects the fundamental principles of the original Pilates method.
- Stays up to date and is open for change and adaptation.
- Incorporates modern research and scientific findings.
- Recognizes and upholds the importance of sensory awareness, as well as the power of imagery as described by the Franklin Method®.
- Integrates myofascial training principles.
- Embraces Tom Myer's Anatomy Trains system and values myofascial meridians as a holistic map for movement.
- Adds the principles of elasticity and dynamics as beautifully translated into movement by Gyrokinesis® and Gyrotonics®.
- Integrates fundamental principles of the gentle, deep work of the Feldenkrais Method®.
- Embraces anatomical viewpoints from Spiral Dynamics®.
- Refers to the evolving knowledge of physical therapy.
- Combines artistic elements with functional training.
- Uses specific sequencing and theme-oriented choreography.
- Incorporates fundamental principles of Neurolinguistic Programming.
- Recognises the positive influence of joy of movement and importance for appreciation of your own body.

Contemporary Pilates brings lightness, poise and energy into the body, refreshes the spirit and promotes ease and efficiency in daily life!



## FUNCTIONAL ANATOMY & TERMINOLOGY

---

### THINKING BODY

A 'neuromuscular-skeletal event', in other words movement begins in the brain, not the muscles. To further develop the 'thinking body', you need to get to know the body, movement patterns and how the nervous system interacts with the muscular system. Understanding the workings of the body is a lifelong process, so take your time!

To establish a solid foundation we will keep things simple to start with; and even simple isn't that simple when it comes to the workings of the body.....

The motor cortex sets movement into motion. The information is received by the brain stem and from there is transmitted to the motor cortex, which passes the commands on to the nervous system. The nervous system sends signals to the muscular system, which moves bones via fascial units such as tendons. Movement or a 'neuromuscular-skeletal event' occurs.

### NEUTRAL & ANATOMICAL POSITION

Bones form joints that are connected by ligaments and are moved by muscles via tendons.

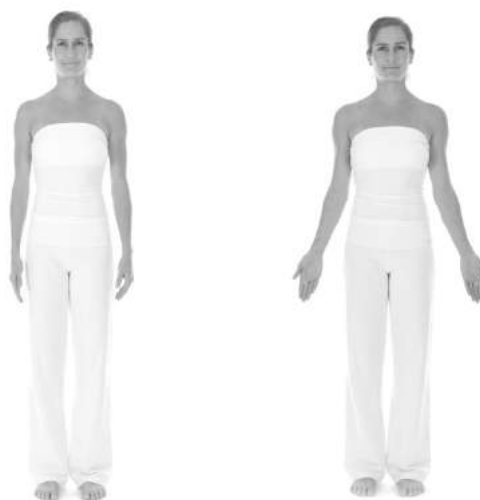
It is not easy to describe movement. Various body parts can move in different directions and often more than one joint is involved.

Reference positions are essential to develop understanding of the musculoskeletal system, planes of movement, joint classification and joint movement terminology.

There are two recognised reference positions:

- The Neutral Position, which is also called Zero Position.
- The Anatomical Position.

During all art of motion education courses we will refer to the Neutral Position only.



Neutral Position

Anatomical Position

When we discuss movement in the repertoire section we will:

- Use the Neutral Position for reference: standing upright, feet hip distance and parallel, arms relaxed alongside the body with the palms facing the body.
- Consider each joint in isolation.
- Consider the joints involved in the main movement only.
- Use three perpendicular planes for reference.

## JOINT MOVEMENT

### Flexion - Bending

- Movement in the sagittal plane.
- In hinge joints the angle between two bones is decreasing.

### Extension - Extension

- Movement in the sagittal plane.
- In hinge joints the angle between two bones is increasing.

### Hyperextension – Too Much Extension

- Extension that exceeds the natural extension of a joint.
- In many joints hyperextension is prevented through bony processes, ligaments and other soft tissue.

### Lateral flexion – Side Bend

- Movement in the frontal plane.
- Side bending of the spine.

### Adduction – Moving Toward

- Movement in the frontal plane.
- Movement towards the longitudinal axis of the body (midline of the body).

### Abduction – Moving Away

- Movement in the frontal plane.
- Movement away from the longitudinal axis of the body (midline of the body).

### Rotation

- Movement in the transverse plane.
- Rotational movements can be described with direction.
  - Rotation: spine.
  - Medial rotation (in ball and socket joints such as the hip and shoulder joints): turning inwards.
  - Lateral rotation (in ball and socket joints such as the hip and shoulder joints): turning outwards.

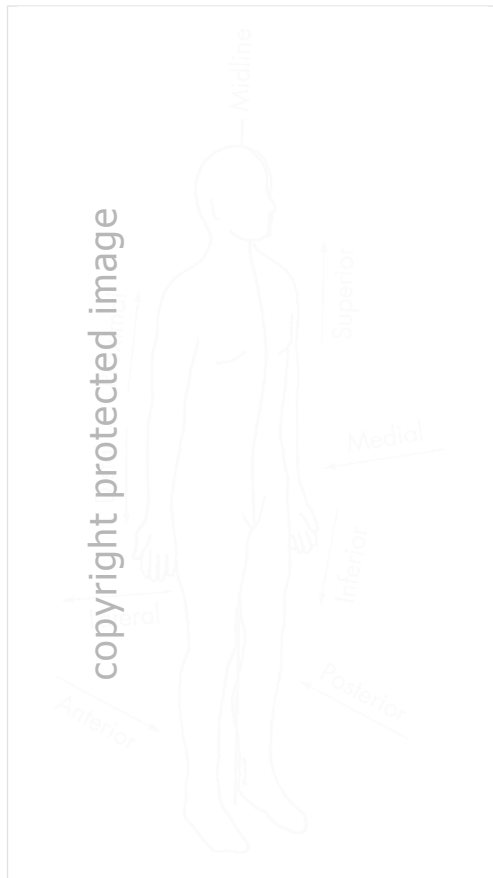
### Circumduction

- Circular movement.





## LOCATIONS & DIRECTIONS



*Manual of Structural Kinesiology, Thompson & Floyd*

### Superior / Cranial

On the head, towards the head.

### Inferior / Caudal

On the foot, towards the feet (also towards the coccyx).

### Palmar

Corresponding with the palm of the hand.

### Plantar

Corresponding with the sole of the foot.

### Medial

Towards the middle, midline of the body or the centre.

### Lateral

Away from the middle, midline of the body or the centre.

### Posterior

Behind, backwards, behind the back.

### Anterior

In front, forwards, front side of the body.

### Superior

Above, higher in relation to another structure.

### Inferior

Below, lower in relation to another structure.

### Superficial

Close to the surface of the body.

### Deep

Inside the body, away from the surface of the body.

### Proximal

Closer to the trunk or a major joint.

### Distal

Further away from the trunk or a major joint.

### Bilateral

Referring to two sides.

### Unilateral

Referring to one side.

### Contralateral

Referring to the opposite side.

### Ipsilateral

Referring to the same side.

PLANES OF MOVEMENT & AXES OF ROTATION

SAGITTAL PLANE

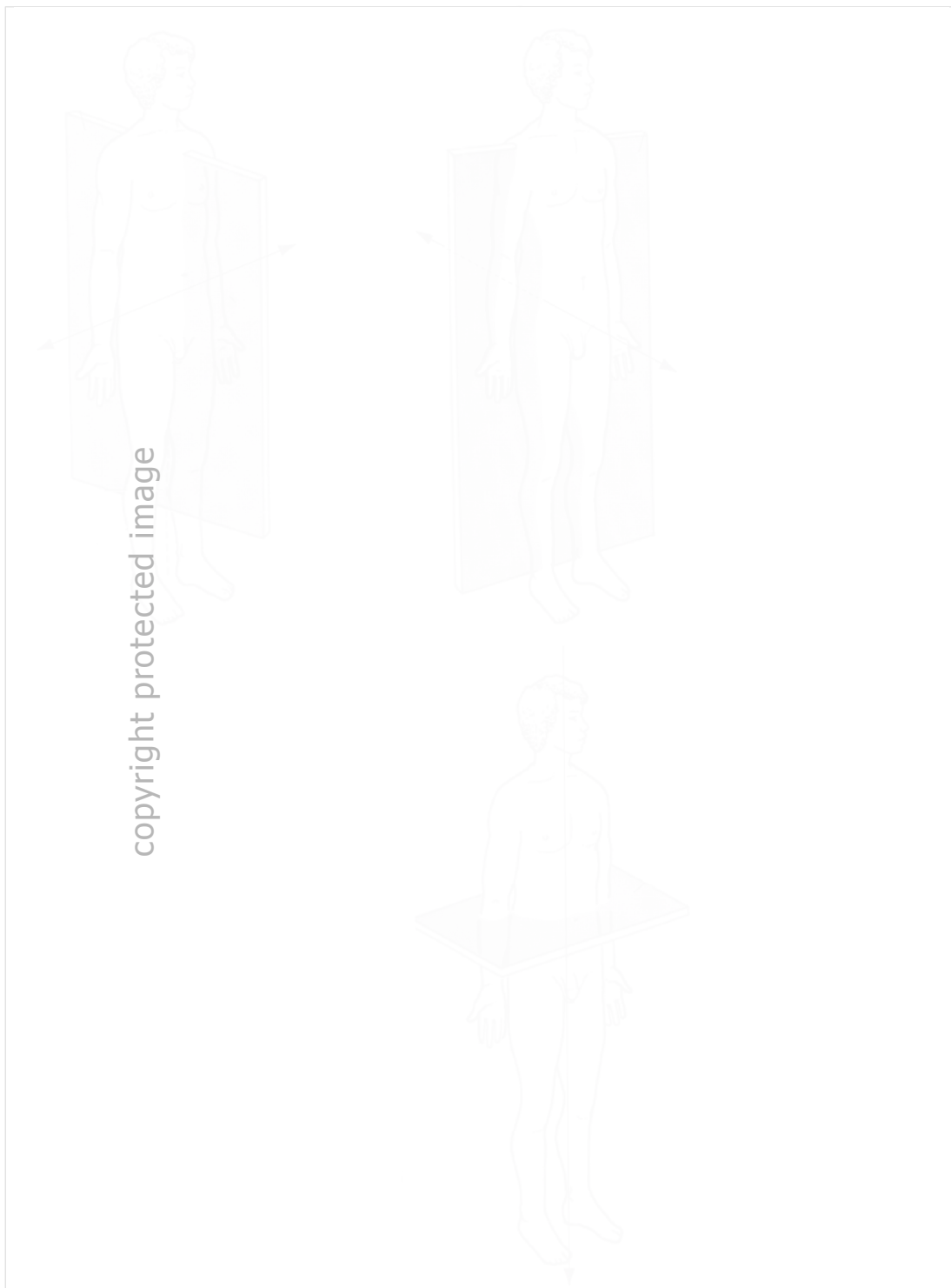
Frontal Axis

FRONTAL PLANE

Sagittal Axis

TRANSVERSE PLANE

Longitudinal Axis



*Manual of Structural Kinesiology, Thompson & Floyd*

Understanding planes of movement and corresponding axes is not only helpful for movement analysis, but for exercise sequencing and lesson planning in general.

As part of our movement discussions in the repertoire section we will categorize the primary movement patterns accordingly to their plane of movement. This is a useful way to understand movement mechanics, however, it is

# art of motion

important to remember that natural, daily motion is triplanar, meaning it's multidirectional and three-dimensional, therefore not fitting into any of the three, admittedly artificial, categories.

For example taking a glass to your mouth to take a sip of water is a triplanar motion, involving all three planes.

## TAILOR'S SIT



### Hip Joint

- Flexion = Sagittal plane.
- Abduction = Frontal plane.
- Lateral Rotation = Transverse plane.

### Knee Joint

- Flexion = Sagittal plane.

### Ankle Joint

- Plantar flexion = Sagittal plane.

## THE SKELETAL SYSTEM

The skeleton is a mobile framework of bones providing rigid support for the body. The adult skeleton consists of approximately 206 to 214 bones. The amount of bones can differ slightly from person to person because the varying number of bones in the foot and spine. Most bones are connected through joints, together with muscles forming the locomotor system.

Some parts of the skeleton can be looked at as a lever system through which muscle action is set into motion. The bones are held together by muscles, tendons, ligaments and other connective tissues.

Together with the myofascial system the skeleton can be compared to a tensegrity system. Such a system is stabilized through balanced tension and compression. In the human body the myofascial system provides the tension to connect (compress) the skeletal system. It's a very resilient construct, however, alike the body, an imbalance in one area will affect the integrity of the system as a whole.

### Aponeurosis – Tendinous Sheet

An aponeurosis (plural: aponeuroses) is a tendinous sheet that may serve as attachment of a skeletal muscle.

It's a flat band with broad attachments connecting muscle to muscle or muscle to bone. Its primary function is to harness forces of contraction to perform specific tasks.

### Tendon

---

### Ligament

---

## THE MAJOR FUNCTIONS OF THE SKELETON

- 
- 
- 
- 
- 
- 

---



---



---



---



---



---

## BONE CLASSIFICATION

Accordingly to their varying sizes, shapes and functions bones are divided into 5 categories.

### LONG BONES

General Function: \_\_\_\_\_

Example: \_\_\_\_\_

### SHORT BONES

General Function: \_\_\_\_\_

Example: \_\_\_\_\_

### FLAT BONES

General Function: \_\_\_\_\_

Example: \_\_\_\_\_

## IRREGULAR BONES

General Functions: \_\_\_\_\_

Example: \_\_\_\_\_

## SESAMOID BONES

General Functions: \_\_\_\_\_

Example: \_\_\_\_\_

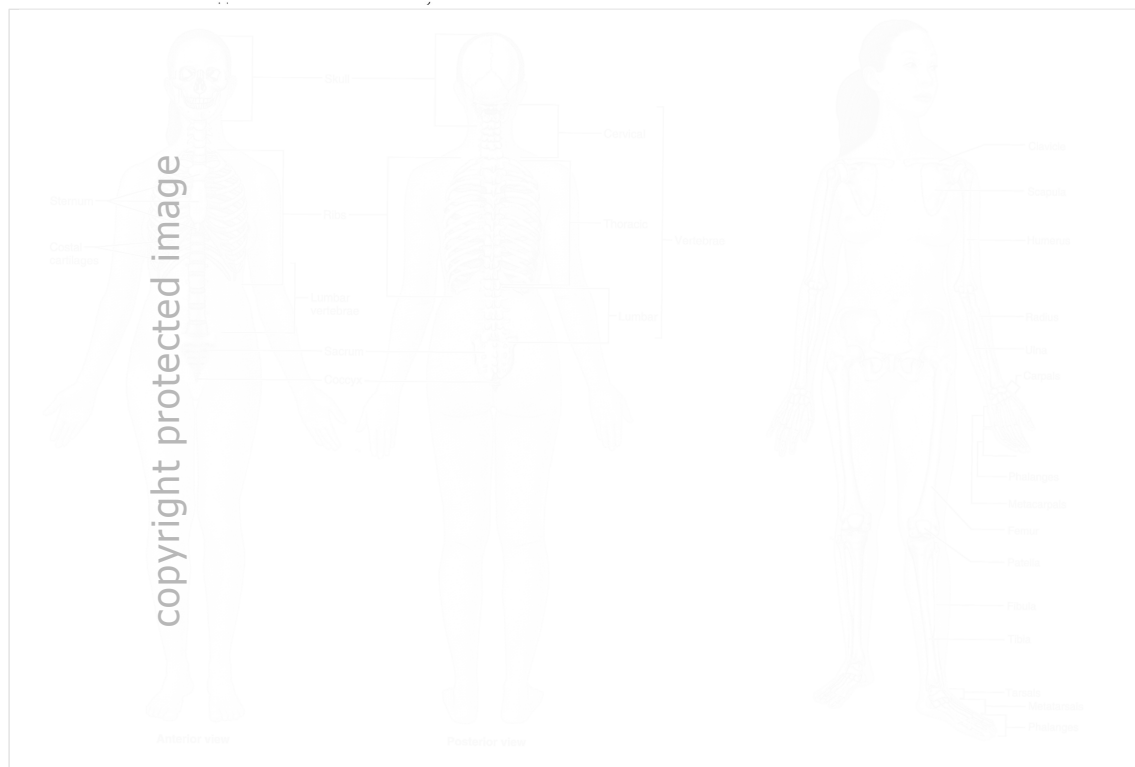
## BONE PHYSIOLOGY

Bones are the hardest building elements within the body, yet they have a degree of elasticity to make them more resilient. Similar to honey comb bones have cavities where the production of the red blood cells occurs. These cells are responsible for the transport of oxygen through the body.

## THE AXIAL & APPENDICULAR SKELETON

### Axial Skeleton

### Appendicular Skeleton



*Human Anatomy & Physiology by Elaine N. Marieb*

### THE AXIAL SKELETON

Skull • Sternum • Ribs • Spine (including sacrum and coccyx)

- Provides the framework of the body.
- Supports and protects organs.
- Provides extensive surface area for the attachment of muscles that adjust the position of the head, neck and trunk; perform respiratory movement; and stabilize or position parts of the appendicular skeleton.
- The joints of the axial skeleton permit limited movement.

### THE APPENDICULAR SKELETON

Shoulder Girdle • Hip Bones • Extremities

- Attachment sites for skeletal muscles.
- Pathway for major nerves and blood vessels.
- The appendicular skeleton is dominated by long bones.

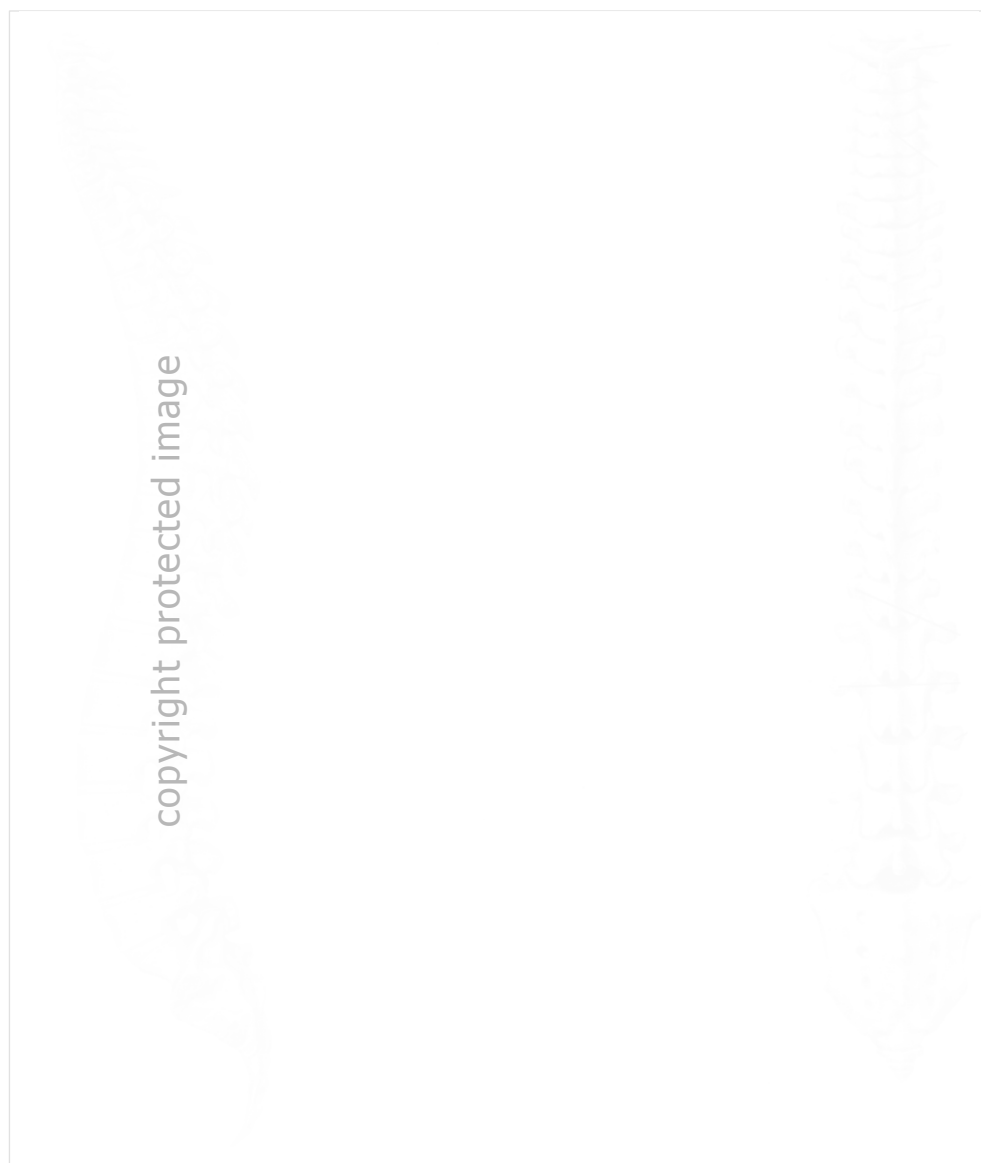
## THE SPINE

The spine is the central support system of the human skeleton. The cranium is mainly supported by the cervical and upper thoracic vertebrae. On both sides every thoracic vertebra is linked with a rib. The ribcage surrounds and supports the heart, lungs and liver. The pelvis, also called pelvic girdle, is roughly a cylindrical structure composed of several articulating or fused bones plus associated muscles and ligaments, supporting the lower organs. The spine is very mobile; it can turn and bend in almost every direction (anterior, posterior, lateral and with rotation). The cervical segments are the most mobile ones, followed by the thoracic and lumbar segments.

The human spine comprises up to 34 vertebrae. Apart from 10, all of them are mobile. Vertebrae are classified into the following groups:

Lateral View

Posterior View



*Gesunder Rücken, Dr. John Tanner*

## REGIONS OF THE SPINE & CHARACTERISTICS

REGIONS OF THE SPINE	CHARACTERISTICS

In general, the structure and the function of the spine are the same for all mammals. One important difference is the fact that our centre of gravity has moved during evolution and gravity impacts on our erect posture with linear downward force. This means that the spine has become a kind of vertical shock absorber whose curves offer the appropriate amount of resistance as well as mobility and adaptability. Looked at from the side, a healthy spine has four curves. The cervical and lumbar curves are convex anteriorly, whereas the thoracic and sacral curves are concave anteriorly.

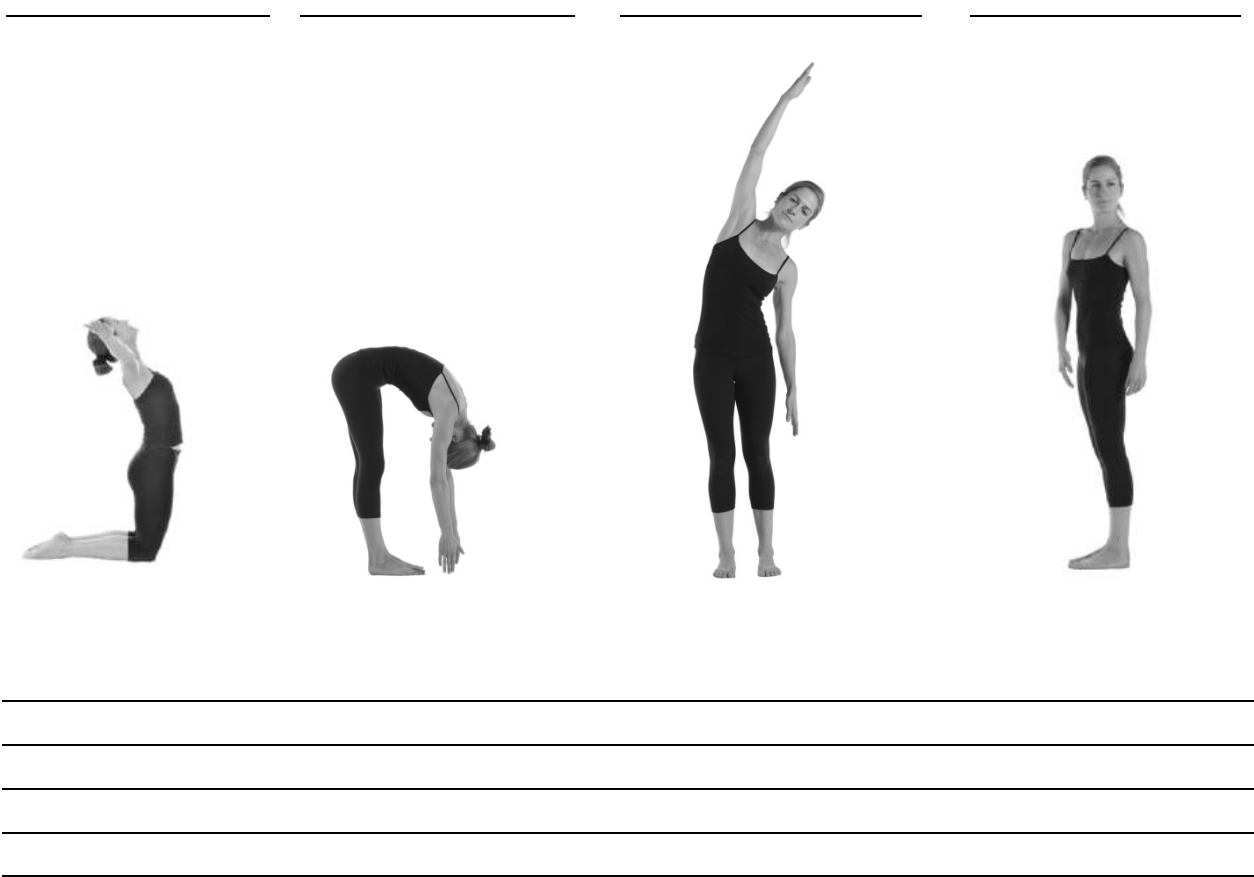
Like the curves of the long bone, the spinal curves add to the resilience of the spine. They support dynamic stability in an upright posture, absorb impact, distribute forces and help prevent injuries. When the spinal curves are balanced the ear, shoulder, hip bone and ankle are vertically aligned. In this position, forces are equally distributed across the spine and stress on surrounding tissue is minimized.

Note: The exact form of the spinal curvatures varies between people; this is normal. The external appearance of these curvatures can be affected by overlying "soft" structures.



MOVEMENT OF THE SPINE

*Muscles, Testing and Function, Kendall*





## THE MUSCLES

The human body comprises about 650 muscles. For a Pilates instructor it is important to know the main muscles/muscle groups, as well as Pilates relevant muscles of the trunk and pelvis. Step by step this foundation knowledge needs to be embodied, deepened and expanded.

## WORKING OF MUSCLES

Joints are surrounded by muscles. Most muscles are linked to bones via tendons. Through neurological signals from the central nervous system, the muscle generates the strength to move bones, thus creating movement. The connection between nerves and muscles, tendons and bones demonstrates the importance of holistic “body thinking”. In order to achieve optimum functionality, every link in the chain must be intact.

Muscles work accordingly to the “Filament Gliding Model” and in synergy with other muscles. They often work on an antagonistic basis, meaning when one muscle or muscle group contracts, i.e. the actin and myosin filaments glide together, the opposite muscles relax and the filaments glide apart.

<p>AGONIST Prime Mover</p>	
<p>ANTAGONIST Opposing Muscle Regulator</p>	
<p>SYNERGIST Helper</p>	
<p>STABILISOR Fixator</p>	

## MUSCLES PULL

Muscles only pull they don't push, therefore they are often working in pairs creating seamless movement in the whole body.

## THOUGHTS ON TRAINING

A relaxed muscle builds strength, a tense muscle builds up more tension.

- Consider a muscle's functions.
- Consider the location of a muscle.
- Consider the form and fibre arrangement of a muscle.
- Consider a muscle's influence on surrounding joints.
- Consider a muscle's characteristics.
- Consider the 9 Key Elements and Mechanical Principles of Pilates.

## THE 9 KEY ELEMENTS

---

The 9 Key Elements can also be named Fundamental or Philosophical Pilates Principles.

### CONCENTRATION & AWARENESS

Concentration is important, awareness is the key to success. An aware person is conscious of their body and possibilities. Potential, movement and otherwise, can be made use of and expanded over time.

### BREATHING

Efficient breathing is a prerequisite for balanced posture and freedom of movement. Awareness to the breath is a fundamental element of the Contemporary Pilates method and essential for purposeful movement and efficiency. Oxygen is life energy.

### CENTRING

The centre is the source of deep power that promotes natural physical elongation and poise.

### CLEAR INTENTION

To reach the goal, the goal needs to be known and articulated. Clear intention and interpretation is key to achieving the desired postural and movement aims through Pilates.

### CONTROL & PRECISION

When every movement is performed with control and attention to detail, the body works with minimal effort and maximum efficiency.

### FLOW

Flow of breath and movement within the body allow for harmonious, rhythmical and clear motion in space.

### DIFFERENTIATION

Differentiation promotes sensory awareness, physical balance, intensity as well as relaxation.

### CONTINUITY

Pilates is an art and a craft, and like any other craft it needs to be practiced for mastery. Training success requires continuity, dedication, clear intention and awareness.

### INTEGRATION

The big goal is for the exercise benefits, as well the physical and emotional sense of wellbeing experienced in the class to seamlessly transpire into daily life.

The principles mentioned above complement each other and are equally important. Concentration and awareness are essential because movement needs to be performed with both control and precision. Each exercise is dynamically stabilized and initiated by the breath, which engages the centre thus promoting powerful movement performed with differentiated fluidity and a sense of ease. A relaxed body absorbs oxygen more effectively, the muscles are nourished and the system as a whole energised.

Only when the body has recognised subconscious movement patterns can you tap into and expand your full movement potential.

## CONCENTRATION & AWARENESS

*„Concentrate on the correct movements each time you do an exercise, least you do them improperly and thus lose all the vital benefits of their value.“ J. Pilates*

The quality of movement increases dramatically when both body awareness and the ability to concentrate on one specific body part improves. Some exercises may look easy; however, each exercise is multifaceted and has specific purposes of great benefit when performed with attention and dedication. Contemporary Pilates is more than moving in a certain way, it's about clear intention and awareness to not only the parts of the body that are strengthened, but those that don't move, are relaxed or getting stretched.

Strengthening of core muscles is an art and to fully absorb the benefits you need to be aware of what is going on in your body during the whole session. Movement that is performed with awareness is rhythmically graceful and literally works from the inside out. 10 repetitions will feel like one flowing motion.

In addition, awareness is essential for knowing what is suitable and beneficial for you at the given time. It allows you to make decisions based on your body's wisdom promoting physical and emotional wellbeing in the most appropriate manner. At the same time you can explore and expand your movement potential.

There is one other bonus: when you give yourself and your body your full attention, you have no time to worry about other things, so movement becomes a beautiful form of active meditation.

Every move is performed with awareness and grace working from the inside out.



## BREATHING

"To breathe correctly you must completely exhale and inhale, always trying to squeeze every atom of impure air from your lungs in much the same manner that you would wring every drop of water from a wet cloth." J. Pilates

### COSTAL BREATHING

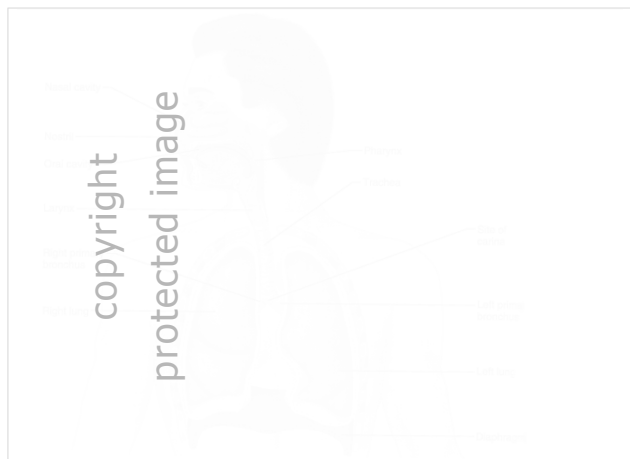
Joseph Pilates put utmost importance on the breath, something Contemporary Pilates embraces 100%. Pilates gave every exercise a specific breathing pattern, which changed depending on the client. Nowadays, we use postero-lateral costal breathing to achieve optimum training results. Breathing postero-laterally accesses the largest and most vascular parts of the lungs, where the exchange of oxygen and carbon dioxide is the highest. Costal breathing also promotes mobilisation of the facet joints that connect the ribs to the spine, mobility and dynamic stability in the shoulder blades and natural elongation of the thoracic spine. The increased mobility of the ribs and the spine allows the lungs to expand further, thus the respiratory diaphragm can contract and relax with more ease while massaging the internal organs underneath and the heart above, improving the health and vitality of these vital body parts.

The breath also promotes self-awareness and has a grounding quality.

### BREATHING PATTERNS

Inhalation is through the nose. Exhalation occurs through relaxed lips and with a gentle constriction of the larynx (voice box). The more this form of breathing is embodied during the practice, the more efficiently you will be able to maintain core stability without having the tendency to experience tension in the neck and shoulders or place too much pressure onto the pelvic floor.

I have given each exercise in the repertoire section a specific breathing pattern that makes "mechanical sense" and is very suitable for Pilates Essentials lessons. Once you have embodied the breathing and movement patterns and have gained the necessary teaching experience, you will be able to vary the patterns, therefore change the movement or sensory focus. However, I strongly recommend staying with the described patterns for a while to give your participants and yourself adequate practice and absorption time.



#### 3-DIMENSIONAL MOVEMENT

Three-dimensional mobility in the thorax is essential for axial elongation, a balanced shoulder girdle, relaxed neck and clear mind. Hence it is one of our main short and long-term goals.

*Human Anatomy and Physiology, Elaine N. Marieb*

Vertical Diameter	The vertical diameter of the ribcage primarily increases when the diaphragm is lowered during inhalation. During exhalation the vertical diameter returns to its resting state.
Transverse Diameter	The transverse diameter increases when breathing into the sides of the ribcage. Ribs 2-10 (approximately) lift and their inferior edges are turned slightly outwards. This causes the lateral parts of the ribs to move away from the centre of the body, thus extending the transversal diameter of the ribcage.
Anteroposterior Diameter	The anteroposterior diameter increases by lifting the ribs during the inhalation. The distance between the sternum and the thoracic spine increases.

FORCE COUPLE

---

The musculature involved in breathing greatly contributes to the dynamic stability of the spine and pelvis.

BREATH AS CONNECTOR

Breathing is the link between the involved muscles, whose forces are transferred throughout the body.

Oxygen Absorption

---



---

Axial Elongation & Mobilisation

---



---

Dynamic Stability & Posture

---



---

Shoulder Organisation

---



---

Massage

INEFFICIENT & FAULTY BREATHING PATTERNS

During the training it's essential to keep the breath flowing. The following breathing patterns are to be avoided.

- Holding the breath.
- Forced breathing (e.g. during aerobic activities).
- Excessive lifting and lowering of the shoulders (this is often coupled with excessive breathing).
- Excessive breathing into the front of the ribcage.
- Inefficient, shallow breath.

GENERAL PILATES ESSENTIALS BREATHING RULE

In general the centre initially engages during exhalation, because the diaphragm is ascending and the intraabdominal pressure is lowered. In Pilates Essentials we often exhale during the most intense phase to ensure maximum lumbar-pelvic stability.

For example when a lever is lengthened, the range of motion increases, the base of support decreases and/or the pressure on the lumbar spine increases.



## REGULAR PILATES BREATH

Pilates exercises are always performed in synergy with the breath. The harmonious synchronicity of breath and movement requires practice, patience and awareness.

Intensity

---

Rhythm

---

## PILATES PECUSSION BREATH

Intensity

---

Rhythm

---

Aims

---

---

---

---

## POSITIVE INFLUENCE ON BODY & MOVEMENT

- Oxygenated blood is transported to the working muscles.
- Waste products are eliminated.
- Axial elongation and balanced spinal alignment is promoted.
- The ribs and facet joints are mobilized.
- Dynamic stability and scapula gliding is promoted.
- Dynamic stability of the spine and pelvis is promoted.
- Initiates and guides movement.
- Movement quality is optimized.
- Endurance is improved.
- Strength, length and relaxation is promoted.
- Physical tonus balance is promoted.
- Organ health is promoted.

## POSITIVE EMOTIONAL INFLUENCE

- Brings awareness to the unity of body and mind.
- Improves energy flow, vitalizes the body and promotes relaxation.
- Improves mental clarity and decision-making ability.
- Improves self-awareness.
- Intensifies sensory perceptions and feelings.

**CENTRING**

The centre is another essential element of the Pilates method. It encompasses the deep abdominal musculature, stabilizing muscles of the spine, the prime respiratory muscle and the diaphragms of the pelvis. If an exercise is correctly executed then the breath initiates the activation of the centre, which dynamically stabilizes the lumbar-pelvic region.

The centre positively influences and supports the natural elongation of the spine, supports the optimal placement of the internal organs and allows freedom of movement for the extremities and the spine.

A functional centre is the basis for all Pilates exercises.

**THE CENTRE & THE CORE**

<p>THE CENTRE – Active Process (Central Core)</p>	<ul style="list-style-type: none"> <li>▪ _____</li> <li>▪ _____</li> <li>▪ _____</li> <li>▪ _____</li> </ul>
<p>THE CORE – Locality (Core)</p>	<p>The tonic musculature surrounding the spine.</p>

**DYNAMIC STABILITY**

It's important to understand that the lumbar-pelvic stability provided by the centre is dynamic, therefore not rigid, but adaptable. Dynamic stability doesn't mean the pelvis and spine are moving, the dynamic is within, it's micro-movement. From the outside the lumbar-pelvic region is stable, however, the musculature and joints are still adequately adaptable. A dynamically stabilized body is resilient.

For ease of reading I will keep using the term 'lumbar-pelvic stability', instead of 'dynamic lumbar-pelvic stability'.

**THE PILATES CENTRE**

Process

\_\_\_\_\_

\_\_\_\_\_

Core Stability

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Core Strength

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

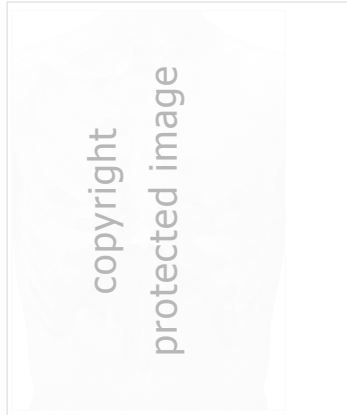


[www.revolutionhealth.com](http://www.revolutionhealth.com)

## MUSCLES OF THE CENTRE

### DIAPHRAGM

The diaphragm is the primary respiratory muscle.



*Das Muskelbuch, K.-P. Valerius et al*

#### Function

The diaphragm is the most important muscle for inspiration.

It contracts during inhalation and relaxes during exhalation.

Adequate diaphragmatic breathing is a key to optimal health and physical functionality.

### PELVIC FLOOR

The pelvic floor is a network of muscles and fascia, which dynamically stabilizes the pelvis from within. It also supports and positions the internal organs above.



*Das Muskelbuch, K.-P. Valerius et al*

#### Functions

- Contraction.
- Relaxation.
- Reflexive resistance.

Supports and positions internal organs.

Ensures continence.

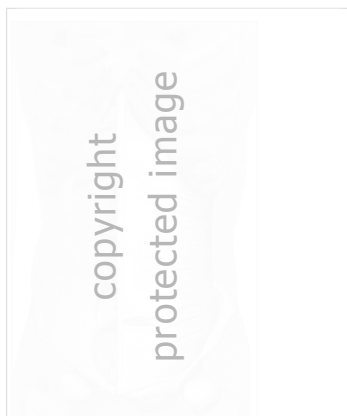
Supports axial elongation.

Promotes lumbar-pelvic stability.

Promotes healthy energy flow.

### TRANSVERSUS ABDOMINIS

Transversus abdominis is the deepest of the abdominal muscles and an effective stabilizer.



*Das Muskelbuch, K.-P. Valerius et al*

#### Functions

Increases intraabdominal pressure (the pressure within the abdominal cavity).

Depresses the abdominal wall.

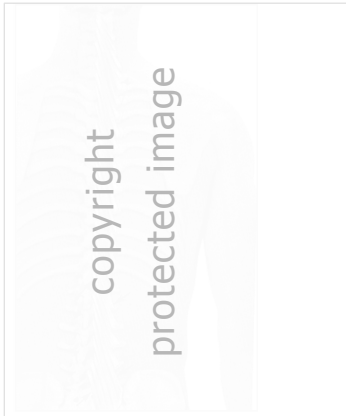
Stabilizes the lumbar-pelvic region.

Works on a reflex basis and can also be engaged voluntarily.

It can have an expiratory function through the narrowing of the ribs.

**MULTIFIDI**

The Multifidus muscles are relatively short, deep muscles that run along the entire length of the spine and contribute largely to segmental spinal stability.



Functions

Segmental spinal stability.

Extension of the spine (bilateral).

Ipsilateral lateral flexion of the spine (unilateral).

Weak contralateral spinal rotation (unilateral).

Supports the dynamic stability of the sacroiliac joints and alignment of the sacrum.

*Das Muskelbuch, K.-P. Valerius et al*

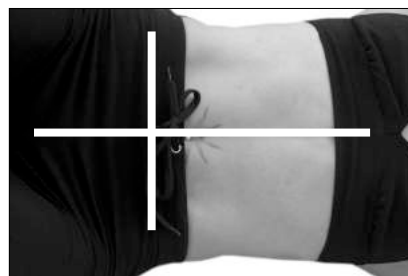
**INITIATION**

In Pilates every exercise is initiated by the activation of the centre. Activation of the core muscles of this region provides the optimal basis for movement integration and efficiency.

**VISUALISATION – THE t**

Picture a t turned upside down. The t represents interplay or difference if you will, between abdominal muscles. The horizontal line running from ASIS (Anterior Superior Iliac Spine) to ASIS represents Transversus abdominis and the horizontal line running from the pubic bone up to the sternum represents Rectus abdominis.

It's a great and easy to understand image that can help your participants understand the difference between core stability and core strength, as well as what it means to maintain a neutral lumbar-pelvic alignment.




---



---



---



---

**ENERGY**

Pelvic floor is the source for both Chi and Kundalini energy, and the centre the place of many mystical hypotheses, myths and stories.

## CLEAR INTENTION

*"Contrology is designed to give you suppleness, natural grace and skill that will be unmistakably reflected in all you do." J. Pilates*

Alike in life, in Pilates it's the journey not the destination that matters most. But to know what path to take you need to know the destination (or at least the general direction of it). Only when the aims and benefits of the exercises are understood and embodied to a certain degree, can they be practiced and taught with clear intention and therefore greatest effectiveness.

### Clear Intention Requires the Following

- A clear understanding of exercise aims and benefits.
- A clear understanding of exercise aims and benefits within the whole system.
- Embodiment of the exercises.

Although this might be necessary in the beginning, mimicking the exercises in Contemporary Pilates is not enough. It requires time, patience, on-going curiosity and practice to experience the full potential of the magnificent training method. It's worth the time and energy!

## CONTROL & PRECISION

*„Ideally, our muscles should obey our will. Reasonably, our will should not be determined by the reflex actions of your muscles." J. Pilates*

Joseph Pilates believed mind over matter, in other words that our body should obey our will and not our mood (or the mood of someone else).

### In Contemporary Pilates Control Encompasses the Following

- Intramuscular coordination and control describes the interplay of nervous and muscular system within a specific movement pattern.
- Intermuscular coordination and control describes the improved muscular interplay (stabilizers, agonists, antagonists and synergists) within a specific movement pattern, which main aim is to refine movement coordination.

The desirable, smooth and graceful movements we want to achieve with Pilates require both intramuscular and intermuscular coordination and control.

Furthermore we pay the same attention to isometric, concentric and eccentric muscle work, as well as the way an exercise is initiated, executed and concluded. Contracting, maintaining contraction, conscious gradual release and complete relaxation are equally important.

The Pilates method is working from the inside out. Each movement has specific aims and together the exercises have specific functions for the training as a whole. With control and precision weak muscles are strengthened and tense muscles are relaxed.

Pay attention to the finer details of an exercise, only then can you get the best results from it. It is irrelevant how often a movement is repeated, what counts is the quality it is performed with. Optimized movement patterns will become automatic with practice and awareness, which contributes greatly to the quality of the training as well as daily life.

Quality always comes before quantity!

## FLOW

*„Correctly executed and mastered to the point of subconscious reaction, these exercises will reflect grace and balance in your routine activities. " J. Pilates*

There is seamless flow in the smoothly coordinated movements of the Pilates method, improving body awareness, proprioception and coordination at the same time.

In this training there are no abrupt or hard motions, because it would contradict what you want to achieve with Pilates. The exercises are comprised of steady, rhythmical movements that have neither beginning nor end.

### Flow Relates to the Following Aspects

- Integration flow, the most inner aspect of flow, refers to our ability to receive internal and external information, process it in the brain and express it through movement.
- Intramuscular and intermuscular coordination referring to the smooth working of our neural and muscular systems, a synergy permitting seamless, refined and clearly coordinated movement patterns.
- Sequencing and choreography are the most outer aspects of flow. Execution can be as simple as putting exercises for the whole body in a logical order or it can be an artful, interconnected functional training where each exercise serves multiple purposes in relation to the structure of the whole lesson.

## DIFFERENTIATION

*„Each muscle may cooperatively and loyally aid in the uniform development of all our muscles. " J. Pilates*

The body operates as an integrated system in which each structure with its unique characteristics plays an important part. In Pilates Essentials we primarily focus on the balance of the muscular system. To achieve the desired equilibrium we need to recognize imbalances and then work towards a more beneficial balance by learning to differentiate movement. Differentiated movement has nothing to do with isolation, quite the contrary. Differentiation means getting to know your body and sensing what part moves when, how and in synergy with what.

It is important to thoroughly understand the principle of differentiation before moving on to more advanced exercises. Most people work too hard when they start with Pilates. This causes unnecessary tension in body parts that should be relaxed, which leads to early fatigue and inhibition of target muscles. Each exercise focuses strength-wise on specific muscles or muscle groups, while others are stretched or remain relaxed.

When differentiation is embodied, the body works like a world-class orchestra with various instruments playing at different times, pitches, rhythms and audibility.



## CONTINUITY

*„Patience and persistence are vital in the ultimate successful accomplishment of any worthwhile endeavour.“ J. Pilates*

Pilates is an art and a craft, and like any other craft that requires continuous practice and dedication for mastery.

### Four Learning Stages

When we learn something new we run (sometimes crawl) through four learning stages.

- Subconscious incompetence.
- Conscious incompetence.
- Conscious competence.
- Subconscious competence.

### Fifth Learning Stage

The fifth stage is the teacher stage.

- Reflective competence – conscious competence of the subconscious.  
At this stage a skill has been competently embodied and can therefore be executed with minimal effort and maximum efficiency and quality. At the same time details and intricacies can be communicated in an appropriate language.

With dedication and continuous practice we pass through these stages all the while facilitating a rich and multifaceted movement life that benefits our whole being!

Tip: Remind your regular participants every now and then to approach their Pilates practice with new awareness and a fresh mind, so they discover something new in each 'known' exercise. Some regulars tend to switch to 'auto pilot', which not only leads to a 'training plateau', but may keep them stuck in habitual patterns that don't serve them anymore; or maybe have never served their wellbeing in the first place.

The result is worth the investment!

## INTEGRATION

*"Practice your exercises diligently with the fixed and unalterable determination that you will permit nothing else to sway you from keeping faith with yourself. " J. Pilates*

The Pilates method trains the body as a whole. Each muscle is activated and integrated, strengthened, lengthened and released promoting balance and physical wellbeing.

The practice itself requires presence and self-awareness, something many of us 'forget' in our busy, outward focused lives.

Breathing is another key component of the method that little by little, like a steady drop that carves a stone, invigorates all of what we are.

Another important goal of the Contemporary Pilates method is joy of movement and appreciation for our own body and who we are.

Life quality improves with quality of the training and vice versa – it just works!

## THE MECHANICAL PILATES PRINCIPLES

---

### BREATH

*Breathing influences our whole being: movement, posture, sensation and thinking.  
Movement, posture, sensation and thinking influences the way we breathe.*

- Posterolateral costal breathing.
- Essential for the activation of core stabilising muscles.
- Essential for maintaining dynamic stability.
- Essential for optimal shoulder organization, a balanced neck and head.
- Supports optimal joint alignment.
- Improves movement efficiency.
- Supports and enhances exercise benefits.
  - Dynamic stability.
  - Strength.
  - Relaxation.
  - Flexibility.
  - Mobility.
  - Axial elongation.
  - Segmental spinal movement.
  - Organ health.
- Improves circulation.
- Cleanses the body.
- Supports the immune system.

### CENTRING

- Isolation.
  - In synergy with the breath the muscles of the centre (Transversus abdominis, Multifidi, pelvic floor and diaphragm) are engaged and dynamically stabilize the lumbar-pelvic area.
- Integration.
  - Following active stabilization spinal and/or extremity movement is integrated.
- Synergists.
  - Under increased load, the internal and external Obliques, Rectus abdominis and Quadratus lumborum provide extra lumbar-pelvic stability and support.
- The centre has the following roles:
  - Maintenance of lumbar-pelvic stability.
  - Segmental spinal stability.
  - Depression of the abdominal wall.
  - Maintaining intraabdominal pressure.



## SEGMENTAL STABILIZATION

The term segmental stabilization refers to the movement control between joint surfaces. Often the joint structure itself is not enough to provide adequate stability, therefore a joint relies on muscular and soft tissue support to maintain functionality and longevity. The short, deep local muscles closest to the joint are the most effective stabilizers preventing unwanted or excessive movement, while allowing primary movement without restriction.

Looking at it like this, we can say that the local, stabilizing muscles act like an additional joint capsule that is linking bones dynamically. With their intrinsic qualities they respond immediately to impacting forces preventing unwanted movement. Unlike the stability provided by the bony joint capsule, muscular stability is adaptable and ideally matches physical requirements.

Increased muscular activity increases tone and therefore the degree of stability. However, the degree of activity in core stabilizing muscles usually doesn't exceed 25% - 30%, which leads to the conclusion that segmental stabilisation is regulating muscular tone rather than generating maximal muscular activity.

Core stabilizing muscles often cannot initiate actual motion, but they can provide up to 80% of functional stability.

It's important to note that stabilizers ideally work on a reflex basis, in other words they engage involuntarily at the right time. As we know, this is not always the case and Pilates is a wonderful way to retrain these natural responses. We are basically making a subconscious process conscious to optimize functionality so eventually the system becomes adequately responsive again without our voluntary 'interference' called core stability training.

- Activate core stabilizing muscles first (isolation).
- Integrate movement (integration).
- Segmental stabilization is a prerequisite for disassociation, therefore differentiated extremity movement.
- As much as necessary, as little as possible!

## DISASSOCIATION

- Disassociation refers to joint movement.
- Primary movement occurs without unwanted secondary movement.
- Disassociation is an essential ingredient for improving core stability and core strength.
- Disassociation requires balance between agonists and antagonists.

## AXIAL ELONGATION & ARTICULATION OF THE SPINE

- Axial elongation refers to the spine.
- Axial elongation unloads the intervertebral discs as well as the surrounding soft tissue structure such as muscles and fascia.
- Axial elongation supports an optimal pelvic alignment and shoulder organisation, therefore biomechanical efficiency of the extremities.
- Axial elongation promotes and supports efficient breathing.
- Axial elongation provides an optimal foundation for segmental spinal movement.
  - o Segmental movement refers to the movement between two vertebrae.
  - o Segmental movement involves short, relatively deep spinal muscles.
  - o Segmental movement is safe and efficient.
- Axial elongation promotes uninterrupted energy flow.
- Axial elongation feels great.
- Axial elongation is aesthetic.

## SHOULDER ORGANIZATION

- Stabilisation in the shoulder girdle is dynamic; the shoulder blades glide during arm movement, however the involved musculature stabilizes the bones adequately on the ribcage.
- The stabilization quality of the shoulder girdle and the shoulder joint can be different.
- The shoulder blades and collar bones can be looked at as an extension of the arms, or vice versa.
- Adequate 3-dimensional volume in the thorax is essential for optimal shoulder alignment and functional arm movement.
- A functional centre is key to optimal shoulder organisation, a relaxed neck and balanced head.

## OPTIMAL ALIGNMENT OF EXTREMITIES

- A neutral alignment of the extremities preserves joint health.
- Movement is mechanically efficient and ergonomic.
- Physical functionality is improved and maintained.
- The length-tension relationships within the muscular system are optimized.
- Conscious directional changes can be made, changing the benefits and aims of an exercise.
- Core stabilizing muscles respond to extremity movement on a reflex basis, hence conscious extremity movement is an integral part of core stability training.

## WEIGHT BEARING

- Weight bearing positions are part of our archetypal motions and therefore an essential training component in Pilates.
- In many weight bearing positions the core stabilization musculature works against gravity.
- Weight bearing positions are important for bone health and contribute greatly to our physical functionality.

## MOVEMENT INTEGRATION

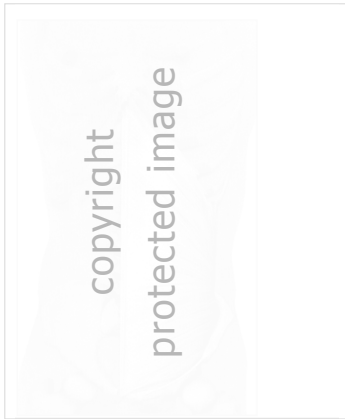
- Movement integration is a progressive process.
  - Start by learning isolation (activation of the centre) and movement integration.
  - Start with more 2-dimensional exercises and progress to 3-dimensional repertoire.
  - Start with exercises in closed and sudo-closed chains, and progress to open chain exercises.
  - Focus on just a few mechanical principles first and expand as you embody the repertoire.
- Movement integration is functional.
  - Postural based and so called 'corrective exercises' often require small, highly differentiated movements from which you progressively move forward to more complex and 3-dimensional repertoire that promotes coordinated multi-joint motion. In Contemporary Pilates these exercises are called 'integration exercises'.

## PILATES ESSENTIALS RELEVANT MUSCULATURE

---

### ABDOMINALS

#### INTERNAL OBLIQUES



*Das Muskelbuch, K.-P. Valerius et al*

#### Functions

##### *Unilateral:*

Rotation of the trunk to the same side.

Lateral flexion of the trunk to the same side.

##### *Bilateral:*

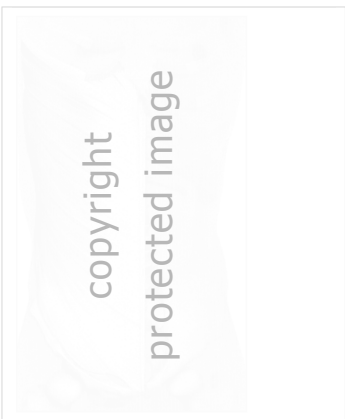
Flexion of the lumbar and lower thoracic spine.

Posterior tilt of the pelvis.

Depression of the abdominal wall.

Narrowing of the ribs during expiration.

#### EXTERNAL OBLIQUES



*Das Muskelbuch, K.-P. Valerius et al*

#### Functions

##### *Unilateral:*

Rotation of the trunk to the opposite side.

Lateral flexion to the same side.

##### *Bilateral:*

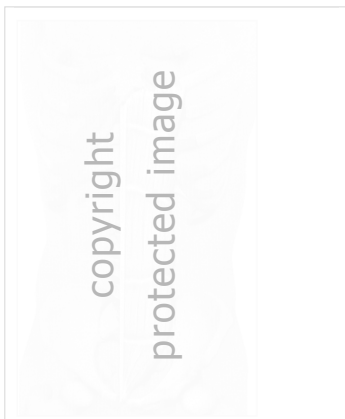
Flexion of the lumbar and lower thoracic spine.

Posterior tilt of the pelvis.

Depression of the abdominal wall.

Narrowing of the ribs during exhalation.

#### RECTUS ABDOMINIS



*Das Muskelbuch, K.-P. Valerius et al*

#### Functions

Powerful flexor of the lumbar and lower thoracic spine.

Assists stability of the pelvis on the femur heads.

Posterior pelvic tilt.

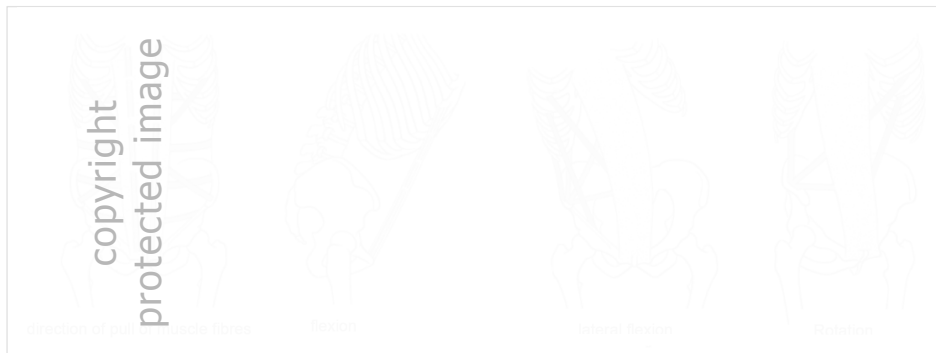
Contributes to the regulation of expiration during speech.

##### *Unilateral:*

Lateral flexion of the spine.

MOVEMENT

Basic spinal movements and relating abdominal musculature.



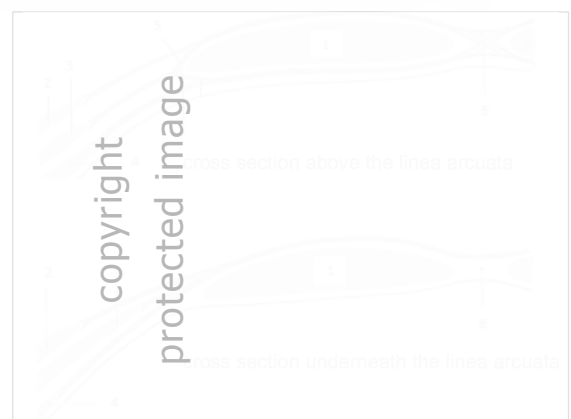
Taschenatlas Anatomie, Werner Platzer

CROSS SECTION (at the level of the 3<sup>rd</sup> lumbar vertebrae)

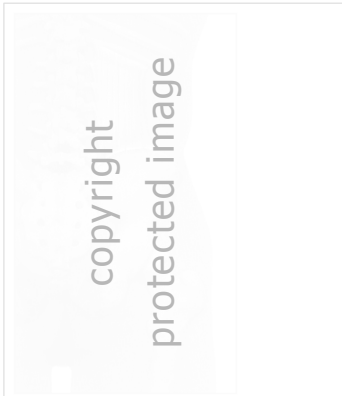


Topographie und Funktion des Bewegungssystems, Michael Schünke

- 1.: \_\_\_\_\_
- 2.: \_\_\_\_\_
- 3.: \_\_\_\_\_
- 4.: \_\_\_\_\_
- 5.: \_\_\_\_\_
- 6.: \_\_\_\_\_



## QUADRATUS LUMBORUM



*Das Muskelbuch, K.-P. Valerius et al*

### Functions

#### *Unilateral:*

Lateral flexion of the lumbar spine.

Lateral tilt of the pelvis.

Rotation of the spine.

#### *Bilateral:*

Lumbar extension.

Anterior pelvic tilt.

Can pull the posterior ribcage downwards.

Stabilizes the lowest ribs during inhalation.

## ILIOPSOAS

Psoas Major • Iliacus



*Das Muskelbuch, K.-P. Valerius et al*

### Functions

#### *Unilateral:*

Flexion of the hip joint.

Lateral rotation of the hip joint.

Lateral flexion of the lumbar spine.

Rotation of the spine.

#### *Bilateral:*

Extension of the lumbar spine.

Possibly flexion of the lumbar spine.

Stabilisation of the lumbar spine.

## RECTUS FEMORIS



*Das Muskelbuch, K.-P. Valerius et al*

### Functions

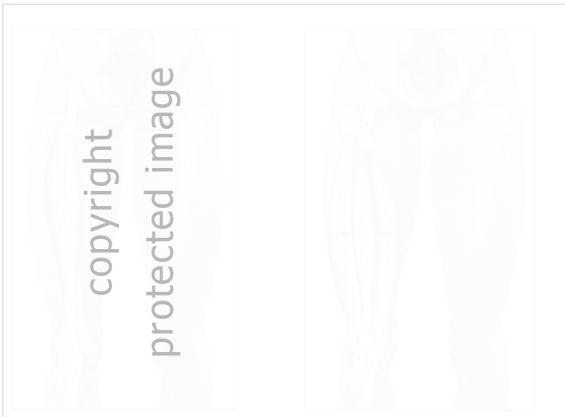
Flexion of the hip joint.

Anterior pelvic tilt.

Extension of the knee joint.

## QUADRICEPS

Rectus Femoris • Vastus Lateralis • Vastus Medialis • Vastus Intermedius



*Das Muskelbuch, K.-P. Valerius et al*

### Functions

Flexion of the hip joint.

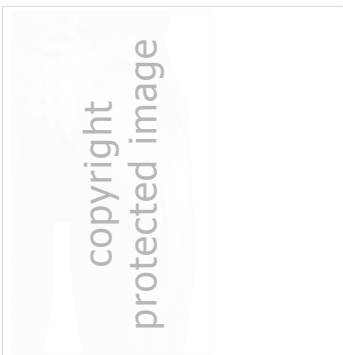
Anterior pelvic tilt.

Extension of the knee joint.

Slight medial and lateral rotation of the bent knee.

Stabilisation of the knee.

## GLUTEUS MAXIMUS



*Das Muskelbuch, K.-P. Valerius et al*

### Functions

Extension of the hip joint.

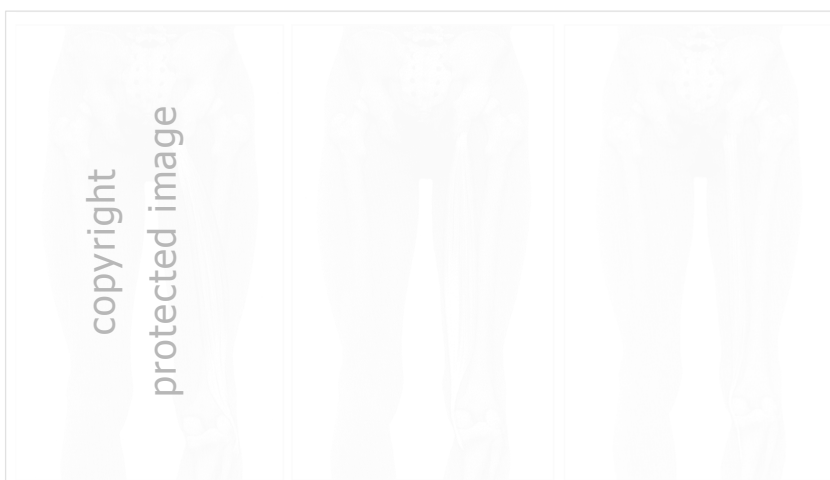
Lateral rotation of the hip joint.

Posterior pelvic tilt.

Contributes to abduction.

## HAMSTRINGS

Biceps Femoris • Semimembranosus • Semitendinosus



*Das Muskelbuch, K.-P. Valerius et al*

### Functions

Extension of the hip joint.

Posterior pelvic tilt.

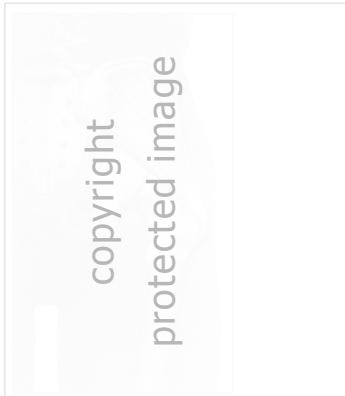
Lateral rotation of the hip.

Flexion of the knee.

Slight medial and lateral rotation of the bent knee.

Stabilisation of the knee.

## GLUTEUS MEDIUS



*Das Muskelbuch, K.-P. Valerius et al*

### Functions

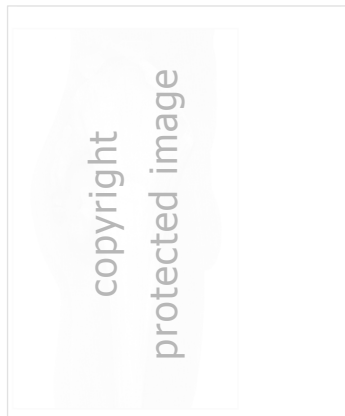
Abduction of the hip joint.

Medial rotation of the hip joint.

Lateral rotation of the hip joint during abduction.

Lateral stability of the hip joint.

## TENSOR FASCIA LATAE



*Das Muskelbuch, K.-P. Valerius et al*

### Functions

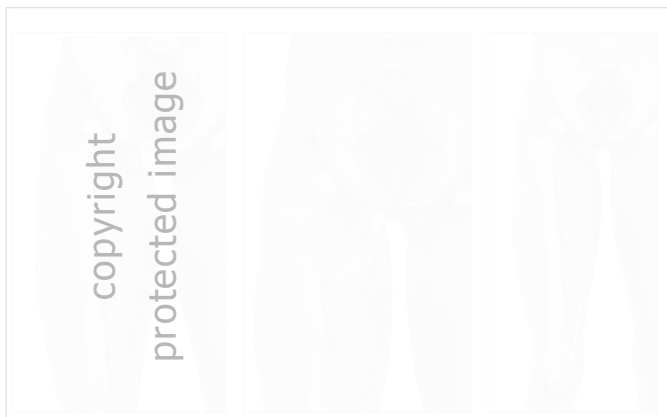
Abduction of the hip joint.

Flexion of the hip joint.

Medial rotation of the hip joint.

## ADDUCTORS

Adductor longus • Adductor brevis • Adductor magnus



*Das Muskelbuch, K.-P. Valerius et al*

### Functions

Adduction of the hip joint.

Mainly lateral rotation of the hip.

*Adductor longus and brevis:*

Flexion of the hip joint.

*Adductor magnus:*

Extension of the hip joint.

## PELVIC & SPINE POSITIONS

---

### NEUTRAL LUMBAR-PELVIC POSITION

Pilates exercises often require a neutral alignment of the pelvis and the lumbar spine.

### DEFINITION OF A NEUTRAL PELVIC POSITION

---



---



---



---



*Ultimate Pilates, Dreas Reyneke*

### DEFINITION OF A NEUTRAL SPINE POSITION

- The natural curves of the spine are aligned and maintained.
- The spinal curves are balanced in relation to each other.
  - The weight distribution is optimally balanced.
  - There is minimal stress on the spine and surrounding tissues.
  - There is minimal neuromuscular activity.
- Optimal physical functionality is provided.

### Importance of a Neutral Lumbar-Pelvic Position, resp. Neutral Spine Position

---



---



---



---



---



---



---



---

### Importance of Spinal Movement

3-Dimensional spinal movement in general is extremely important and in relation to training as important as the recognition and dynamic stabilisation of a neutral spinal alignment.

It's essential to move the spine in all three planes to maintain its natural mobility, to strengthen, stretch and relax the surrounding musculature, and to contribute to the nourishment of the intervertebral discs.



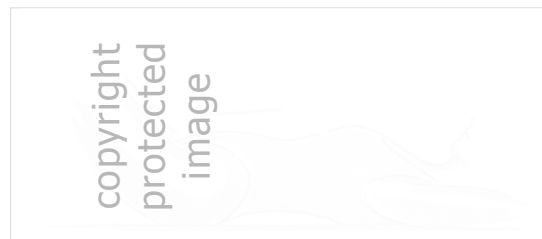
## LUMBAR-PEVIC POSITIONS IN SUPINE



### HYPEREXTENDED POSITION

The pelvis is tilted anterior and the lumbar spine is hyperextended.

- This position can be a habitual pattern.
- The hip flexors and lumbar extensors might be tight or hyperactive.
- The impacting force might be greater than the available strength; decrease the load.
- The centre and if need be the oblique abdominals need to be engaged more.

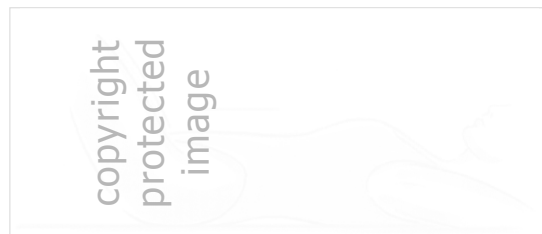


*Superbody mit Pilates, Christine Kuhnert*

### NEUTRAL POSITION

The pelvis and lumbar spine are aligned and maintained in a neutral position.

- The centre is engaged to maintain the position.
- Global activity is to be minimized.
- The muscular activity is as much as necessary and as little as possible.



*Superbody mit Pilates, Christine Kuhnert*

### FLEXED/FLATTENED POSITION

The pelvis is tilted posterior and the lumbar spine is flexed, which looks flattened.

- This position can be a habitual pattern.
- The global abdominal muscles can be overactive.
- Some of the hip extensors might be gripping.
- If the pelvis is tilted posterior during movement the impacting load could be greater than the available strength in the centre; decrease the load.

A strong posterior pelvic tilt and co-contraction of global abdominal muscles and hip extensors during core stability exercises compensates, creates and/or manifests an imbalance that long-term greatly decreases physical functionality.



*Superbody mit Pilates, Christine Kuhnert*

**NEUTRAL & ELONGATED LUMBAR POSITION**

ELONGATED LUMBAR POSITION



The intraabdominal pressure is increased through stronger engagement of pelvic floor and abdominals.



Through increased abdominal engagement the lower front ribcage closes softly, which elongates the lumbar spine upwards.

Through increased engagement of pelvic floor and the lower portions of the abdominals, the lumbar spine is elongated downwards.

*Gesunder Rücken, John Tanner*

**NEUTRAL POSITION • ELONGATED LUMBAR POSITION • SEGMENTAL MOVEMENT**

**NEUTRAL POSITION**

Generally speaking in Pilates Essentials we are aiming at a neutral lumbar position when we work on core stability, therefore minimal effort and global activity.

Characteristics of a Neutral Lumbar Position

Pelvic Position	Lumbar Position	Aim	Muscular Focus	Core Stability	Core Strength
Neutral	Neutral	Lumbar-pelvic stability	Pelvic floor Transversus abdominis Multifidi	Closed chain Possibly sudo-closed chain	Not applicable

**ELONGATED LUMBAR POSITION**

The increased activity of the internal and external Obliques increases the intraabdominal pressure and through even traction elongates the natural lumbar lordosis upwards and downwards.

Generally speaking in Pilates Essentials we are working with an elongated lumbar spine when doing flexion exercises in supine, spine extensions with extremity movement and core stability exercises in which greater load is placed on the lumbar spine, for example in a Table Top position. Through the involvement of the oblique abdominals and Quadratus lumborum during lateral flexion and rotation exercises, the lumbar spine is naturally slightly elongated, therefore won't be our focus during the teacher training.

Characteristics of an Elongated Lumbar-Pelvic Position

Pelvic Position	Lumbar Position	Aim	Muscular Focus	Core Stability	Core Strength
Neutral	Elongated (Natural lumbar extension is lengthened up and down)	Increased lumbar-pelvic stability	Centre Internal and external Obliques Quadratus lumborum	Sudo-closed chain Open chain	Flexion Extension Lateral flexion Rotation

**SEGMENTAL SPINAL MOVEMENT**

During segmental movement the spine is moved vertebrae by vertebrae. PELVIC CURL is an excellent example of segmental spinal movement: to initiate the movement the pelvis is tilted posterior, the spine then flexes one segment at a time peeling the spine off the mat. Once the spine is in the Bridging position the movement pattern is reversed by imprinting one vertebrae at a time into the mat to finally establish a neutral alignment again.

Characteristics of Segmental Spinal Movement

Pelvic Position	Spine	Aim	Muscular Focus	Core Stability	Core Strength
Will vary during the exercise	Spinal segments are individually moved	Mobilisation of the spine  Strengthening and releasing of the involved musculature	Multifidi	Not applicable	Flexion Extension Rotation Lateral flexion
			Muscles involved		
			Pelvic floor Transversus abdominis Internal and external Obliques Rectus abdominis Quadratus lumborum <i>Erector spinae</i>		

EXAMPLES

Name five Pilates Essentials exercises and/or exercise variations in which the lumbar spine is in a neutral and five in which it is in an elongated position. Add five exercises that primarily focus on segmental spinal movement.

Neutral Lumbar position	Elongated Lumbar Position	Segmental Spinal Movement

Define the term 'Neutral lumbar Position' in your own words

---



---



---

Define the term 'Elongated lumbar Position' in your own words

---



---



---

**FORWARD FLEXION IN SUPINE**

In supine exercises in which we flex the thoracic spine, for example in CURL UP, axial elongation, a neutral pelvic alignment, elongated lumbar position and optimal shoulder organisation is the key to Pilates-success.

**KEY INSTRUCTIONS**

Gaze of Eyes	At the beginning the gaze is directed to the space just above the knees and then gradually lowers towards the thighs during the forward flexion.
Hand Position	The thumbs are close to the edge of the skull, the hands are relaxed behind the back of the head.
Chest & Arm Position	The chest is open and relaxed, the elbows are open and seen out of the corners of the eyes.
Neck & Shoulders	The neck is long and the shoulders broad. The collar bones are open. The tips of the shoulder blades lightly touch the floor or are just off the floor.
Lumbar Alignment	The lower back is elongated, lengthening equally up and down.
Pelvic Alignment	The pelvis is in a neutral position; the bony tips of the pelvis (ASIS) and the pubic bone are on one level.
Centre	The centre is strongly engaged. The pelvic floor draws in and up. The Transversus abdominis flattens the belly wall, broadening and pulling the Rectus abdominis back towards the spine.
Leg Alignment	The legs are parallel and hip distance apart with the knees pointing up.
Foot Position	The weight is evenly distributed between both; Tripods are maintained.
Breath	The breath initiates the movement and flows continuously. The exhalation promotes a strong centre and activation of the abdominal muscles. The inhalation expands and widens the back of the ribcage.



**INITIALIZATION**

Forward flexion exercises are initiated through the breath and the centre like all other Pilates exercises. Only when the core muscles are engaged are the global muscles moving the spine.

Important Note: When the abdominal wall is pushed out the pelvic floor muscles and Transversus abdominis are not adequately working and/or the load is greater than the existing strength in these muscles.

## PRINCIPLES OF CORE STABILIZATION TRAINING

---

The value and benefits of differentiated activation of core stabilizing muscles and subsequent movement integration are thoroughly researched and documented. One question that keeps arising is how much muscle activation is required for adequate core stabilization.

- The activation of the pelvic floor muscles and Transversus abdominis in synergy with the Multifidi should be adequate for core stabilization without strong load.
  - o This relates to exercises in a neutral lumbar position, where minimal load is placed on the spine.
- The activation of internal and external Obliques, as well as Quadratus lumborum is adequate during more complex movement and exercises dealing with greater internal and external loads.
  - o This relates to exercises in an elongated lumbar position, where greater loads are placed on the spine.

The long-term goal is to retrain and/or improve the reflective activation of the local muscles, in other words to facilitate adequate responses of the core muscles to internal and external influences.

### FUNDAMENTAL PRINCIPLES

- The breath must flow.
- The pelvis is in a neutral position.
- Muscular activity is adequate, but minimal.
- The lumbar spine is neutral, or if need be elongated.
- The Centre can be consciously engaged and relaxed.
  - o Pelvic floor muscles can be engaged, activity can be maintained and also completely relaxed.
- Arm and leg movement is integrated.
- Movement must be pain free.
- Movement is slow and performed in a conscious and controlled manner with minimal effort.
- Unnecessary global activity is to be avoided.
- Movement patterns are repeated and refined with presence and awareness over an extended period of time.
- The training needs to be regular; rather do less, but on a regular basis.
- When movement patterns are mastered, variations, progressions and positional changes are integrated.

### BUILD UP

- Breathing and activation of the Centre.
- Movement integration.
  - o 1. Closed chain.
    - Coordinate breath and movement.
    - Master disassociation and differentiation.
  - o 2. Sudo-closed chain.
    - Progressively increase resistance (e.g. lever length and position, additional resistance for example by using Toning Balls, etc.).
    - Work with or on instable surfaces (e.g. with the Roller).
    - Decrease core activation.
    - Vary body positions.
    - Increase coordination (integrate coordinative more challenging movement patterns).
    - Add more varying rhythms and contrast.
  - o 3. Open chain.
    - Analogue 'Sudo-closed chain'
- Design topic specific, specialized training programs.

## OPTIMAL BODY POSITION DURING TRAINING

---

This chapter revolves around optimal body positions during the training. We will be looking at optimal alignment when standing, sitting, weight bearing and lying. The short-term goal is to facilitate correct exercise execution; the long-term goal is to promote ease and efficiency in natural, day-to-day body posture.

Recruitment of superficial muscles instead of deep muscles to stabilize the body leads to overload, tension and ultimately weakening of the involved muscles, which leads to a negative change in postural alignment.

In German the word 'posture' also means attitude, which is very clever, because our inner and outer postures and attitudes do affect one another. This essentially means our posture is unique and it's adaptable, hence in Contemporary Pilates we are aiming for postural balance that is optimal for the individual. It's the kind of balance that feels wonderful, promoting free energy flow and allowing freedom of movement.

The postural patterns of a person can give you valuable information about their habitual activities (or non-activities), although this is just part of a very large picture. When there is an injury and pain, may that be physical or emotional, the body will naturally change. Temporary change is normal, the real problem are sub ideal changes that physically manifest and become subconscious, in other words habitual. All of us also have a movement history that to a certain degree shaped us. Chances are that the embodied training of a ballerina still shows at an old age or the dedicated golfer has a tendency to rotate more easily to one side than the other. Here is the good news- it's called living life, and, living life simply is not linear. Nevertheless, it's always a good time, regardless of age and ability, to move towards more postural ease and efficiency.

An optimal posture is based on alignment that permits the best biomechanical efficiency. Moshé Feldenkrais described this posture as the position from which you can move in all directions, from beginning to end with minimal resistance. There are many different viewpoints on 'ideal posture' and how it is defined and assessed. Because Pilates Essentials is a foundation education course, we will adopt a fairly standardized way of looking at posture, using the 'Plum Line Method'. This is by no means the only or best way to evaluate posture, but it certainly is a valuable tool to practice the art and craft of observing the human body.

### OPTIMAL STANDING BODY POSITION & INSTRUCTIONS

#### FRONTAL VIEW

Looked at from the front, ideally the ears, shoulders, chest, ASIS's (anterior superior iliac spine), knees and ankles are fairly symmetrical and at the same height.

Both sides of the waist are equally long and feature balanced curves.



## LATERAL VIEW

Looked at from the side, the ear, shoulder (acromion), hip (trochanter minor), knee and ankle are in one vertical line.



For the sake of clarity and communication postural alignment guidelines are helpful and somewhat necessary. It's still important to keep in mind that essentially postural balance is individual. Therefore it's important to offer training that allows a person to work with and not against their body. And as previously mentioned, not all imbalances are of purely physical nature, the way we feel and think at the time also influences the way we hold ourselves.

## INSTRUCTIONS

Tripods	The weight is evenly distributed between both feet. Three points (Tripod) on each foot carry even weight: the ball below the big toe, the ball below the little toe and the Centre of the heel.
Knees	The knees are softly extended. The kneecaps are pointing forward.
Pelvis	The pelvis is neutral (ASIS and pubic bone are on one plane). The hip bones are horizontally balanced.
Spine	The spine is long (mild traction from the tailbone downwards and the crown of the head upwards) with its natural curves aligned. The length is maintained with minimal effort.
Ribs	The ribs are soft.
Shoulders	The shoulders are open and relaxed (the collar bones are always a good reference point) on the same level.
Arms	The arms are hanging relaxed alongside the body. The hands are open and soft.
Neck	The neck is long and relaxed.
Head & Gaze	The head is Centred and balances with ease on top of the spine. The gaze of the eyes is straight ahead.

*Humans, existing as the only erect species in the presence of gravity, are designed to have our primary weight-bearing joints vertically and horizontally parallel with each other and with the ground. Thus, shoulders, hips, knees and ankles line up over and above one another from the side, while from the front and rear, shoulders are level, hips level, knees point straight ahead, and feet are straight and held at the width of the hips sockets. The right and left sides, being mirror images of one another in both form and function, each bear half the weight. This creates a perfect four-socket-position frame with a right angle at each primary weight-bearing joint. This right-angled design confers the greatest structural integrity (neutrality) to the human form in relation to the force of gravity.*

*Muscle Balance and Function Development by Geoff Gluckman (as Printed in B.C. Massage Practitioner, Fall 1995).*

## OPTIMAL BODY POSITIONS & INSTRUCTIONS

A Pilates group lesson is always a compromise, because what is ideal for one person might not be ideal for another. You can neither evaluate everyone's postural patterns, nor is it possible to offer each person the exact thing they need at the given time in a group format. However, with instructions that are both clear and specific without being rigid, you can offer a safe, efficient and multifaceted training, which over time contributes greatly to optimized movement and postural patterns.

Each starting position is an exercise in itself. Take your time to set up and cue the position using verbal and tactile instructions. An accurately aligned starting position is the ideal foundation for proper exercise execution.

### SITTING

- The weight is evenly distributed between both sit bones.
- Sit directly on top or slightly in front of the sit bones.
- The spine elongates upwards.
- The thorax is directly above the pelvis.
- The legs are relaxed.

#### Sitting Positions



Tailor's Sit



Diamond Sit



Long Sit

### QUADRUPED KNEELING – 4-POINT KNEELING

- The hands are directly underneath the shoulders and the knees are directly underneath the hips.
- The weight is evenly distributed between the hands and the knees.
- The neck is a natural extension of the rest of the spine.
- The gaze of the eyes goes towards the fingertips.
- The fingertips face forward and the outside of the hands press slightly onto the floor.
- The inside of the elbows face diagonally forward; in a 45° angle.
- The forearm is spiralling inwards, while the upper arm is spiralling outwards.
- The shoulders are broad with the collar bones wide apart.
- The shoulder blades lie flat on the ribcage.
- The Centre is activated, the frontal ribs softly closed and the lower back is in its natural alignment.
- The pelvis is stabilized in a neutral position.
- The shin bones press lightly onto the floor.





## SUPINE

- The feet are hip distance and parallel with the Tripods maintained.
- The knees point towards the ceiling and are in alignment with the hip joints.
- The pelvis is neutral and the triangle between the hip bones and pubic bone parallel to the floor.
- The Centre is engaged and spine in its natural alignment.
- The weight is on the sacrum, the flat bony part of the pelvis.
- The ribs at the back are on the floor.
- The ribs in front are softly closed.
- The chest and shoulders are open and relaxed.
- The neck is long and the gaze of the eyes above the knees.
- The arms are relaxed alongside the body.



## PRONE

- The legs are (generally) hip distance apart.
- The pelvis is neutral with the pubic bone on the floor.
- The Centre is engaged to stabilize the natural alignment of the lower back.
- The front of the ribcage is in contact with the floor.
- The chest is open and the collar bones apart. They are slightly off the floor.
- The neck is the natural extension of the thoracic spine with the head balanced and the forehead on the floor or a support.
- The arms are long and extended alongside the body with the fingertips reaching back.



## SIDE LYING

- Both ankles, knees, hip bones and shoulders are stacked on top of each other.
- When looking down the body, the toes can be seen.
- The pelvis is neutral with the tip of both hip bones and the pubic bone on one plane.
- The spine is stabilized in a neutral position.
- The two sides of the waist are equally long; there is maximum distance between the hips and the ribs.
- The neck is long with the ears away from the shoulders.
- The gaze of the eyes is going straight ahead.
- The bottom arm underneath the head can be bent or extended.



## THE PELVIS & PELVIC FLOOR

---

### THE PELVIS

The bones of the male and female pelvis are essentially the same; thickness, weight, width, depth and angles however can vary.



*Human Anatomy & Physiology, by Elaine N. Marieb*

- The bony pelvis comprises the two hip bones and together with the sacrum forms the pelvic girdle.
- The hip bones comprise of the following 3 components:
  - Ilium (pelvic bone).
  - Ischium (sit bone).
  - Pubis (pubic bone).
    - In the human body these three bones completely fuse around the area of the acetabulum to form one solid hip bone at the age of approximately 15.
    - All three bones meet at the hip socket (acetabulum), which together with the head of the thigh bone (femur) forms the hip joint.
- The hip bones are connected to the sacrum via the sacroiliac joints.
  - The sacroiliac joint is a plane synovial joint that is strongly reinforced by ligaments. It's a highly variable joint, which micro-movement is vital for postural and movement ease.
- In front the hip bones have a cartilaginous connection via the pubic symphysis.

The pelvis is a central point in the body, a centre from which many of our daily movements originate. All larger movements in space require a weight transfer of the pelvis.

The pelvis is also the link between the legs and the spine. The weight of the upper body accumulates downwards towards the sacrum from where it is distributed to the thigh bones via the sacroiliac joints. From there the weight keeps travelling down to the legs into the feet and to the ground. In reverse, the impact of the floor is transferred from the feet up into the legs, via the hip and sacroiliac joints to the sacrum and from there to the spine.

Our upright posture is well supported by the solid built and stability of the pelvic girdle that at the same time allows functional force transfer across the body.

## PELVIC POSITIONS

The pelvis can be tilted in various ways and planes.

*Muscles, Testing and Function, Kendall*



---

---

---

---

---

---

---

---

*Muscles, Testing and Function, Kendall*



---

---

---

---

---

---

---

---

## THE PELVIS AS A HANDLE OF THE SPINE

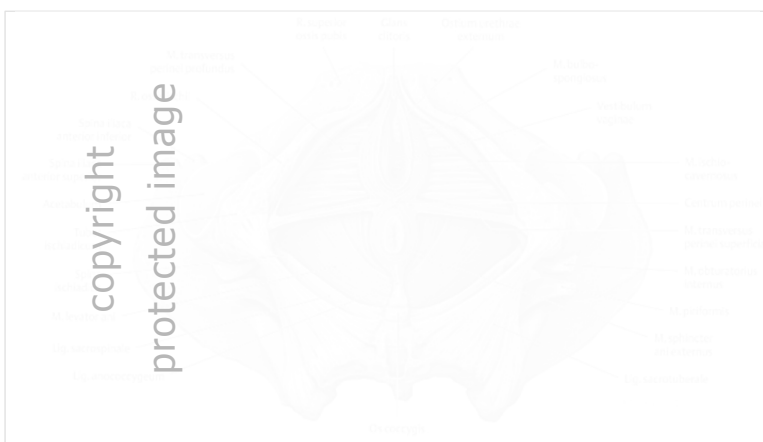
The pelvis can be looked at as a 'handle' of the spine and therefore affect the spinal alignment negatively. Here is a very simplified list of spinal imbalances and postural patterns they could possibly lead to.

- Flexion of the lumbar spine.
  - o Can lead to a so-called 'Flat Back ' or 'Sway Back' posture.
- Extension of the lumbar spine.
  - o Can lead to a so-called 'Lordotic' or 'kyphotic-lordotic' posture.
- Rotation of the spine.
  - o Can lead to a so-called 'Scoliosis'.
- Lateralflexion.
  - o Can eventually lead to a 'Scoliosis' as well.
- Translation.
  - o Can lead to a variety of postural patterns, including, but not limited to the above.

## THE PELVIC FLOOR

Despite there is a lot of thoroughly documented research available, the pelvic floor is not yet a fully understood mystery. The exact description of the myofascial elements of the pelvic floor still vary from literature to literature. The same goes for what is considered functional pelvic floor training; the mantra of one school is the red flag of another. There is still a lot to be learned and most likely interpretation of what has been learned will always vary. But then again, variation is the spice of life and ensures a wide variety of pelvic floor trainings for a wide variety of needs and wants.

In this chapter I want to give you a brief overview of the involved musculature and their functions. However, delving deeply into this rich topic would by far exceed the extent of Pilates Essentials, therefore I have made this fascinating topic the key functional anatomy feature of Pilates Flow. In Pilates Flow we will look at the anatomy in a lot more detail, discuss its body-wide influence as well as the characteristics of active dynamic pelvic floor training and its integration into Contemporary Pilates.



Basically the pelvic floor is a membrane spanned across the pelvis comprising layers of muscle and fascia. Pelvic floor ensure continence and supports the internal organs above. Strength, elasticity and the ability to relax are vital ingredients for the pelvic floor to provide dynamic stability, support proper pelvic and lumbar alignment, unload the spine, assist organ health, respiratory functionality and effortless gait.

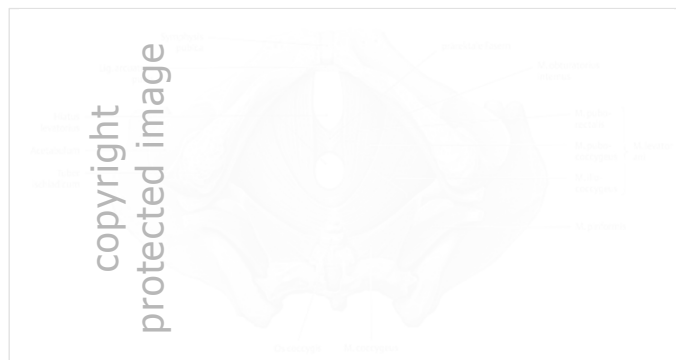
*Allgemeine Anatomie und Bewegungssystem, Prometheus*

## THREE LAYERS OF PELVIC FLOOR

### PELVIC DIAPHRAGM

- Deepest (superior) layer of pelvic floor.
- Essentially it comprises of Levator ani (Pubococcygeus, Iliococcygeus) and Coccygeus.
- It is penetrated by the rectum.

*Allgemeine Anatomie und Bewegungssystem, Prometheus*



### UROGENITAL DIAPHRAGM

- Middle, anterior layer of pelvic floor.
- It comprises of Transversus perinei profundus and superficialis as well as their fascia.
- It is penetrated by the urethra and the vagina in a woman.

### PERINEUM

- Most superficial (inferior) layer of the pelvic floor.
- It is the region between the anus and the superficial genitals.
- It comprises of Sphincter ani, Ischiocavernosus, Iliocavernosus and Bulbospongiosus.

## THE THREE MAJOR FUNCTIONS OF THE PELVIC FLOOR

### Contraction

The pelvic floor surrounds the lower portion of the urethra and rectum, there adequate pelvic floor strength and the ability to contract is important to ensure continence in both men and women.

### Relaxation

The pelvic floor needs to be able to relax completely during urination and defecation.

### Reflexive Resisting

Reflexive resisting means that the pelvic floor muscles contract in response to increased pressure within the abdominal cavity.

The ability of the muscles to resist on a reflex basis is important to maintain continence, especially when we are coughing, sneezing, laughing, carry heavy objects, etc.

## PELVIC FLOOR RESILIENCE

A functional pelvic floor is resilient, in other words strong, elastic and adaptable. It can adequately contract, maintain activation and completely relax. Pelvic floor functionality is essential for our holistic wellbeing.

### A Functional Pelvic Floor Positively Influences the Following

- Balanced alignment of the pelvis and the spine.
- Dynamic lumbar-pelvic stability.
- Freedom of movement in the hip joints.
- Sense of lightness in movement.
- Unrestricted breath.
- Relaxed neck and jaw.
- Optimal organ placement and health.
- Continence.
- Fulfilling sex life.
- Free energy flow.
- Internal power and inner lift.
- Even temper and sense of calm.

### Factors Influencing Pelvic Floor Functionality

---

---

---

---

---

---

---

---

---

---

## THE SHOULDERS

The shoulder complex also is a fascinating and extensive topic that's worthwhile exploring in depth and details. Alike pelvic floor, an overview and shoulder basics will have to suffice during this foundation training. Still, you get the tools you need to get started and further your knowledge as you go. At art of motion functional shoulder anatomy, evaluation and postural based shoulder training are explored in depth in Pilates Integration.

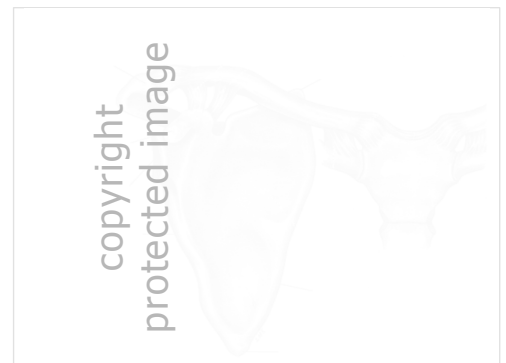
### THE SHOULDER GIRLDE

#### The Shoulder Girdle Comprises Four Bones

- Two shoulder blades (scapulae).
- Two collar bones (claviculae).

#### JOINTS

- The only true joint connection to the trunk is the sternoclavicular joint.
- The acromioclavicular joint links the clavicle and the scapula.



*Manual of Structural Kinesiology. Thompson, Floyd*

#### COLLAR BONE / CLAVICULA

The collar bones are delicate, long swung bones that connect the arms and the shoulder girdle with the trunk. They are also kind of a shock absorber between the shoulder blades and the sternum. You can also look at the collar bones as an extension of the arms, or vice versa. Because of their mobile joint connection to the sternum, their length and the placement of the arms, we can move the arms freely.

#### SHOULDER BLADE / SCAPULA

The shoulder blades are stabilized through muscular forces, therefore their connection to the ribcage is not classified as a true joint. A balanced length-tension relationship between the shoulder girdle muscles is essential for optimal shoulder organization und unrestricted movement. In addition, during respiration and arm movement the shoulder blades are dynamically stabilized, which requires the scapulae to have a certain degree of gliding movement between the Serratus anterior and Subscapularis.

### PRIME MOVERS OF THE SCAPULA

Five muscles are considered prime movers of the scapula, providing dynamic stability and movement.

- They attach on the axial skeleton and on the scapula or clavicle.
- They don't attach to the humerus.
- They provide dynamic shoulder girdle stability.

#### Anterior

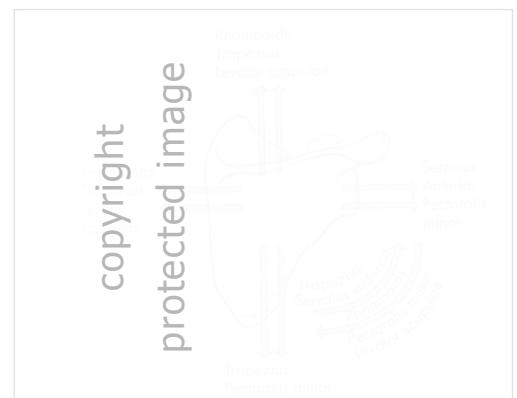
The main movements are protraction and depression.

- Pectoralis minor.
- Serratus anterior.

#### Posterior

The main movement are retraction and elevation.

- Trapezius.
- Rhomboiden.
- Levator scapulae.

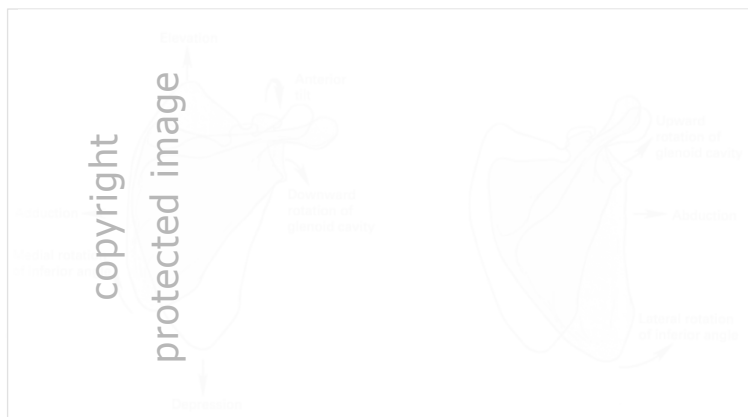


*Manual of Structural Kinesiology by Thomson, Floyd*

## SCAPULA MOVEMENT

The scapula can move in various directions.

- Elevation.
- Depression.
- Protraction (abduction).
- Retraction (adduction).
- Upward rotation.
- Downward rotation.



*Muscles, Testing and Function, Kendall*

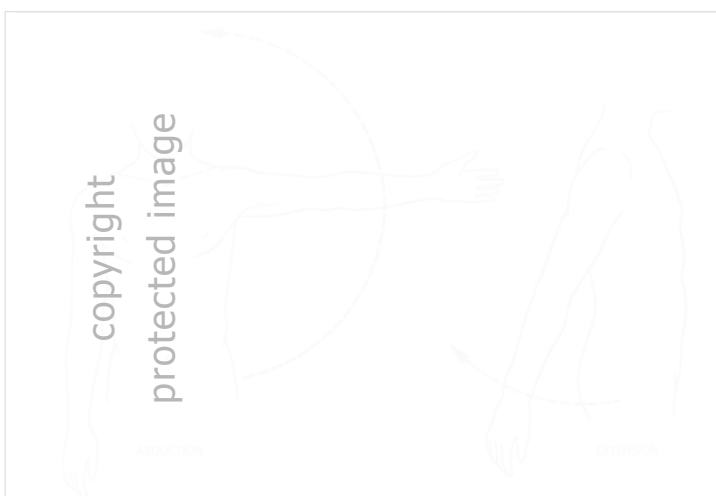
## SHOULDER JOINT / GLENOHUMERAL JOINT

The shoulder joint is a synovial ball and socket joint. It has a very shallow socket in comparison to the hip joint and is therefore more mobile than stable. It is this mobility that gives us such great freedom of movement, practicality and way to express ourselves creatively through gesture. Shoulder stability is largely dependent on the proper functioning of the deep local muscles surrounding the joint. Because it's a joint that heavily relies on muscular stability, the potential for tension and injury is higher than in a joint that is more securely stabilized by the joint capsule itself.

## SHOULDER JOINT MOVEMENT

The shoulder joint has three-dimensional freedom of movement.

- Flexion.
- Extension.
- Adduction.
- Abduction.
- Horizontal adduction.
- Horizontal abduction.
- Medial rotation.
- Lateral rotation.



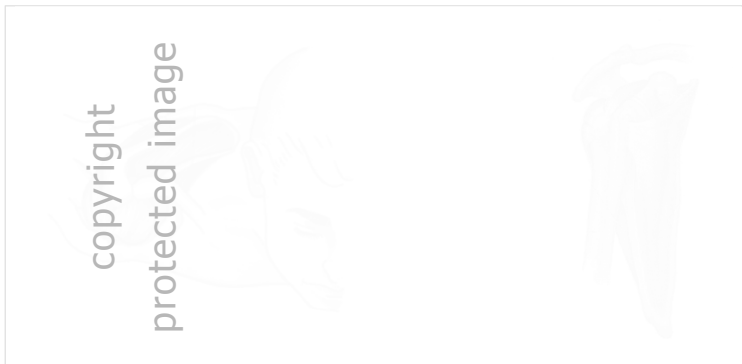
*Muscles, Testing and Function, Kendall*

**THE ROTATOR CUFF**

The rotator cuff comprises four muscles.

- Supraspinatus.
- Infraspinatus.
- Subscapularis.
- Teres minor.

All four are local, single joint muscles. They rotate the shoulder joint, however their main function is to centrally stabilize the humeral head in the capsule. Because they are mainly tonic, adequate endurance strength at low load is an essential training component.



Functions

Stabilize the shoulder joint.

Lateral and medial rotation of the shoulder joint.

Weak abduction of the shoulder joint.

*Das Muskelbuch, K.P. Valerius et al*

**SHOULDER ORGANISATION**

Many people complain of tension in the neck and shoulders, the upper back and around the shoulder blades. In Contemporary Pilates shoulder organisation starts at the pelvis. A dynamically stabilized, neutral pelvis allows axial elongation and a balanced relationship between the pelvis and the thorax. This balance allows three-dimensional expansion of the ribcage, which is key to optimal shoulder girdle alignment and relaxed neck muscles.

Key Points for Verbal and Tactile Cueing

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---





## FLEXIBILITY

---

The natural range of motion in a joint is mainly limited by its joint structure and degrees of freedom, as well as surrounding soft tissues.

Flexibility, in combination with adequate mobility, is a joint's ability to move freely within its natural full range of motion. Adequate flexibility is an important factor for joint health, muscular balance and therefore movement ergonomics, as well as our general wellbeing. In postural malpositions length-tension relationships within a muscle or the muscular system as a whole are imbalanced. Facilitating more balanced muscular relationships may not resolve all postural issues, but will definitely contribute to improved physical functionality and a sense of ease in the body.

### STRETCHING

In muscular contractions a muscle often visually shortens. In stretches a muscle visually elongates in its entirety beyond its natural resting length. Because muscles can only pull not push, stretching requires the opposing muscle or muscle group to contract, or we have to adopt a specific body position, use gravity, a person or an aid to lengthen a muscle or muscle group effectively. It is necessary to know the attachments of a muscle to create the biggest distance between its ends and achieve the best stretch possible.

### ART OF STETCHING

There is a large variety of stretching techniques (and opinions about them). Below is a selection of what has been working for us.

- Dynamic Stretching: Rhythmical and in coordination with the breath.
- Slow Eccentric Action: Slow active lengthening in coordination with the breath.
- Post-Isometric Relaxation: Isometric contraction followed by relaxation.
- Post-Isometric Stretching (reciprocal action): Isometric contraction followed by release and subsequent stretching.
- Antagonistic Release (reciprocal inhibition): Contracting the opposing muscle(s) to facilitate relaxation in the target muscle(s).

Some stretching techniques have been proven to be more efficient than others, however a detailed analysis would exceed the framework of this chapter. From my experience all I can say is that some techniques work better for certain muscle groups and different body types. On-going research is conducted in this fascinating area and it's certainly worthwhile looking up newly released articles and specialized literature, but it's equally important to trust and value your own experience in this controversial field.

Whatever your take on stretch training may be, the Pilates method offers a beautiful opportunity to improve flexibility and mobility in a safe and enjoyable manner. When movements are executed correctly stretching and relaxation go hand in hand with strengthening.

#### The Filament Gliding Model

Imagery is a great way to assist effortless stretching.

- Imagine muscle filaments gliding in a fluid, smooth manner together and apart.

## STRETCHING FOCUSED CUEING

In Contemporary Pilates we often work on both strength and flexibility at the same time; strengthening one part of the body and gaining more length or relaxation elsewhere. With specific cueing the focus can be placed on either the strength or the flexibility component of an exercise.

When the focus lies on length and flexibility the cueing focus can be as follows:

- Focus on the antagonist during concentric contractions.
- Focus on the agonist during eccentric muscle actions.
- Focus on engaging the opposing muscles to assist lengthening in the eccentrically working muscles.

## THE IMPORTANCE OF ADEQUATE LENGTH

- Tight antagonists restrict the contraction ability and therefore the strength potential of agonists.
- Local tension negatively influences global efficiency.
- Strong and flexible muscles are more resilient, therefore less injury prone.
- Adequate muscle length promotes balanced postural alignment.
- Adequate muscle length is important for maintaining adequate joint mobility and health.
- Adequate muscle length is important for preventing degenerative joint conditions.
- Adequate muscle length promotes blood circulation and oxygenation of the body.
- Adequate muscle length improves lymphatic flow.
- A relaxed muscular system positively influences the nervous system.
- Adequate muscle length improves energy flow.
- A relaxed body is more spacious.
- A relaxed system perceives and senses more easily and more refined.
- Adequate muscle length is important for taking care of the body, especially when aging.
- Adequate muscle length is important for daily tasks. Restrictions cannot only lead to physical, but emotional and social downward spirals.
- Adequate flexibility feels amazing!



## RELAXATION

Relaxation during Pilates has nothing to do with 'slouching', but with letting go of unnecessary tension. As some muscles relax, others can work efficiently without undue resistance. I firmly believe that a relaxed body gains functional strength faster. A relaxed body also perceives more easily and a lot more refined, the parasympathetic nervous system can do its rejuvenating magic, energy flows better and organ health is promoted. Let tension melt!

## DISCOMFORT & PAIN

---

Injury or pain in one part of the body will inevitably affect other parts, including the muscular system. To unload the painful area surrounding muscles will partly take over functions of inhibited ones, which eventually leads to strain and tension in these muscles. Those that are inhibited get weaker, and often tense too. As a result, movement patterns change, joint alignment, and therefore posture, is negatively affected, which sets a malicious downward spiral into motion.

No one should feel in pain during a Pilates lesson. Therefore it's important to offer exercise variations and modifications to enable your participants to choose what is right for their body at the given time.

The more teaching and observation experience you have, the easier it will be to master this challenging task. And the more experienced and aware your participants become, the easier it will be for them to make the most appropriate choice.

CONTEMPORARY PILATES MATCHES A PERSON'S ABILITY.

### Modification for Back Pain in Supine

- Ensure and if need be support the neutral pelvic and spinal alignment.
- Engage the Centre or assisting abdominal muscles more strongly.
- Put a low support underneath the head and if need be a very low support underneath the top of the shoulders.
- Reduce the load (lever length, range of motion, resistance) to match the existing strength.
- Increase the base of support.
- Support the movement with an aid.

### Modifications for Pain in the Lower Back in Prone

- Engage the Centre more strongly and elongate the lumbar spine.
- Ensure and if need be support a neutral pelvic alignment.
- Elongate the lumbar spine and if need be place a support underneath the ASIS.
- Decrease the load to match the existing strength.
- Increase the base of support.
- Open the legs wider.

### Modifications for Pain and Tension in the Neck during Forward Flexion in Supine

- Engage the abdominals more strongly.
- Organize the gaze and align the head to reduce load placed on the neck.
- Decrease load by changing arm position.
- Decrease load in general to match the existing strength.
- Support or relax the head on the floor.
- Reinforce a relaxed breath and respiration flow.

Important Note: Should the pain persist it's recommendable to discontinue the practice and seek advice of an allied health professional.

Comment: Some people, especially in the beginning, find it hard to differentiate 'real' pain caused by faulty alignment, compression or reinforcement of existing weaknesses and imbalances from the 'normal' pain of working or stretching muscles. It is up to them to tune into their body, but it's up to us to deliver a training that promotes tuning in and becoming more aware, not just stronger and fitter.

## IMBALANCES & TRAINING

---

Physical imbalances can have a multitude of reasons. It is difficult and sometimes impossible to find the cause, but it's possible to recognize it and modify the training accordingly.

Training aims vary accordingly to the body conditions and individual characteristics of a person, as well as their personal goals. I have listed a few topic related key words.

### GENETIC PREDISPOSITION

- Maintain and optimize physical wellbeing and functionality.
- Evaluate progress.
- If need be refer to an allied health professional.

### FUNCTIONAL IMBALANCES

- Recognize the pattern.
- Question the need or usefulness of the pattern.
- Make the person aware to the degree that is appropriate.
- Optimize the movement patterns.
- Evaluate progress.
- If need be refer to an allied health professional.

### COMPENSATION PATTERN

- Recognize the pattern.
- Look for the cause.
- In the meantime optimize movement patterns.
- Evaluate progress.
- If need be refer to an allied health professional.



---

## TEACHING METHODOLOGY & DIDACTICS

---

### TEACHING PILATES

#### TEACHING PILATES DOESN'T MEAN DOING PILATES!

- Keep in mind that teaching Pilates and doing Pilates are two different things. Teaching doesn't replace your own practice.
  - Create your personal 'Body Maintenance Program' to step by step embody the method.
  - Not only your body benefits from participating in other instructors' lessons, but you will always learn something and gain new insights and inspirations.
  - As a Pilates teacher you are a role model for your participants. Make sure you are looking after your own body and enjoy your own practice time, because it's a joy you will embody and pass on to your students.
  - When you demonstrate exercises in class, stay with the lowest level participants as much as possible. Verbally cue or demonstrate advanced versions only a couple of times.
  - For many of your participants their Pilates lesson is the highlight of the day; give them the attention they deserve and the movement experience they look forward to.
  - Some participants might be a bit less motivated or their motivation is based on their physios advice, pain or the latest article they read about Pilates. Whatever it is, they got out of the house and made it to the studio, this alone is reason to give them a pat on the back.
  - Let your personality show and shine in your classes, this is what makes them unique.
  - Thorough knowledge is important and certainly adds to the work, however, presence, a genuine interest in your participants and wholehearted belief in what you do is key to success.
- 
- 
- 

### AMBIENCE

A Pilates training lesson can be a movement experienced flavoured by you.

Dimmed lighting, candles, an oil burner in the corner and mellow music can most definitely contribute to creating a certain ambience and mood. However, simplicity, brightness and stillness are equally beautiful to create a serene atmosphere that promotes calm alertness.

- Dimmed Light: Dimmed light can be very relaxing and help someone to tune inwards, but it can also be counterproductive. Some people lack alertness and feel sleepy when there isn't enough light and for visual learners, especially those with visual impairment, seeing can be an effort.
- Fragranced Oils: Different fragrances evoke different emotions. They can stimulate, calm, bring back memories and create new positive associations. So no doubt, a faint scent can contribute to the movement experience, however, it can also do the opposite. I would use fragranced oil very sparingly and if possible for individual use only.
- Music: Music totally is a matter of taste and the panpipes someone loves drive someone else crazy. Generally I recommend music with few or no vocals, so the teacher and the singer don't compete too much. To make it easier for participants to stay with the breath, rather than the rhythm of the music, it's recommendable to use music with a rather discreet beat. If in doubt, ask your participants.
- Silence: Silence is also beautiful. There is definitely sound in 'silence' and magic in the rhythms the breath creates.

## CLASS ORGANISATION

Organize your participants so everyone has adequate space around their mat and can see you as easily as possible. When laying out or having your students lay out the mats, think ahead of what you are going to do in class. Generally it's best to stagger the mats and have the short or long side facing the front of the room; depending on the choreography.

Still, no matter how hard you try, if you have a certain number of participants or poles in the room, there will always be a person who can't see you that easily. Therefore it's important to change your position in the room and give very clear, specific and easy to understand instructions.

## INTRODUCTION

After introducing yourself it's always useful to layer in a few words about the many beneficial and/or some key aspects of the Pilates method. Tell your participants what a wonderful practice is awaiting them. Every now and then remind them that a group lesson is a balanced whole body training, but it's not the right format to address severe and acute physical issues or special conditions. People with specific or special needs are much better off in customized classes or one-to-one training taught by a movement therapist.

## WARM UP

In Pilates there is no such thing as a specific warm up, but for the sake of communication ease, let's call the beginning of a class 'warm up'. The first 10 minutes of a class should ideally bring the mind to the presence and the current state of the body, the exercises should awaken the Centre, warm up the muscular system and prepare the body for the training session ahead.

At Contemporary Pilates we have no set rule that defines in what body position to start a class. The Pilates Essentials repertoire limits your choice somewhat, but in combination with Pilates Flow the choice is yours if you want to start standing, sitting, in a resting position or supine. For now, let's look at the benefits of standing and supine.

### Advantages of a Standing Warm Up

- The instructor gets an overview of body and postural types, as well as the body language of the participants.
- The participants can get to know and learn about their standing posture.
- Eye contact can be established.
- Large muscle groups can be warmed up and major joints mobilized fairly easy.
- Pelvic floor exercises can be executed against gravity.
- Balance exercises can be integrated.
- Lateral flexion and rotation can be executed without restriction.

### Advantages of a Supine Warm Up

- Participants can easily relax.
- The floor gives tactile feedback for the alignment of the spine.
- Breathing exercises can be beautifully integrated.
- Awareness can be brought to the body with the 'distraction' of doing something.
- Pelvic floor exercises can be executed with minimal intraabdominal pressure.

Regardless of how you start the class, the main goal is to bring awareness to the body, the Centre and the breath, as well as to warm up and facilitate ease in the musculoskeletal system.

Give your participants adequate time to 'arrive' and create their own movement space.

WARM UP STRATEGIES & EXERCISES

- Breath.
  - Bringing awareness to the breath.
  - Bringing awareness to the natural breathing rhythm.
  - Paying equal attention to the inhalation and the exhalation.
  - Instructing Pilates Breathing.
- Centring.
  - Bringing awareness to the pelvic floor.
    - Engaging pelvic floor, holding the activity, releasing completely.
  - Bringing awareness to the Transversus abdominis.
    - Tightening and releasing the abdominal 'corset'.
  - Bringing awareness to the Multifidi.
    - Shifting the weight forwards and backwards in standing.
  - Finding one's own central point that requires minimal effort.
- Mobilisation of the spine: releasing back muscles and activating abdominal muscles.
  - Suitable exercises:
    - ROLL DOWN.
    - PELVIC CURL.
- Releasing the lateral back musculature (lumbar area).
  - Suitable exercises:
    - TIC TOC.
- Balance exercises.
  - Suitable exercises:
    - FOOTWORK.
    - KNEE LIFT.
    - AEROPLANE.

**BREATHING INTEGRATION**

In Pilates we synchronize breathing and movement patterns to achieve the best results, hence you will always cue conscious breathing. To promote relaxation in the neck and shoulders, as well as deep pelvic floor engagement the lips and jaw remain relaxed. At the beginning the synchronicity and way of breathing is a challenge for most people. If a person is getting too worried about 'getting it right' or starts to feel unwell, simply remind them to breathe naturally and focus on the movement pattern instead; effortless synchronicity comes with practice.

Talking from experience, teaching the breath-movement synergy is one of the big challenges at the beginning of your teaching career. No panic and don't stress! As long as your participants breathe, they are fine and you will conclude the class with a sense of success instead of a headache.

**FLOOR EXERCISES**

When sequencing exercises the whole body needs to be considered and trained in a balanced manner.

Pay special attention to the balance between agonists and antagonists when structuring a floor-based routine. The sequencing also is very important, therefore it's a topic we will discuss thoroughly in the lesson planning component of the course.

With a sound understanding of functional anatomy and the Mechanical Pilates Principles, a Pilates Essentials lesson can be taught in a fluid manner that requires very few breaks. It's all a matter of sequencing.





## COMMUNICATION & TEACHING

- It is our responsibility to teach an exercise or lesson structure in a way that can be understood by our participants. It is important to cater for different learning styles and adapt to the students' level of understanding; to speak 'their language' so to speak.
- It is the responsibility of the participants to pay attention and listen with an open, receptive mind.

## LEARNING STYLES & INSTRUCTIONS

In a group lesson there will always be people with different learning styles. As an instructor this is something you have to take into consideration and teach accordingly, using a variety of instructions that can be understood by the variety of people in your class.

- Visual learner.
  - Visual learners like to watch you and copy.
  - Your form and execution needs to be competent and clear.
- Auditory learner.
  - Auditory learners listen and will rely greatly on your verbal instructions.
  - Your voice needs to be clearly audible and well modulated.
  - The exercise description needs to be clear and precise.
  - Technical and kinaesthetic cueing, as well as imagery are equally valuable.
- Kinaesthetic learner.
  - Kinaesthetic learners rely on their feeling and learn by experience.
  - They need time and occasionally silence to feel and process information.
  - Kinaesthetic and tactile instructions, as well as imagery works well for kinaesthetic learners.

## GETTING STARTED

Instructing clearly and specifically is an important aspect of teaching Pilates. This, at the beginning requires quite a bit of preparation. Here a few tips for getting started.

- Pick five exercises from your lesson plan and note one technical, kinaesthetic, imaginary and tactile instruction for each of them.
- Describe exercises when you do your own practice.
- Participate in lessons on a regular basis and note which instructions were effective and which weren't, which ones worked for you and which didn't.
- Not many of us like to hear ourselves on tape or even worse watch ourselves on DVD, however, these are incredibly valuable tools to reflect on and improve our teaching skills and exercise execution.
- Every now and then it's worthwhile getting a coaching session with an experienced Pilates instructor to fine-tune your own practice.

## PILATES LANGUAGE

It's beneficial to create a Pilates-specific vocabulary for yourself.

- Large, strong, global muscles = strong vocabulary.
- Small, deep, local muscles = soft vocabulary.
- Strong muscular activity = strong voice and vocabulary.
- Mild activity and gentle movement = gentle voice and vocabulary.

## TEACHING EFFECTIVELY

With regular movement and teaching practice you will embody the repertoire so deeply that multifaceted cueing becomes second nature. I know, in the beginning this seems hard to believe, but did you think you would drive from A to B holding a relaxed conversation with a friend when you learnt how to drive a car? Probably not, I certainly didn't. Once your teaching communication is in flow, it's time to refine and expand your skills, to respond even more effectively to your clients' 'languages'.

## LISTENING & LEARNING

If a person tells you how amazing the deep blue of the ocean in stark contrast with the white of the sand was, you are talking with a visual learner and/or someone who takes notice of their surroundings.

- Teaching example: DART.
  - o Demonstrate the exercise.
  - o Imagine the sternum to be an airplane that is rolling forward and then taking off in a long arch.

If a person tells you how beautiful it was to listen to the crashing waves in the morning before any other noises filled the day, you are speaking with an auditory person and/or someone who pays attention to surrounding sounds.

- Teaching example: DART.
  - o The sternum is sinking towards the floor and then gliding forwards to lift off the floor in a long arch that is extending the upper back.

If a person tells how great it was to walk barefoot in the cool, soft sand while feeling the silky warmth of the evening sun on their shoulders, you are speaking with a kinaesthetically focused person and/or someone who values how things feel.

- Teaching example: DART.
  - o Feel the weight of the sternum as you let it sink towards the floor. Notice the contrasting lightness as you lift it off the floor in a long arch.

## MIRRORING BODY LANGUAGE

To build rapport we often subconsciously mirror someone's body language and adapt to their speech. It's a very effective way to connect with another person and find a 'common language'.

In teaching it's a valuable tool to bring your message across.

## NEGATIVE INSTRUCTIONS

Negative instructions are to be avoided. That's easier said than done, because most of us are trained to see the fault, for example faulty movement patterns, compensations and postural imbalances. Negative cueing reinforces negative patterns by focussing on them and because the brain doesn't recognize no. So if for example an instructor keeps saying "don't arch your lower back", she is successfully imprinting "arch your lower back" into the participants' subconscious.

In addition, negative instructions require double thinking. First I need to think about what is wrong and secondary what is correct. If there is no suggestion for improvement given, negative instructions also require me to already know the right answer.

Also, Pilates should establish positive associations in regards to the body, movement and skills. A person that feels generally capable, appreciated, happy in their body and positive about their movement ability, progresses faster than someone who has no sense of their body and feels unable, uncoordinated and incompetent.

## CHOICE OF WORDS & VOICE

Appropriate choice of words and the quality of your voice are important components in teaching.

Here is a collection of not so appropriate cueing examples (I haven't made them up.....).

- Would you seriously ask a group of football players to balance a cup of tea on their hip bone?
- Having rural Australian people sense the feel of snow is kind of difficult.
- Are you wondering why not everyone in class appreciated the visualisation of being pinned down with sword?
- Yelling at a group of mums to imprint their spine in mud is somewhat far fetched.
- Instructions including disrespectful comments about other people, butterflies on sticks or Jesus on the cross are taboo without exception.

Here a few key points.

- Match imagery to the audience.
- Choose vocabulary that matches the audience.
  - Avoid too many technical and anatomical terms for the general public.
  - Avoid too many flowery images for more left-brain oriented people.
  - Avoid too many square angled instructions for more right-brain oriented people.
- Vary your voice and interpret exercises.
  - When the shoulder blades are gliding smoothly, the voice is as smooth as silk.
  - When the abdominals are strongly engaged, the voice is firm, matching the intensity of the exercise.
- Pilates is versatile and you don't need to whisper for the whole duration of the class!

## FACE TO FACE

I recommend facing your participants when teaching a class. This way you can make eye contact easily, observe what's going on in the room and instruct accordingly.

In Pilates we mirror the movement of the participants, which often requires mirrored 'right-left' instructions.

## CONNECT • CORRECT • PRAISE

- Connect: Assure that you make eye contact with each participant.
- Correct: Give general, but also take the time to give some individual corrections.
- Praise: Give general and individual praise generously.

## TEACHING SUCCESS

As discussed voice and wording are important teaching elements, however, it's your body language that is the key to success. Here is the general rule.

- 7% of what you say is received.
- 38% of your voice modulation and rhythm is perceived.
- 55% of your body language is perceived.

Presence, a genuine interest in your participants and love for what you do is the key to success!

## SCOPE OF PRACTICE & YOUR OWN WELLBEING

When you start teaching Pilates in a group format you will probably execute many of the exercises together with your participants, which is normal and absolutely ok. Many beginners rely on visual instructions at first anyway, so it's a bonus for them to move with you. In the beginning it's also easier to teach this way, because movement patterns and rhythm are demonstrated and cueing comes from within, basically from what is experienced then and there. The more you embody the repertoire and gain teaching routine, the more you will be able to walk around cueing verbally and through tactile instructions. With practice, your tactile and verbal instructions will be so smooth that the class flows as if you would move with your students the whole time.

Tactile instructions are a powerful teaching tool and many "aha"-moments happen through touch, however, there are a few things to consider.

### Scope of Practice

- As a Pilates instructor you can only apply positioning and guiding tactile instructions.
- As a body worker or therapist your scope of practice is of course much broader. However, I still recommend limiting your hands-on skills to the above tactile instructions, as one of our goals is for people to be and stay in charge of their own body.

### Agreement

- Inform your participants at the beginning of the class that you will be walking around and use touch as a teaching tool. Tell them why you do it and how it is going to benefit them. Let them know that tactile instructions are not necessarily corrections, and that they can let you know if they prefer not to be touched.

## IMPORTANT FOR YOU

### Your Physical Wellbeing

- Pay attention to your own body and the position you put your body in during teaching.
- Make sure that you don't always demonstrate unilateral exercises on the same side and then tactile cue when participants swap sides, otherwise you end up with serious imbalances in your own body.

### Your Training

- The more you walk around to tactile cue during a class, the less you move. And even if you move, you will not get quality training when demonstrating exercises. However, as an instructor you are a role model and for your own good, practice is incredibly important!
- I recommend creating a 'Body Maintenance Program' for yourself. When it comes to exercise quantity be realistic; rather do less, but do it!

## MY PILATES ESSENTIALS BODY MAINTENANCE PROGRAM

PILATES ESSENTIALS LESSON PLAN

Date \_\_\_\_\_

THEME *(optional)* \_\_\_\_\_

There are many different ways to structure a balanced and holistic Pilates Essentials Lesson. You can use this template or you can create your own. The grey shaded fields can be moved or removed.

STARTING POSITION	TYPE	EXERCISES
BREATHING CENTRING	Various	
STANDING	Spine articulation Footwork Shoulders Lateral flexion Rotation	
PRONE	Thoracic extension	
SITTING	Various	
SUPINE	Various	

# art of motion

STARTING POSITION	TYPE	EXERCISES
SIDE LYING <i>First side</i>	Various	
TRANSITION	Supine or prone into sitting	
SIDE LYING <i>Second side</i>	Various	
PRONE	Thoracic or spine extension	
REST POSITION		
WEIGHT BEARING	Various	
SITTING <i>or</i> KNEELING <i>or</i> STANDING	Active or passive relaxation or spine articulation	
<i>Finish in</i> SITTING <i>or</i> STANDING	Various	

REST POSITIONS can be integrated at all times.

## CHECKLIST

- |   |                          |   |                          |
|---|--------------------------|---|--------------------------|
| Is the level appropriate for the participants   | <input type="checkbox"/> | Is the level continuous                     | <input type="checkbox"/> |
| Is the structure progressive and logical  | <input type="checkbox"/> | Are variations and modifications integrated | <input type="checkbox"/> |
| Is the whole body involved  | <input type="checkbox"/> | Are agonists and antagonists balanced       | <input type="checkbox"/> |
| Are stability, strength, mobility, stretching and relaxation components integrated in a balanced manner | <input type="checkbox"/> |   | <input type="checkbox"/> |

## Notes

---



---



---



---





Joseph Pilates firmly believed that his innovative exercise method is the best way to achieve health and happiness. This is the big goal and like everything that promises positive effects, it should become part of our daily life. It requires dedication and persistence to master this multifaceted movement method, but the benefit for body, mind and spirit will reward the time and energy invested. That's a promise!



---

## THE PILATES ESSENTIALS REPERTOIRE

---

## ROLL DOWN

### APPLIED MECHANICAL PRINCIPLES

Axial Elongation • Segmental Spinal Movement • Centring • Breathing

### EXERCISE AIMS & BENEFITS

---



---

### STARTING POSITION

*Optimal Standing Body Position.*

### MOVEMENT & BREATHING PATTERN

The exercise can be executed in one, two or more breaths.

<i>Inhale</i>	The ribcage expands out to the side and the spine elongates.
<i>Exhale</i>	The Centre engages. The roll down motion is initiated by tilting the head, followed by segmental movement of the thoracic spine. The pelvis remains neutral. The knees can be slightly bent or softly extended.
<i>Inhale</i>	The posterior part of the ribcage expands increasing the stretch in the upper back and between the shoulder blades.
<i>Exhale</i>	The abdominal muscles engage more and the roll down motion continues until the fingertips are close to the floor. The hip joints remain as open as possible.
<i>Inhale</i>	The stretch at the lowest point is maintained. The Centre stays strongly engaged as the breath is directed into the mid and lower back.
<i>Exhale</i>	The abdominals lift the pelvis into a neutral position; the hamstrings naturally engage to assist the motion. The lumbar spine follows the pelvis. The hip joints open and the lower back elongates.
<i>Inhale</i>	The Centre stays engaged while the inhalation is directed into the lower back.
<i>Exhale</i>	The segmental spinal movement is continued until the spine is in a neutral position with the head balanced on top.

### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

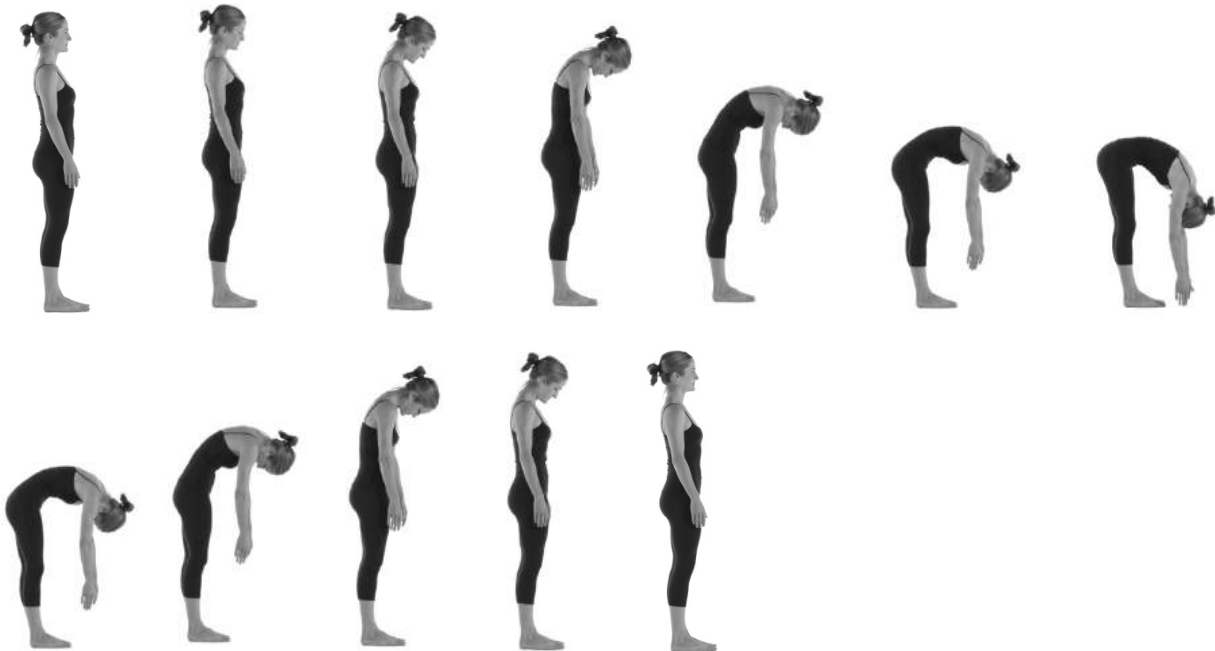
Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

## ROLL DOWN

### ROLL DOWN



### ROLL DOWN with the Knees Bent



## REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

RHYTHM CHANGE	The breathing and movement rhythm can be varied. The exercise can be performed with a flowing breath.
AGAINST A WALL	Execute the exercise against a wall.
MONKEY	The position is held at the lowest point where the lumbar spine is flexed. The knees bend and extend in the rhythm of the breath.
ROLL DOWN & LEG STRETCH	Roll down as far as possible. At the lowest point the pelvis tilts anteriorly, the sit bones 'open' and the lower back lengthens. The hamstrings stretch.
LEG STRETCH	At the lowest point where the lumbar spine is lengthened and the pelvis (by sense) is held in an anterior tilt. The knees bend and extend in the rhythm of the breath.
PILATES V	The thighs are slightly turned out with the heels touching. The heels can remain on the floor or can be lifted off the floor a little bit.
MEDIAL ROTATION	The thighs are internally rotated. The distance between the feet can vary.
SHOULDER STRETCH	The hands are interlaced behind the back.

ROLL DOWN

MONKEY



LEG STRETCH



PILATES V



MEDIAL ROTATION



SHOULDER STRETCH



TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Technical* The weight is evenly distributed between both sides of the body, the Tripods are in place. Maintain the balanced weight distribution throughout the movement.

*Technical* The exercise is initiated by engaging the pelvic floor muscles and deep abdominals

*Technical* The movement is initiated by tilting the head in a small nodding motion forward. The deep, short muscles that attach the back of the head to top of the spine lengthen.

*Kinesthetic* Feel how the deep, short neck muscles release and space underneath the edge of the skull opens and softens.

*Kinesthetic* Feel each segment of the spine move individually. Be aware of any tensions and where they are; consciously breathe into these areas until you feel the tension melting.

*Kinesthetic* Feel how the muscles that run along spine get softer and warmer with each repetition.

*Imaginary* Imagine you are leaning against a wall and peeling one vertebra after the other away from the wall. When you roll up you are softly imprinting each vertebra.

*Technical* A neutral pelvis position is maintained as long as possible when rolling down. When rolling up, a neutral pelvis position is established first and the spine follows.

*Kinesthetic* The pubic bone draws up towards the sternum on the way up.

*Imaginary* Imagine a little weight attached to your tailbone; feel its weight lengthening the tailbone down as you roll down and up.

*Kinesthetic* Feel the opposing forces of muscle strength and gravity. The deep muscular strength of the pelvic floor and abdominals pull inwards and upwards, while gravity flows out of the fingertips downwards.

## ROLL DOWN

### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

- Imaginary* Imagine the muscles that run along the spine to be elastic bands that elastically lengthen as you roll down and naturally recoil as you roll up.
- Imaginary* Imagine you are rolling over a garden fence; your hands are in front of the fence, the legs behind it and belly is drawing away from the spiky tips.
- Imaginary* When you pause at the lowest point, imagine hands wrapped around your belly. The hands are lifting you up, allowing your lower back to lengthen and soften even more.
- Imaginary* Imagine your spinal discs to be air cushions that expand with the inhalation and allow a cushioned rolling motion.
- Kinesthetic* When pausing with the inhalation, breathe deep into your back while keeping the centre engaged.
- Tactile* 'Walk' your fingers up the spine of the participant while they are rolling up.
- Technical MONKEY* The lower abdominals and the pubic bone draw upwards. The lower back is evenly flexed. The knees are pointing straight forward as they bend and extend.
- Technical LEG STRETCH* The hips are strongly flexed with the belly close to the thighs. The pelvic floor is relaxed and the sit bones point up towards the ceiling. The knees bend and extend.
- Kinesthetic PILATES V* Feel the connection and upward energy flow through the midline of the body; from the heels to the inner thighs into the pelvic floor and the abdominals.
- Kinesthetic PILATES V* The inner thighs are spiralling from the inside out.
- Kinesthetic MEDIAL* Feel how the back of the pelvis (sacroiliac joints) widens as you roll down. Breathe into the sacrum at the lowest point and let the space open up even more.

### Notes

ARM SERIES: BALLERINA ARMS & ARM CIRCLE

APPLIED MECHANICAL PRINCIPLES

Shoulder Organisation • Disassociation • Extremity Alignment • Breathing

EXERCISE AIMS & BENEFITS

---



---



---

BALLERINA ARMS

STARTING POSITION

*Optimal Standing Body Position.*

- The arms extended to the front at chest height.
- The elbows are softly extended, and the wrists are the elongation of the arms.

MOVEMENT & BREATHING PATTERN

*Exhale*            Open the arms out to the side.  
                           Maintain the width through the shoulder blades.  
                           The palms face forward or towards the floor.

*Inhale*            Rotate the arms outward and lift them over head.  
                           The shoulder blades glide alongside the ribcage.  
                           The palms face towards each other.

*Exhale*            Lower the arms to shoulder height.  
                           The palms face the floor.

*Inhale*            Adduct the arms to shoulder width.  
                           Maintain the space between the collar bones.  
                           The palms face each other.

Repeat the exercise 5 - 10 times.



Wide collar bones

*BO:* Arms open

*BI:* Arms over head

*BO:* Arms lower

*BI:* Arms close

## ARM SERIES: BALLERINA ARMS & ARM CIRCLE

### ARM CIRCLE

#### STARTING POSITION

*Optimal Standing Body Position.*

- The arms are extended and relaxed alongside the body.

#### MOVEMENT & BREATHING PATTERN

*Exhale* Lift the arms to shoulder height.  
The shoulder blades are stable.

*Inhale* Rotate the arms outward and lift them over head.  
The ribcage expands and the shoulder blades glide softly along the ribs.  
The palms face each other.

*Exhale* Lower the arms to shoulder height.  
The ribs naturally close and the shoulder blades glide in their neutral position.  
The palms face the floor.

*Inhale* Lower the arms all the way down.  
The ribcage expands and the chest broadens.  
The shoulder blades are dynamically stabilized.  
The palms face the body.

Repeat the exercise 5 - 10 times.



#### MAIN MUSCLES

#### STABILIZING MUSCLES

#### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

ARM SERIES: BALLERINA ARMS & ARM CIRCLE

REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

ARM CIRCLE OUT & IN

The arms are laterally rotated with the palms facing forward.

*Exhale* The arms lift to shoulder height.  
The palms face forward.

*Inhale* The arms rotate upwards and lift above the head with the palms facing outwards.

*Exhale* The arms lower to shoulder height.  
The palms face backward.

*Inhale* The arms lower and face forward.  
The palms face forward.



ARM CIRCLE IN & OUT

The arms are medially rotated in the starting position.

- The arms rotate from internal rotation into external rotation over head and back down to an internally rotated position.

ARM SERIES & RELEVÉ

The heels lift and lower simultaneously with the arm movement.

ARM SERIES & BALANCE

The exercise is executed with the heels lifted (semi-point).



SINGLE ARM SERIES

The movement is completed with only one arm.

ARM SERIES COORDINATION

Begin with one arm and follow after one breath with the second arm.



ARM SERIES: BALLERINA ARMS & ARM CIRCLE

TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

- Technical* The neck is in the natural elongation of the spine and the head is balanced upon the upper most vertebra. The gaze is directed forwards.
- Technical* During the whole arm movement the hands stay within the field of vision.
- Imaginary* Imagine you are standing against a wall and the hands remain always slightly away from the wall.
- Technical* The centre is engaged to maintain the stability in the lumbar spine.
- Kinesthetic* Feel the melting of the ribs into your abdomen whilst you open your arms.
- Kinesthetic* Feel the gliding movement of your shoulder blades whilst you move your arms; the shoulder blades massage your back.
- Imaginary* Imagine a puppeteer up in the ceiling guiding your arm movements.
- Imaginary* Imagine the bones of your upper arms gliding through soft butter in your shoulder joints.
- Tactile* Place your hands softly upon the shoulders of the participant; gently pull outwards giving a sense of width across the shoulders.

Notes

TIC TOC

APPLIED MECHANICAL PRINCIPLES

Axial Elongation • Breathing • Shoulder Organisation

EXERCISE AIMS & BENEFITS

---



---



---

STARTING POSITION & PREPARATION

*Optimal Standing Body Position.*

- The arms are extended out to the side at shoulder height.

MOVEMENT & BREATHING PATTERN

*Inhale* Elongate and side bend the spine to the right (lateral flexion).  
 The right arm reaches up and across the body, while the left arm is lowered.  
 The pelvis remains neutral.

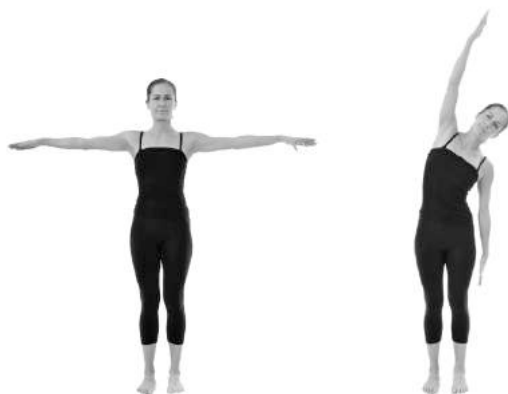
*Exhale* Lift the spine into a neutral position again.  
 The arms are balanced at shoulder height.

*Inhale* Elongate and side bend the spine to the left.

*Exhale* Return to the starting position.

The breathing pattern can be reversed depending on the exercise focus or aim.

The exercise can be executed by alternating sides 5 times each or the lateral flexion can be held for 5 breaths on each side.




---



---



---

## TIC TOC

### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### TIC TOC ARMS OVERHEAD

The arms are extended over head in starting position.  
One arm is lowered during lateral flexion.

#### TIC TOC ARM FLOAT

The lateral flexion is maintained and the lower arm lifts with the exhalation and lowers with the inhalation several times.



#### TIC TOC & HIP SHIFT

Shift the pelvis sideways as you side bend; one arm can be lowered or both arms can remain extended over head.



TIC TOC

TIC TOC STRETCH

Interlace the fingers above the head with the index fingers pointing up. The lower arm lengthens the contralateral side of the body and opens the ribcage laterally.



TIC TOC STRETCH CROSSED LEGS

When the spine is bent to the right, the left leg is crossed behind the right. The stretch is maintained for a few breaths.



TIC TOC SPIRAL

Maintain lateral flexion and slightly rotate the thoracic spine to the front or up towards the ceiling. The rotation is maintained for a few breaths.



TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Technical* The spine is elongated as much as possible and bent to the side.

*Technical* In side flexion the pubic bone draws up towards the belly button and the ribcage towards the opposite hip bone. The obliques are strongly activated and the lower back elongated.

*Technical* The pelvis is aligned with both hip bones levelled and pointing forwards.

*Technical* The fingertips of the right arm reach up towards the ceiling. The right shoulder remains relaxed and the shoulder blade stable.

*Imaginary* Touch the ceiling with your fingertips.

*Kinesthetic* Maintain the space between the right ear and the right shoulder.

### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

- Technical* In side flexion to the left the right foot presses down onto the floor and the right ribcage lifts up towards the ceiling.
- Imaginary* Listen with your right ear on the ceiling while the right foot is pressing down.
- Kinesthetic* Anchor the foot firmly to the floor.
- Imaginary* The upper body forms a long even arc.
- Imaginary* Imagine your lungs like balloons. When you inhale and side bend to the left, the right lung balloon is expanding. When you exhale to lift the spine, the lung balloon is deflating.
- Kinesthetic* Lift through the left ribcage when bending to the left and feel the right side of the ribcage open.
- Imaginary* Imagine the ribs open like a Japanese fan.
- Imaginary* The pelvis is stable and the spine bends and extends like a palm tree in the wind.
- Imaginary* Imagine you are standing between 2 glass walls. Bend right and left without touching the walls.
- Imaginary* Imagine your spinal discs to be like air cushions that fill up and expand with each inhalation. Feel the softly cushioned movement of the spine.
- Tactile* Place your hands gently at the side of the ribcage to support the lateral flexion.

### Notes

**BOW & ARROW**

**APPLIED MECHANICAL PRINCIPLES**

Axial Elongation • Segmental Spinal Movement • Shoulder Organisation • Breathing

**EXERCISE AIMS & BENEFITS**

---



---



---

**STARTING POSITION & PREPARATION**

*Optimal Standing Body Position.*

- The arms are extended to the front at chest height.

**MOVEMENT & BREATHING PATTERN**

*Inhale* Reach forward with your right arm and allow the right scapula to glide into slight protraction. The protraction of the scapula initiates the thoracic rotation.

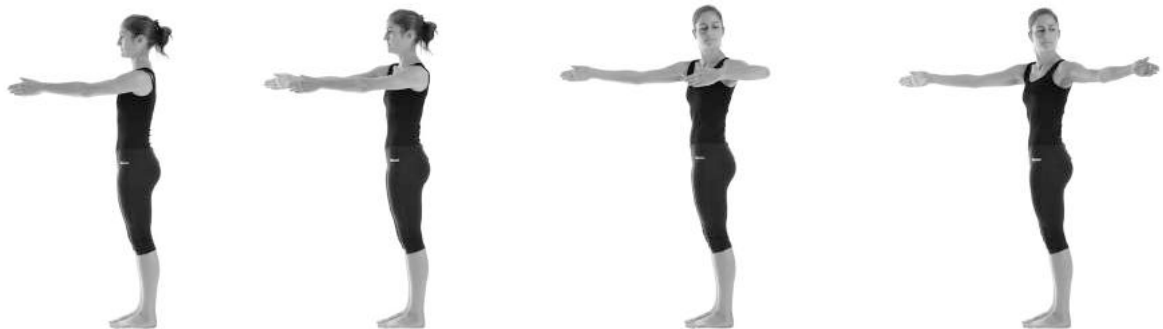
*Exhale* Keep rotating the thoracic spine in a segmental motion to the left and bend the left elbow back diagonally. The gaze of the eyes follows the movement.

*Inhale* Extend the left elbow keeping the shoulder blade stable.

*Exhale* De-rotate the thoracic spine in a segmental motion. The left arm follows until it's extended in front at chest height again the right scapula glides back into a neutral position.

The exercise can be executed in 1 breath.

Repeat the exercise 4 - 5 times on each side.



*BC: Centre*

*BI: Protraction, rotation*

*BC: Rotation, elbow bends*

*BI: Arm extends*

---



---



---

## BOW & ARROW

### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### BOW & ARROW with Elbow Flexion and Extension



#### BOW & ARROW in One Breath

##### *Inhale*

Reach forward with the right arm and let the shoulder blade glide along the ribcage.  
The thoracic spine rotates while the left elbow bends and reaches diagonally back.  
The gaze of the eyes follows the movement.  
The lumbar-pelvic stability is maintained.

##### *Exhale*

De-rotate the thoracic spine until it's centred; move the left arm to the front at the same time.  
The right shoulder blade glides back to its neutral position.



## BOW & ARROW

### BOW & ARROW with Flowing Arm Movement

Let movement and breath flow.

### BOW & ARROW with Extended Arms

Keep the arms extended during the thoracic rotation and de-rotation.

### BODY POSITIONS

The exercise can be executed in high kneeling, sitting on a chair or exercise ball, as well as sitting on the floor.



High Kneeling



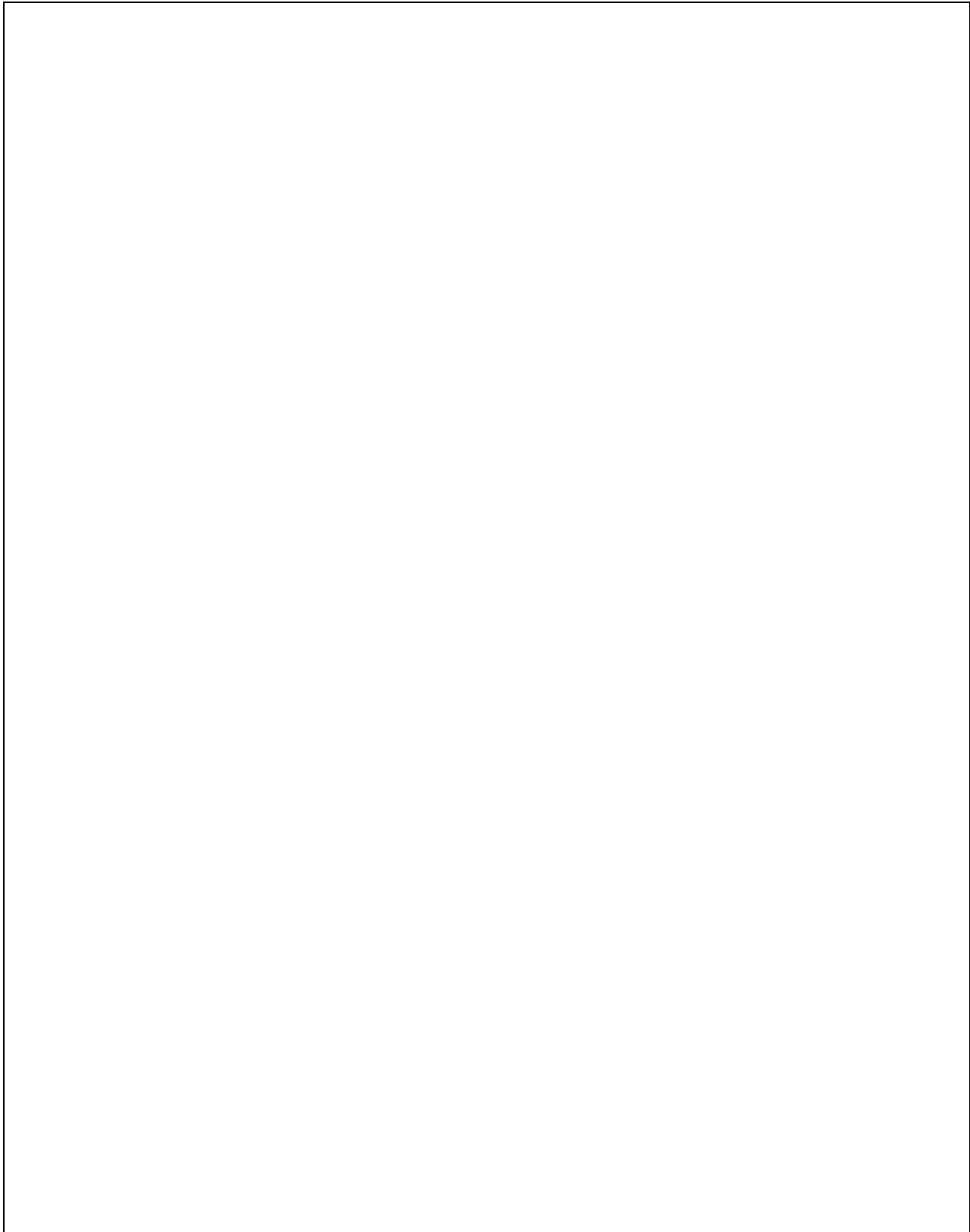
Tailor's Sit

### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

- Technical* The shoulders remain relaxed and the neck long with head balanced on the centre of the spine.
- Technical* Reach to the front with the right arm to initiate the rotation to the left.
- Technical* The bent elbow reaches diagonally back while the shoulder blade is stabilized on the ribcage.
- Technical* Follow the elbow with your eyes.
- Technical* Both hip bones face straight forward.
- Kinesthetic* Reach forward with the left hip bone as you rotate to the left.
- Imaginary* Imagine a light shining from your hip bones straight forward to the wall in front of you.
- Technical* The shoulder blade glides away from the spine with the inhalation. The rotation follows the movement of the shoulder blade.
- Kinesthetic* Feel how the shoulder blade is gliding forward and the sternum effortlessly rotates around.
- Imaginary* Imagine a light shining out of your sternum. It illuminates the room with its quarter turn.
- Imaginary* Imagine the elastic resistance of the bow as you rotate. Return to the starting position with an easy movement.
- Kinesthetic* Feel the connection of the ribs and the hips during the rotation.
- Imaginary* Imagine the pelvis and the ribs to be two perfectly stacked rings. The rib-ring rotates directly above the pelvic-ring.
- Imaginary* Imagine your ribcage to be a wheel that you turn a little bit further with each inhalation.
- Tactile* Place your hands onto the participant's hip bones and stabilize the pelvis during rotation.



Notes



FOOTWORK

APPLIED MECHANICAL PRINCIPLES

Extremity Alignment • Disassociation

EXERCISE AIMS & BENEFITS

---



---



---

STARTING POSITION

*Optimal Standing Body Position.*

- The arms can be relaxed alongside the body or extended out to the side at shoulder height.

WALKING

MOVEMENT & BREATHING PATTERN

*Exhale* Lift one heel off the floor.  
 The knee points forward and the ankle is stabilized.  
 The pelvis is three dimensionally stabilized.

*Inhale* Lower the heel to the floor.

*Exhale* Peel the other heel off the floor.

*Inhale* Roll the heel down to the floor.

Repeat the lifting and lowering of the heel 5 times on each side.

The exercises can be complemented with other FOOT WORK variations.

Tip: Educate your participants. Explain the importance of strong and adaptable feet and how their alignment influences posture.




---



---



---

## FOOTWORK

### RELEVÉ

#### MOVEMENT & BREATHING PATTERN

The arm pattern is optional.

*Exhale* Lift both heels simultaneously off the floor.  
The ankles are stabilized laterally and the leg position remains neutral.  
The pelvis is stabilized.

*Inhale* Lower the heels simultaneously.



### CAROLE'S PLIÉ

#### MOVEMENT & BREATHING PATTERN

The arm movement is optional.

*Inhale* Parallel Plié: bend the knees.

*Exhale* Lift the heels off the floor.  
The upper body remains at the same height; the knee flexion increases.

*Inhale* Stay in plantar flexion (semi-point) and bend the knees.

*Exhale* Extend the legs and lower the heels.



*BI*: Parallel Plié

*BO*: Relevé

*BI*: Extend legs

*BO*: Lower heels

---

---

---

FOOTWORK

MAIN MUSCLES

STABILIZING MUSCLES

PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

RUNNING

Keep the natural flow of breath. Execute the WALKING motion in various faster paces.

RELEVÉ PILATES V

Lift and lower the heels in Pilates V.

CAROLE'S PLIÉ PILATES V

Execute the exercise in Pilates V.

RELEVÉ & PLIÉ PILATES V

The arm movement is optional.

*Exhale* Lift the heels off the floor.

*Inhale* Stay in plantar flexion (semi-point) and bend the knees.

*Exhale* Extend the legs.

*Inhale* Lower the heels.



FOOTWORK

TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

- Technical* The centre remains active during the duration of the exercise to assure optimal dynamic lumbar-pelvic stability.
- Imaginary* Imagine your pelvis to be a bowl with a scoop of vanilla (or whatever flavour you fancy) ice cream in the middle. Keep the bowl completely still so the ice cream stays balanced in the centre.
- Technical* The leg alignment is maintained.
- Technical* Articulate the foot, instead of a mechanical lifting and lowering of the heels.
- Kinesthetic* Think of peeling the heel off the floor, rather than just lifting it.
- Kinesthetic* Feel how the small joints in the feet are mobilized and lubricated.
- Kinesthetic* The motion is as smooth as the movement of a cat.
- Technical* Stabilize the ankles and knees on the way up and down.
- Technical* The ball below the big toe remains in constant contact with the floor to promote lateral ankle stability.
- Kinesthetic* Feel how the weight on the ball below the big toe increases stability on the outside of your ankle.
- Tactile* Place your hands onto the hip bone of the participant to assist a proper pelvic alignment.

Notes

**KNEE LIFT & AEROPLANE**

**APPLIED MECHANICAL PRINCIPLES**

Centring • Disassociation • Segmental Spinal Stability • Extremity Alignment

**EXERCISE AIMS & BENEFITS**

---



---



---

**KNEE LIFT**

**STARTING POSITION**

*Optimal Standing Body Position.*

- The arms are extended laterally at shoulder height.
- One heel is lifted off the floor.



**MOVEMENT & BREATHING PATTERN**

*Inhale* Lift the knee.  
 The pelvis is dynamically stabilized.  
 The spine is neutral and elongated.

*Exhale* Lower the gesture leg until the toes lightly touch the floor.

The breathing pattern can be reversed.  
 Repeat the exercise 6 – 10 times.



*BI:* Lift the leg



*BO:* Lower the leg



VARIATION: Integrate arm movement

---



---

## KNEE LIFT & AEROPLANE

### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### KNEE LIFT BALANCE

Keep the gesture leg lifted for a few breaths.

#### KNEE LIFT & PLIÉ

Bend and extend the supporting leg (the toes of the gesture leg can be on the floor for more balance).



### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Technical* The pelvis is neutral and the ribcage directly above the pelvic ring.

*Imaginary* Imagine your pelvis to be scales that you want to keep in perfect balance.

*Kinesthetic* The supporting leg is softly extended. All toes are relaxed on the floor.

*Kinesthetic* Lift and lower the gesture leg in an even pace and range of motion.

*Technical* The gesture leg moves in alignment with the hip joint.

*Technical* Actively 'draw' the head of the thigh bone into the hip socket to assure a deep muscular connection.

*Kinesthetic* Feel the sitbone of the gesture leg descending towards the floor as the knee lifts.

*Imaginary* Imagine a little weight hanging off your tailbone. It draws your tailbone down as the knee lifts.

*Imaginary* Imagine your knee is suspended from the ceiling with an elastic band; the descend is supported and the lift is assisted.

KNEE LIFT & AEROPLANE

AEROPLANE

STARTING POSITION

- The upper body is tilted forward.
- The gesture leg is extended back with the toes touching the floor.
- The pelvis and the spine are neutral.
- The supporting knee is slightly bent.



MOVEMENT & BREATHING PATTERN

*Exhale* Lift the leg and lower the upper body in balance maintaining a neutral alignment of the spine, pelvis and hip joint.  
The angle of the whole body alignment can vary from any diagonal to a horizontal position.

The position is maintained for 6 – 10 breaths.




---



---



---



---



---

MAIN MUSCLES

STABILIZING MUSCLES

PLANE OF MOVEMENT

- Core Stability       Core Strength       Segmental Spinal Movement   
 Neutral Lumbar Spine       Elongated Lumbar Spine



## KNEE LIFT & AEROPLANE

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### AEROPLANE & ARM CIRCLE

Integrate Bilateral or Unilateral Arm Circles.



Bilateral Arm Circles



Unilateral Arm Circles

#### AEROPLANE FLYING

*Exhale* Rotate the pelvis over the supporting femur; lateral rotation of the hip joint.  
The gesture leg remains stable and simply follows the movement of the pelvis.

*Inhale* The pelvis rotates down until it's parallel to the floor again.



---

---

---

### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Technical* The centre is strongly activated. The pubic bone slightly draws up towards the belly button.

*Technical* The knee of the supporting leg is slightly bent. The toes are relaxed on the floor.

*Technical* The gesture leg is fully extended and reaching back.

*Technical* The knee of the gesture leg points towards the floor.

*Technical* The strength of the gluteal muscles keep the leg lifted and aligned.

*Technical* Keep the heel, hip bone, shoulder and ear in one line.

*Kinesthetic* Reach back with the gesture leg. Imagine you want to touch the wall with your big toe.  
Reach forward with the crown of your head as if you want to touch the wall in front of you.

*Kinesthetic* Reach out into the room and expand the space around you.

## ARM & LEG LIFT

### APPLIED MECHANICAL PRINCIPLES

Segmental Spinal Stability • Disassociation • Shoulder Organisation • Weight Bearing • Extremity Alignment

### EXERCISE AIMS & BENEFITS

---



---



---

### STARTING POSITION

*Quadruped Kneeling Position.*

- It's important to cue the starting position with accuracy and attention to detail. 4-point kneeling is an exercise itself.

### MOVEMENT & BREATHING PATTERN

#### LEG LIFT

- The gesture leg is extended back.
- The toes lightly touch the floor.

*Exhale* Lift the gesture leg until the hip joint is extended to maximum.  
The pelvis and the lumbar spine are stabilized in a neutral position.

*Inhale* Lower the gesture leg.

Repeat the exercise 5 – 10 times right and repeat on the left side.



#### ARM LIFT

*Exhale* Lift one arm while stabilizing the shoulder blade.  
The supporting shoulder and shoulder blade is firmly stabilized.

*Inhale* Lower the arm.

The exercise can be executed by 10 times alternating arms or by lifting one arm 5 times and then the other.



## ARM & LEG LIFT

### ARM & LEG LIFT

*Exhale* Slide the right leg back, lift it off the floor until the hip joint is extended.  
Simultaneously lift the left arm.  
The body remains centred and the lumbar-pelvic stability is maintained.

*Inhale* Lower the right leg, bend the knee and slide it back underneath the hip joint.  
Simultaneously lower the left arm and place the hand onto the floor.

The exercise can be executed by alternating sides 5 times each.  
Or staying on one side for 5 – 10 repetitions and then changing sides.



### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### LEG SLIDE

The foot slides along the floor while the leg extends and bends.



#### CROSSING

The elevated gesture leg crosses over (adducting) the stationary leg.



## ARM & LEG LIFT

### LEG CURL

The elevated gesture legs bends and extends.

- The foot and ankle can stay in plantar flexion or plantar and dorsi flexion can be alternated.



Plantar flexion



Plantar flexion or dorsi flexion

### LEG PRESS

*Quadruped Kneeling Position.*

*Inhale* Lift both feet off the floor.

*Exhale* Lower the feet and press the top of the feet and shin bones lightly onto the floor.

### WALKING WITH HANDS

*Quadruped Kneeling Position.*

*Flowing Breath* Lift one hand after the other off the floor; think of the light footed movements of a cat.

## TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

### QUADRUPED KNEELING

*Technical* The weight is evenly distributed between the knees and the hands.  
 The inside of the elbows point forward at a 45° angle.  
 The upper arms are spiralling out and the forearms are spiralling in.  
 The hands are firmly connected to the floor with the weight slightly more towards the little fingers.  
 The shoulder blades are flat on the ribcage.  
 The neck is the natural extension of the upper back.

*Technical* Once the neck is properly aligned, focus on a spot on the floor. Keep the gaze on that spot during the duration of the exercise.

*Tactile* Place your hands gently on the side and the back of the person's head. Your thumbs are underneath the occiput and the other four fingers lightly hold the side of the head. Lengthen the crown of the head forward and elongate the cervical spine through mild traction.

*Kinesthetic* Pull the mat slightly apart with your hands to maintain the width across the chest.

*Technical* The muscles around the shoulder blades stabilize by even pull in all directions.

*Kinesthetic* Feel how the ribcage is firmly held by the muscles around the shoulder blades.

*Kinesthetic* Feel the even space between the shoulder blades and between the collar bones.

*Tactile* With light touch place your hands between the collar bones and the shoulder blades of the participant to give the person a sense of width.

*Kinesthetic* Press the shin bones onto the floor lightly and feel the centre engage.

ARM & LEG LIFT

TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

MOVEMENT

- Technical* The spine is elongated and the pelvis stabilized in a neutral position for the whole duration of the exercise.
- Technical* The weight stays as evenly distributed as possible.
- Imaginary* Imagine you are kneeling on a thin layer of ice and you need to keep the weight as evenly distributed as possible to keep the ice intact.
- Imaginary* Imagine you are balancing a glass of champagne on your sacrum.
- Kinesthetic* Draw the pubic bone slightly towards the belly button when lifting the leg (at end range hip extension).
- Kinesthetic* Press the flat part above the big toe of the supporting leg onto the floor when lifting the gesture leg.
- Kinesthetic* The upper part of your supporting arm is deeply connected into the shoulder joint.
- Kinesthetic* Feel the length of the body during the ARM & LEG LIFT; from the big toe across the body to the opposite hand.

Notes

MOVING PUSH UP

APPLIED MECHANICAL PRINCIPLES

Shoulder Organisation • Segmental Spinal Stability • Weight Bearing • Extremity Alignment • Disassociation

EXERCISE AIMS & BENEFITS

MOVING PUSH UP I

STARTING POSITION

*Modified Quadruped Kneeling Position.*

- The forearms are on the floor with the elbows underneath the shoulder joints.
- The knees are underneath the hip bones.

MOVEMENT & BREATHING PATTERN

*Exhale*            Extend the elbows and lift the forearms off the floor.  
The pelvis stays above the knees.

*Inhale*            Shift the weight forward until the shoulders are directly above the hands.  
Lumbar-pelvic stability is maintained.

*Exhale*            Bend the elbows back towards the knees until the forearms are on the floor.  
The pelvis remains stationary.

*Inhale*            Shift the pelvis back until the hip joints are above the knees.

Repeat the exercise 6 – 10 times.



Starting Position



*BO:* Extend arms



*BI:* Shift the upper body forward



*BO:* Bend elbows and lower forearms to the floor



*BI:* Shift the upper body back

## MOVING PUSH UP

### MOVING PUSH UP II

#### STARTING POSITION

*Quadruped Kneeling Position.*

#### MOVEMENT & BREATHING PATTERN

*Inhale*                Bend the elbows until the forearms rest on the floor.  
The pelvis remains in a neutral, stable position.

*Exhale*                Lift and extend the elbows.

Repeat the exercise 5 – 10 times.

Caution: Should a participant experience pain in the elbow joint, advise them to either decrease the range of motion or alternatively do BASIC TRICEPS PUSH UP.



#### MAIN MUSCLES

#### STABILIZING MUSCLES

#### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

#### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

##### BASIC TRICEPS PUSH UP

- The distance between the hands and knees can vary. The further away the hands from the knees the more challenging it is.
- The focus is on scapula stability; adapt the range of motion to the existing degree of stability.



## MOVING PUSH UP

## TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS &amp; IMAGERY

- Technical* The pelvis and the spine are stabilized in a neutral position during the whole duration of the exercise.
- Kinesthetic* Feel how the 'abdominal corset' stabilizes the lumbar-pelvic area.
- Technical* The neck is long and the natural extension of the thoracic spine.
- Kinesthetic* The shoulders are broad and drawn away from the ears.
- Technical* The whole hand is resting on the floor with the outer edge firmly pressed down.
- Kinesthetic* Press up through the outer edges of the hands.
- Kinesthetic* Feel you are pressing yourself away from the floor, rather than having your body weight pulling you down towards the floor.
- Technical* The elbows stay close to the body when they bend; the tip of the elbows point back towards the feet.
- Imaginary* Imagine you are kneeling between two glass walls and your elbows can only move within the boundaries of your body without touching the glass.
- Kinesthetic* The elbows spiral outwards as you bend them and then spiral back as you extend the arms.
- Tactile* Place your hands on the outside of the participant's elbows and guide the movement.
- Tactile* Stand behind the participant with your lower legs on either side of their pelvis. With your hands you can support their optimal shoulder organisation and the alignment of the arms.

## Notes



## THREAD THE NEEDLE

### APPLIED MECHANICAL PRINCIPLES

Shoulder Organisation • Axial Elongation • Weight Bearing • Breathing

### EXERCISE AIMS & BENEFITS

---

---

---

### STARTING POSITION

*Quadruped Kneeling Position.*

- One arm is extended out to the side at shoulder level.

### MOVEMENT & BREATHING PATTERN

*Exhale*            The right arm reaches below the ribs across the body to the left.  
The shoulder blade glides into slight protraction.  
The thoracic spine segmentally rotates to the left.  
The supporting elbow bends and the shoulder retracts.  
Lumbar-pelvic stability is maintained throughout.

*Inhale*            Reverse the movement pattern; de-rotate the thoracic spine segmentally, let the scapula glide back to a neutral position, reach the gesture arm out to the side and extend the supporting elbow.

Repeat the movement 5 – 8 times on one side and then the other.



### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

## THREAD THE NEEDLE

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### THREAD THE NEEDLE UP

- This exercise can be done independently or as part of THREAD THE NEEDLE.

*Exhale* Activate through the posterior muscles of the supporting arm, laterally rotate the upper arm and lift the sternum.

The thoracic spine rotates upwards with a segmental motion.

The gesture arm lifts in harmony with the rotation of the upper back. It reaches up towards the ceiling at end range.

The supporting arm is extended and the upper arm deeply connected to the shoulder joint. Lumbar-pelvic stability is maintained.

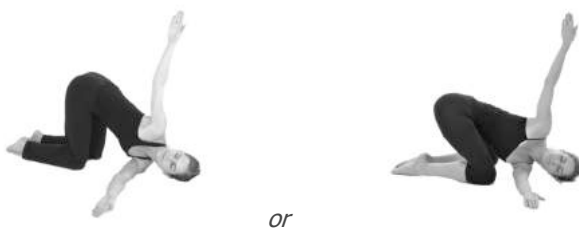
The rotation can be maintained for one or a few breaths.

*Inhale* Centre the thoracic spine and lower the arm to shoulder level.



#### THREAD THE NEEDLE STRETCH

- Place the gesture arm and shoulder on the floor; reach up towards the ceiling with the other arm.
- The head touches the floor lightly without bearing weight.
- The pelvis can be positioned above the knees or shifted back as far as comfortable.
- Maintain the position for a few breaths.



or

#### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Kinesthetic* Feel the solidity of the deep connection between the head of the upper arm and the shoulder.

*Technical* Maintain the stability of the pelvis and the lengths in the spine during the rotation.

*Imaginary* Imagine your spine is a string of pearls, lengthen the string before turning one pearl after the other.

*Kinesthetic* Lengthen the tailbone back and the crown of the head forward.

THREAD THE NEEDLE

TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Imaginary* Imagine a light shining out of your breast bone. See the small light arc as you rotate the spine.

*Tactile* Stand behind the participant with your knees either side of their pelvis. Stabilize the supporting shoulder with a firm grip with one hand and assist the thoracic rotation with a light guiding touch on the back of the opposite shoulder with the other hand.

*Tactile THREAD THE NEEDLE UP* Your body position and tactile feedback for the supporting shoulder are the same as above. To assist the upward rotation, place your hand underneath the shoulder of the participant's gesture arm and support the rotation by literally taking the weight of that shoulder into your hand.

Notes

## SHOULDER SEPARATION

### APPLIED MECHANICAL PRINCIPLES

Shoulder Organisation • Centring • Breathing

### EXERCISE AIMS & BENEFITS

---



---



---

### STARTING POSITION

*High Kneeling or Optimal Standing Body Position.*

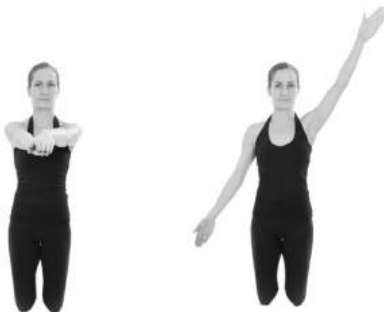
- The arms are extended in front of the body at chest height.
- The hands are placed on top of each other with the left above the right.

### MOVEMENT & BREATHING PATTERN

*Exhale*            Extend the right arm diagonally up and lower the left arm diagonally down.  
Scapula stability is maintained.  
The centre stabilizes the lumbar-pelvic area.

*Inhale*            Return to the starting position placing the right hand on top of the left.

Repeat the exercise 5 times each side.



### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

## SHOULDER SEPARATION

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### SHOULDER SEPARATION PARALLEL

Lift and lower the arms in a vertical line.



#### SHOULDER SEPARATION & CIRCLE

Incorporate semicircular arm movements.

#### AGAINST A WALL

Execute the exercise against the wall for feedback.

#### SUPINE

Execute the exercise in supine for feedback and different muscular activity.

### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Technical* Intensify the activation of the centre when you open your arms.

*Technical* The head remains balanced on top of a long neck.

*Imaginary* Imagine you are leaning against a wall and the back of your ribcage and head stay in contact with the wall at all times.

*Imaginary* The hands never touch the imaginary wall.

*Kinesthetic* Feel the ribcage melt into your belly as you open the arms.

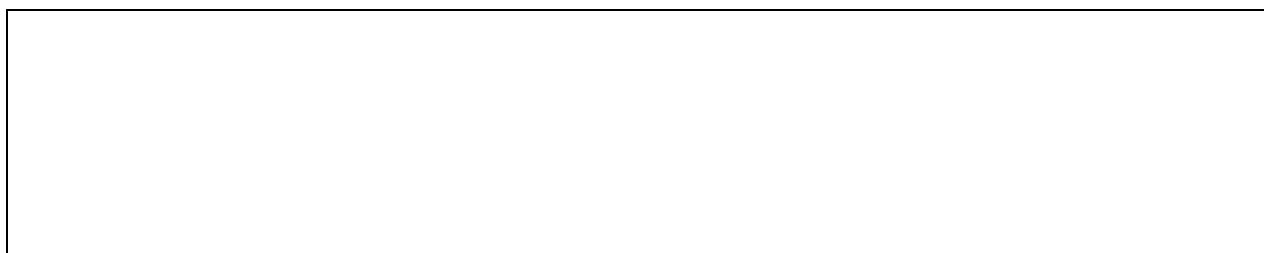
*Kinesthetic* Feel the shoulder blade gliding down as you lift your arm.

*Imaginary* Imagine your arm to be a boom gate that is lifted by the shoulder blade.

*Imaginary* Imagine a cross on your upper body going from the tip of one hip bone to the opposite armpit. The top arm is an extension of the cross.

*Kinesthetic* Feel how the muscles in front of the shoulders and the chest are getting warmer, softer and more elastic with each repetition.

*Tactile* Place your hands lightly onto the shoulders of the participant.





SITTING POSITIONS

TAILOR'S SIT  
Swap legs regularly.



---

---

---

---

DIAMOND SIT  
Wide angle in the knees.



---

---

---

---

LONG SIT with Bent Knees  
Legs adducted or hip distance.



---

---

---

---

LONG SIT  
Legs adducted or hip distance.  
Feet relaxed, in plantar or dorsi flexion.



---

---

---

V-SIT  
The degree of abduction can vary.  
Feet relaxed, in plantar or dorsi flexion.



---

---

---

LONG SIT with Ball  
Use a ball as a wedge to lift the pelvis.  
The ball can also be used for all other sitting positions.



---

---

---

LONG SIT Elevated  
The height varies accordingly to need.  
A sitting support can be used for all sitting positions.



---

---

---

## SPINE TWIST

### APPLIED MECHANICAL PRINCIPLES

Axial Elongation • Segmental Spinal Movement • Breathing • Shoulder Organisation

### EXERCISE AIMS & BENEFITS

---



---



---

### STARTING POSITION

*Long Sit.*

- The legs are extended in a relaxed manner (parallel or adducted). The knees point towards the ceiling.
- The feet can be relaxed, in plantar or dorsi flexion.
- The pelvis is in a neutral position with the weight evenly distributed between both sit bones.
- The arms are extended out to the side (the hands stay in peripheral vision).

### MOVEMENT & BREATHING PATTERN

*Inhale* Segmentally rotate the thoracic spine to the right.

*Exhale* Centre the thoracic spine.

Alternate the rotation 5 times to each side or rotate 5 times to one side first and then 5 times to the other side.

SPINE TWIST Point




---



---

SPINE TWIST Flex




---



---



## SPINE TWIST

### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### SITTING VARIATIONS

- Tailor's Sit, Diamond Sit or sitting elevated.
- Use a soft ball as a wedge below the tailbone (the sit bones stay on the floor).



Tailor's Sit

#### ARM VARIATIONS

- Diamond Arms (elbows bent, fingertips touching) or Genie Arms (elbows bent, forearms stacked).
- Holding an exercise band that is stretched from one hand to the other behind the back.



Diamond Arms

#### REVERSE BREATHING

Reverse the breathing pattern and rotate with the exhalation.

#### PERCUSSION BREATH

Incorporate a double percussion breath.

#### SPIRALLING TWIST

- The knees are bent; parallel or adducted.
- The thoracic spine segmentally rotates.
- One hand presses lightly against the outside of the contralateral knee, while the other arm extends out to the side.
- The palm of the gesture arm faces forward or towards the floor.

*Inhale* The thoracic spine elongates and further rotates.

*Exhale* Release the rotation slightly.



**SPINE TWIST**

**SPIRALLING TWIST & HALF ROLL DOWN**

- Inhale*            Rotate the thoracic spine to the right.
- Exhale*            Tilt the pelvis back, segmentally flex the spine and cross the right arm over the left.
- Inhale*            Elongate the spine and extend the left arm to the front. The outside of the right hand is pressing against the outside of the left knee.
- Exhale*            Initiate the thoracic rotation.
- Inhale*            Elongate the spine and increase the spinal rotation.



*BI:* Strong thoracic rotation            *BO:* Pelvic tilt, spine flexion            *BI:* Spine elongation            *BO:* Rotation initiation

**TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY**

- Technical*        The weight is evenly distributed between both sit bones. Sit directly on the sit bones.
- Kinesthetic*    The sit bones are screwed into the floor.
- Imaginary*      Imagine you are sitting in a block of ice that stabilizes your lower body.
- Technical*        The spine is long, the shoulders broad and the shoulder blades lie flat against the ribcage.
- Imaginary*      Imagine the top of your head to be magnetically lifted up towards the ceiling.
- Tactile*          Stand behind the participant and with your lower leg support the lift of the pelvis and the length in their spine. Your hands can be placed on the shoulders to guide the rotation with light touch.
- Technical*        The arms remain in alignment with the shoulder joints; the hands stay in peripheral vision.
- Imaginary*      Imagine your upper body and arms are forming a 't', and this shape is maintained throughout.
- Technical*        Rotate one vertebra after the other.
- Imaginary*      Imagine your ribcage to be a well oiled wheel that effortlessly turns to the right and to the left.
- Kinesthetic*    Spiral the spine up and create space between the spinal bones.
- Imaginary SPINE TWIST Flex*    Imagine the soles of your feet pressing against a wall. Press the sole of the right foot against the wall when rotating to the right to increase lumbar-pelvic stability.
- Kinesthetic SPINE TWIST Point*    Let the left sitbone shift forward slightly when rotating to the right to facilitate ease of movement and the sense of a complete spiralling up motion.

---



---



---



---

## BASIC ROLL UP

### APPLIED MECHANICAL PRINCIPLES

Axial Elongation • Segmental Spinal Movement • Breathing • Centring

### EXERCISE AIMS & BENEFITS

---

---

---

### STARTING POSITION

*Sitting.*

- The knees are bent and adducted. The angle in the knees is wider than 90°.
- The hands are placed behind the knees.

### MOVEMENT & BREATHING PATTERN

*Exhale* Engage the centre, tilt the pelvis back and segmentally flex the spine from the lowest lumbar vertebra upwards until the spine is evenly bent.

Slide the feet towards the sit bones until they lift off the floor with minimal effort.

*Flowing Breath* Keep the abdominals fully engaged and maintain even spinal flexion as you roll back. When lumbar spine is on the floor, start to segmentally release the rest of the spine one vertebra at a time until the head and shoulders rest on the floor.

*Inhale* Relax with the legs in Table Top or draw them towards the chest for a complete rest.

*Exhale* Engage the centre.  
Lift the head and segmentally flex the thoracic spine until you are in full flexion.

*Flowing Breath* Maintain the flexed position and roll up and forward until the feet are on the floor and head is close to the knees: Spine Stretch Position.

*Inhale* Lift the pelvis into a neutral position and elongate the spine segmentally.

Repeat the exercise 5 – 8 times.

Tip: Build the exercise up with BASIC ROLL UP PREPARATION, so the participants have the possibility to stay in a seated position.



**BASIC ROLL UP**

**MAIN MUSCLES**

**STABILIZING MUSCLES**

**PLANE OF MOVEMENT**

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

**REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS**

**BASIC ROLL UP PREPARATION**

*Exhale* Engage the centre and tilt the pelvis backwards.  
The spine flexes segmentally from the bottom of the spine upwards.

*Inhale* Maintain the long, even spine flexion and inhale deep into the back of the ribcage.

*Exhale* Roll forward into the Spine Stretch Position.

*Inhale* Lift the pelvis into a neutral position and segmentally elongate the spine.



**HALF BASIC ROLL UP**

Roll back into a balance position behind the sit bones.



## BASIC ROLL UP

### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

- Technical* Draw the lower belly back towards the spine; the abdominal wall is flat.
- Imaginary* Hollow the belly.
- Technical* The gaze is on the thighs.
- Technical* The legs are closed and the inner thigh muscles activated.
- Technical* Maintain right-left balance and roll down and up centred on the mat.
- Imaginary* Imagine white paint on your spine and you are drawing a centred, straight line onto the mat when rolling down.
- Technical* Keep the chest open, the shoulders relaxed and the neck long. The elbows point outwards.
- Technical* Roll down and up in a slow, controlled manner.
- Imaginary* Imagine you are wearing very heavy shoes that balance the weight of the upper body and assist the roll up motion.
- Kinesthetic* Pull the toes towards the floor when rolling up.
- Kinesthetic* Feel the strength in your abdominal muscles when you exhale. Feel the back muscles relax at the same time.
- Imaginary* In the Spine Stretch Position imagine you have a hedgehog on your lap and you are drawing the belly away from the spikes.

### Notes

ROLL UP

APPLIED MECHANICAL PRINCIPLES

Axial Elongation • Segmental Spinal Movement • Breathing • Centring • Shoulder Organisation

EXERCISE AIMS & BENEFITS

---



---



---

STARTING POSITION

*Long Sit.*

- The arms are extended in front at chest height.

MOVEMENT & BREATHING PATTERN

*Exhale* Engage the centre, tilt the pelvis back and segmentally flex the spine starting at the lower lumbar spine.

Roll down one vertebra at a time until the shoulders and head are on the floor.

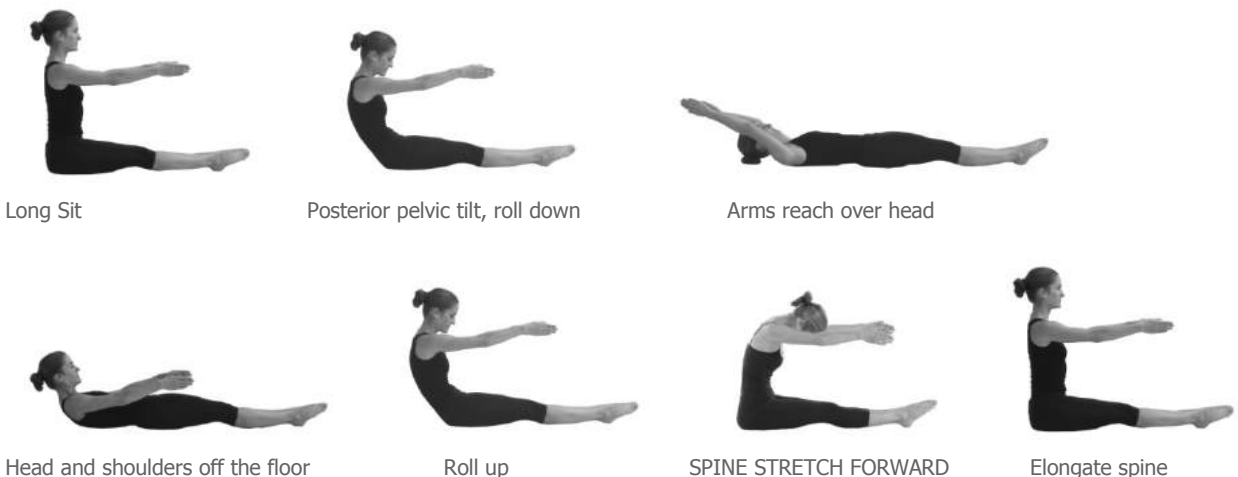
*Inhale* Reach the arms over head keeping the ribs connected in front.

*Exhale* Circle the arms to the front and lift head and shoulders off the floor.

*Inhale* Keep the centre firmly engaged.  
Inhale deep into the lowest portions of the lungs and expand the back of the ribcage.

*Exhale* Roll up in a segmental motion peeling one vertebra after the other off the mat.  
Roll over the legs into SPINE STRETCH FORWARD.  
The pelvis is neutral, the lumbar spine is elongated and the thoracic spine is in long flexion. The neck is the natural extension of the thoracic spine.  
The arms are parallel to the floor.

*Inhale* Segmentally elongate the thoracic spine until the neutral position is re-established.



## ROLL UP

### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### SITTING VARIATIONS

- Sit with the knees bent. Roll down keeping the heels where they are so the legs naturally extend.
- When you roll up the knees bend naturally, simplifying the segmental spinal movement.

#### FOOT VARIATIONS

- The feet can be relaxed, in plantar flexion or dorsi flexion.
- Plantar flexion and dorsi flexion can be alternated within the movement pattern.

#### LEG STRETCH

You can roll into LEG STRETCH instead of SPINE STRETCH FORWARD.

- By sense, the pelvis is tilted anterior.
- Dorsi flexion increases the stretch, plantar flexion decreases the stretch.



#### HALF ROLL UP

Roll half way down only.

#### HALF SPINE STRETCH FORWARD

Roll only half way over the legs instead of all the way like in SPINE STRETCH FORWARD. Elongate the spine from this position.



## ROLL UP

## TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS &amp; IMAGERY

- Technical* The pelvic tilt initializes the roll down motion.
- Kinesthetic* Maintain the length and a sense of space between the spinal bones (avoid sinking into passive flexion).
- Imaginary* The discs expand with each inhalation like little air cushions, increasing the space between the spinal bones.
- Technical* The centre and all abdominal muscles are strongly engaged.
- Technical* Together with the pelvic floor muscles, the transversus abdominis pulls the lower belly back and flattens the abdominal wall.
- Imaginary* Hollow the belly.
- Imaginary* Tighten the abdominal corset.
- Technical* The heels remain in contact with the floor, the knees point towards the ceiling and the thighs are as relaxed as possible.
- Technical* The arms are parallel to the floor during the roll down and roll up movement. The shoulders are relaxed and the chest is open.
- Technical* Imprint one vertebra after the other into the floor. Peel one vertebra after the other off the floor.
- Kinesthetic* It's a seamless flowing, smooth movement that has neither a beginning nor an end.
- Imaginary* Imagine you are sitting in fresh snow and as you roll down you are imprinting one spinal bone at a time into the cool snow. When rolling up you are peeling the spine out of the snow one vertebra at a time.
- Imaginary* Imagine you are rolling down and up into white Caribbean sand. Your body naturally finds the same indents each time.
- Kinesthetic* Feel how the muscles of your back get warmer and more elastic with each repetition.
- Technical* The abdominal muscles control the rolling down and up movement. The outer hip flexor muscles are as relaxed as possible.
- Kinesthetic* Feel the strength flowing up through the midline of the body; from the adductors, into the pelvic floor and the abdominals.
- Kinesthetic* Feel how the energy currents of the abdominal muscles are flowing upwards, while the currents of the hip flexor muscles are flowing downwards.
- Tactile* Place your forearm lightly onto the stretched out arms of the participant to assist the roll up motion. The person can apply mild pressure upwards onto your forearm.





ROWING I

APPLIED MECHANICAL PRINCIPLES

Axial Elongation • Disassociation • Shoulder Organisation

EXERCISE AIMS & BENEFITS

STARTING POSITION

*Long Sit.*

- The elbows are bent and close to the waistline. The palms of the hands face down.

MOVEMENT & BREATHING PATTERN

The shoulder blades are dynamically stabilized throughout the exercise.

*Inhale* Extend the arms diagonally, forwards and upwards.

*Exhale* Lower the arms towards the floor.

*Inhale* Lift the arms over head.

*Exhale* Lower the arms sideways.

*Inhale* Bend the elbows back to the starting position.

*Exhale* Pause and elongate the spine.

Repeat the exercise 5 – 10 times.



*BO:* Activate the centre



*BI:* Arms reach diagonally up



*BO:* Arms lower



*BI:* Arms reach up over head



*BO:* Arms lower sideways



*BI:* Elbows bend

## ROWING I

### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### SITTING VARIATION

Long Sit Elevated, Tailor's Sit, Diamond Sit.



Long Sit Elevated

#### SINGLE ARM

Perform the movement with one arm only.

#### COORDINATION

Begin the movement with one arm and after one breath follow with the second.

#### TONING BALLS

Hold light Toning Balls

### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Imaginary & Kinesthetic Instructions: Water.*

Imagine you are sitting in warm water. The sit bones are firmly anchored to the ground and the crown of the head reaches up towards the sky.

*Picture 1* Let your hands glide through the water without resistance while extending the arms diagonally up.

*Picture 2* Press your arms down and feel the resistance of the water.

*Picture 3* Let your arms float up to the surface like air in water.

*Picture 4* Press your arms sideways down and feel the resistance of the water again.

*Picture 5* Bend your elbows effortlessly.

## ROWING I

## TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS &amp; IMAGERY

*Imaginary & Kinesthetic Instructions: Helium Balloons.*

Imagine you have helium balloons attached to your wrists.

*Picture 1* The arms are floating diagonally up.

*Picture 2* Feel the balloons lightly carrying the arms on the way down.

*Picture 3* The arms are floating up towards the sky.

*Picture 4* The arms are floating down.

*Picture 5* The hands are carried up and the elbows bend effortlessly.

*Imaginary & Kinesthetic Instructions: Weights*

Imagine heavy weights attached to your wrists.

*Picture 1* Feel the heaviness of the weights as the arms extend up.

*Picture 2* Feel the weight attached to your wrists and consciously slow down the descend.

*Picture 3* Lift the weights with a slow motion.

*Picture 4* Consciously decelerate the lowering of the arms.

*Picture 5* As you lift the hands, the elbows naturally bend.

## Notes

## ROLLING LIKE A BALL

### APPLIED MECHANICAL PRINCIPLES

Centring • Breathing

### EXERCISE AIMS & BENEFITS

---

---

---

### STARTING POSITION

*Sitting.*

- The pelvis is tilted back and the spine in long, even flexion.
- The hands are placed behind the knees with the elbows pointing out. The chest is open.
- The legs are bent, adducted and lifted off the floor.
- The body weight is behind the sit bones.
- The centre is strongly engaged and the abdominal wall drawn back.

### MOVEMENT & BREATHING PATTERN

*Inhale*

Roll back to the middle of the shoulder blades.

The abdominal muscles remain strongly engaged and the spine stays in long flexion.

The distance between the belly and thighs remains the same.

*Exhale*

Roll up and balance behind the sit bones.

Repeat the exercise 10 times.



### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

## ROLLING LIKE A BALL

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### ROLLING PREPARATION

- The pelvis is tilted back, the spine is in long flexion and the feet are on the floor.

*Exhale* Roll forward into the Spine Stretch Position.  
The forehead is close to the knees and the belly as far as possible away from the thighs.

*Inhale* Move the chest away from the thighs maintaining spine flexion.



#### BASIC JACKKNIFE

- Balance behind the sit bones.

*Exhale* Draw the knees to the forehead and the forehead to the knees.

*Inhale* Open to the starting position.



#### CLASSICAL ROLLING LIKE A BALL

- Hold the heels with your hands.
- Roll forward and backward like ROLLING LIKE A BALL.



### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Technical* All abdominal muscles are strongly engaged.

*Technical* The spine flexion is long and even.

*Technical* The gaze is on the thighs.

*Kinesthetic* Shoulders are open, the neck long and the breath is flowing evenly.

*Imaginary* Imagine your spine to be a long, evenly arched bow.

*Technical* Maintain the same distance between the belly and the thighs.

ROLLING LIKE A BALL

TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

- Kinesthetic* Draw the pubic bone up towards the belly button when you are rolling up (avoid an anterior pelvic tilt in the seated position).
- Kinesthetic* Keep the pubic bone connected to the sternum at all times.
- Imaginary* Imagine strong elastic bands connecting the hip bones with the lowest ribs from the first to the last repetition.
- Technical* Roll from the sacrum to the tips of the shoulder blades and back to the sacrum.
- Kinesthetic* Roll backwards and forwards with an even rhythm.
- Imaginary* Imagine white paint on your spine and with each rolling motion you are drawing an even white line onto the mat.
- Kinesthetic* Feel how the mat massages the spinal muscles.
- Technical* The smaller the rolling motion, the more challenging the exercise.

Notes

REST POSITIONS

As previously mentioned, appropriate breaks and rest if need be is important to achieve short-term and long-term goals in Pilates. For people new to Pilates, it's a completely different form of training, even when they are active and competent in other forms of movement. Building up deep strength takes time and practice. Many beginners fatigue faster in their body than their mind, which leads to tension and tension is counterproductive to what we want to achieve. In the beginning it's also quite normal to work too hard and to do too much in areas that should be relaxed, which again leads to tension and fatigue.

Instruct the appropriate Rest Position before going into a floor based exercise sequence. If, for example, you transition from a sitting exercise to LEG FLOAT in supine, cue the REST POSITION in supine before LEG FLOAT.

Explain the importance of adequate rest and why it is important to avoid building up unnecessary tension; you might have to repeat this subtly every now then. The more lesson planning experience you gain and the more 'advanced' your participants become, the less breaks will be necessary. However, at the beginning it's essential to plan ahead and include Rest Positions in your class.

REST POSITION in Supine

Relax completely and let the lower back sink into the mat.



REST POSITION / CHILD POSE

The hands are underneath the forehead.



The arms are extended in front.



The arms are alongside the body.



The knees are open.



NECK STRETCH

The hands are interlaced behind the head.



SHOULDER STRETCH

Hands interlaced behind the back with the arms lifted.



SIDE STRETCH

The spine is bent to one side.





## HAND, ARM, LEG & FOOT POSITIONS

---

### HAND & ARM POSITION IN SUPINE

Allow your participants to support their head and neck during forward flexion exercises in supine.



The hands can be placed behind the head with the thumbs on the edge of the skull (Occiput) and the other four fingers relaxed on the back of the head. The elbows are wide open but visible from the corners of the eyes.



The hands can also be interlaced behind the head.

In the beginning it's recommendable to place a flat towel underneath the head during supine exercises. Some people need two towels; one underneath the top of the shoulders and another one underneath the head. It's a simple thing that can greatly support proper spinal alignment, therefore working in a more neutral position with minimal muscular effort.

### ARM & SHOULDER ALIGNMENT

The shoulders should be in neutral alignment in supine and the hand placement secondary to the shoulder organisation.

What works best for one person might not be the best for someone else. Always give options and explain what you are looking for; a shoulder organisation that allows the shoulder and neck muscles to relax.



LEG POSITIONS IN SUPINE

TABLE TOP



---

---

---

---

---

---

---

PILATES V



---

---

---

---

---

---

---

PARALLEL & ADDUCTED



---

---

---

---

---

---

---

PARALLEL & HIP WIDTH



---

---

---

---






---

---

---

**FOOT & FEMUR POSITIONS**

In Pilates we pay as much attention to the feet as we do to every other part of the body, hence strengthening and mobilizing them is an integral part of the training. Foot positions can also alter the focus of an exercise.

DESCRIPTION	VISUAL
POINT – Plantar flexion	
SOFTLY POINTED – Relaxed plantar flexion	
FLEX – Dorsi flexion	
PILATES V – Adduction and lateral rotation of the hip joints	
MEDIAL-ROTATION – Medial rotation of the hip joints.	

## LEG FLOAT

### APPLIED MECHANICAL PRINCIPLES

Centring • Disassociation • Extremity Alignment

### EXERCISE AIMS & BENEFITS

---



---

#### BASIC LEG FLOAT

##### STARTING POSITION

*Supine.*

##### MOVEMENT & BREATHING PATTERN

*Exhale* Lift the gesture leg into Table Top (90° angle in hip and knee joint).

*Inhale* Lower the leg and roll the foot down until you are in the starting position again.

Repeat the exercise 5 - 6 times on each side, alternating sides or only right, then left.



#### LEG FLOAT ALTERNATING

##### MOVEMENT & BREATHING PATTERN

*Inhale* Lift the right leg into Table Top.

*Exhale* Lift the left leg into Table Top.

*Inhale* Lower the right leg back onto the floor.

*Exhale* Lower the left leg back onto the floor.

Repeat the exercise 2 – 4 times on each side, alternating sides or beginning only right, then only left.



## LEG FLOAT

### LEG FLOAT

#### STARTING POSITION

*Supine.*

- The legs are in Table Top position.

#### MOVEMENT & BREATHING PATTERN

*Exhale* Lower the gesture leg until the toe touches the floor.  
The movement is in the hip joint, the knee joint stays at a 90° angle.

*Inhale* Raise the leg up into Table Top again.

Repeat the exercise 5 – 6 times on each side, alternating, or only right, then left.



---

---

#### MAIN MUSCLES

#### STABILIZING MUSCLES

#### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

#### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

##### BREATHING VARIATION

The breathing pattern can be varied.

##### ARM VARIATION

The arms rest alongside of the body or extend up towards the ceiling.

##### LEG FLOAT HEEL TAP



## LEG FLOAT

### BASIC LEG FLOAT with Ball

To improve movement perception an Overball can be placed under the knee.



### DIAGONAL LEG FLOAT

Rotate the knees to the right side of the mat in order for the toes to point to the left corner. The left hip joint is rotated inward, the right hip joint is rotated outward.



### DIAMOND LEG FLOAT

The knees are shoulder distance or a little bit more apart, big toes together.



### DIAMOND DOUBLE LEG FLOAT



### LEG FLOAT UP

The movement of the legs can be executed whilst the spine is in forward flexion.

- The exercise can be conducted with a slow breathing pattern or using percussion breath.



BASIC LEG FLOAT UP



LEG FLOAT UP

### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Technical* The shoulders are open, the neck is relaxed and the gaze of the eyes is to the knees.

*Technical* The centre is actively engaged and the pelvis is stabilised in a neutral position.

*Kinaesthetic* The centre stays activated throughout the exercise and you feel a slight tension above the pubic bone.

LEG FLOAT

TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Kinaesthetic* Compare the lightness of your legs.

*Tactile* Have the participant place their hands onto their lower belly; the thumbs underneath the belly button and the index fingers near the pubic bone – thumbs and index fingers forming a triangle. Let them control the stability of the pelvis through the hands as well as feel the slight muscular tension underneath.

*Imaginary* Imagine there is a small anchor attached to your sacrum which connects your pelvis to the floor.

*Imaginary* Imagine your pelvis is a bowl full of water. Keep the water stable while moving your legs.

*Imaginary* Imagine your feet are standing on rice paper; peel each foot gently off the floor so as not to tear the fine paper.

*Imaginary* Imagine your feet are standing on a thin sheet of ice that you don't want to break.

*Imaginary* Imagine there is a balloon tied to your knee and your leg is raised and lowered with a light, almost floating movement.

Notes

## ARM FLOAT

### APPLIED MECHANICAL PRINCIPLES

Centring • Disassociation • Extremity Alignment

### EXERCISE AIMS & BENEFITS

---



---



---

### STARTING POSITION

*Supine.*

*Basic Position:* The feet are hip distance apart and on the ground.

*Table Top position:* The feet are raised off the ground so that the knees and hip joints form an angle of 90°.



Basic Position



Table Top position

### BUTTERFLY

#### MOVEMENT & BREATHING PATTERN

*Exhale* Lower the left arm sideways towards the floor, maintaining lumbar-pelvic stability.

*Inhale* Lift the arm back to the starting position. Change sides.

The exercise can be performed with one or both arms or alternatively.

Repeat the exercise 5 times.



Single Arm Butterfly



Double Arm Butterfly

---



---



---



---



## ARM FLOAT

### MONKEY

*Exhale* Lower the left arm down towards the floor next to your hip; simultaneously take the right arm to the floor next to your ear.

*Inhale* Raise both arms back into starting position.

Repeat the exercise 5 times alternatively.



### HELICOPTER

*Inhale* Lower the left arm down towards the floor next to your hip; simultaneously take the right arm to the floor next to your ear.

*Exhale* Draw two semicircles just above the floor with both arms at the same time.

*Inhale* Move the arms through the centre just like closing and then opening a pair of scissors and repeat.

Repeat the exercise 5 times in one direction and 5 times in the other direction.



### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### TONING BALLS

- Perform the exercise with Toning Balls in your hands.
- Place Toning Balls underneath your feet.



### ARM CIRCLES


- Draw even circles with one or both arms.

## ARM FLOAT

## TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS &amp; IMAGERY

- Technical* Keep the gaze of the eyes right above your knees.
- Technical* Engage the centre as much as necessary, but as little as possible!
- Technical* The shoulder blades stay relatively stable; the floor gives you tactile feedback.
- Technical* The movement of the arms is conducted in an even rhythm.
- Kinaesthetic* Focus your attention on your centre and feel how the arm movements affect its stability.
- Kinaesthetic* Feel your upper arms rolling and gliding through the shoulder joints.
- Kinaesthetic* Discern how both arms are drawing the same size of movement with the same speed.
- Imaginary* Imagine your shoulder joints are filled with olive oil and the upper arms are moving with ease and effortlessness.
- Imaginary* Imagine your shoulders and hips form an even square box which you want to keep in perfect shape.

## Notes



## DEAD BUG

### APPLIED MECHANICAL PRINCIPLES

Centring • Disassociation • Extremity Alignment

### EXERCISE AIMS & BENEFITS

---

---

---

### STARTING POSITION

*Supine.*

- The legs in Table Top position.
- The arms are extended up towards the ceiling, the palms facing towards each other.

### MOVEMENT & BREATHING PATTERN

*Exhale*      Extend the right leg and lower the right arm towards the floor close to your hip; simultaneously extend the left arm over your head.  
The centre stabilizes pelvis and lumbar spine.

*Inhale*      Return to starting position.

Repeat the exercise 5 – 10 times alternating sides or repeat 5 times on one side, then the other.

In a Pilates Essentials Lesson I would recommend you teach this exercise progressively, that is, step by step.



---

---

---

### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

## DEAD BUG

## REGRESSIONS, PROGRESSIONS, VARIATIONS &amp; MODIFICATIONS

## BASIC DEAD BUG I

- Perform the exercise with both feet resting on the floor.
- Extend and bend the knee of the gesture leg keeping the alignment of the thighs.



## BASIC DEAD BUG II

- Perform the exercise with one foot resting on the floor and the gesture leg in Table Top position.
- Extend the gesture leg out in line with the opposite thigh then return to Table Top.

## SINGLE LEG EXTENSION

- Move only the legs.
- The arms may stay relaxed at your sides or can be extended towards the ceiling.



BASIC SINGLE LEG EXTENSION

SINGLE LEG EXTENSION

## BREATHING VARIATION

- One long exhaling breath and one shorter inhaling breath.

## TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS &amp; IMAGERY

*Technical* Engage your abdominals strongly so the arms and legs can move freely.

*Technical* The rhythm of the arm and leg movement is steady and the range of motion is the same on both sides.

*Technical* Bring the stationary knee a little closer to your chest in the Table Top position to take some load off the lower back. Keep the neutral alignment of the pelvis.

*Technical* The more the leg is lowered to the floor the more challenging the exercise becomes for the lumbar-pelvic stability.

*Kinaesthetic* The extended leg feels long and light.

*Kinaesthetic* Feel the length of the leg and the length of the arm from your big toe to your middle finger.

DEAD BUG

TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Kinaesthetic* Let the supporting thigh bone sink heavily into the hip joint whilst the other leg is extended in a straight line.

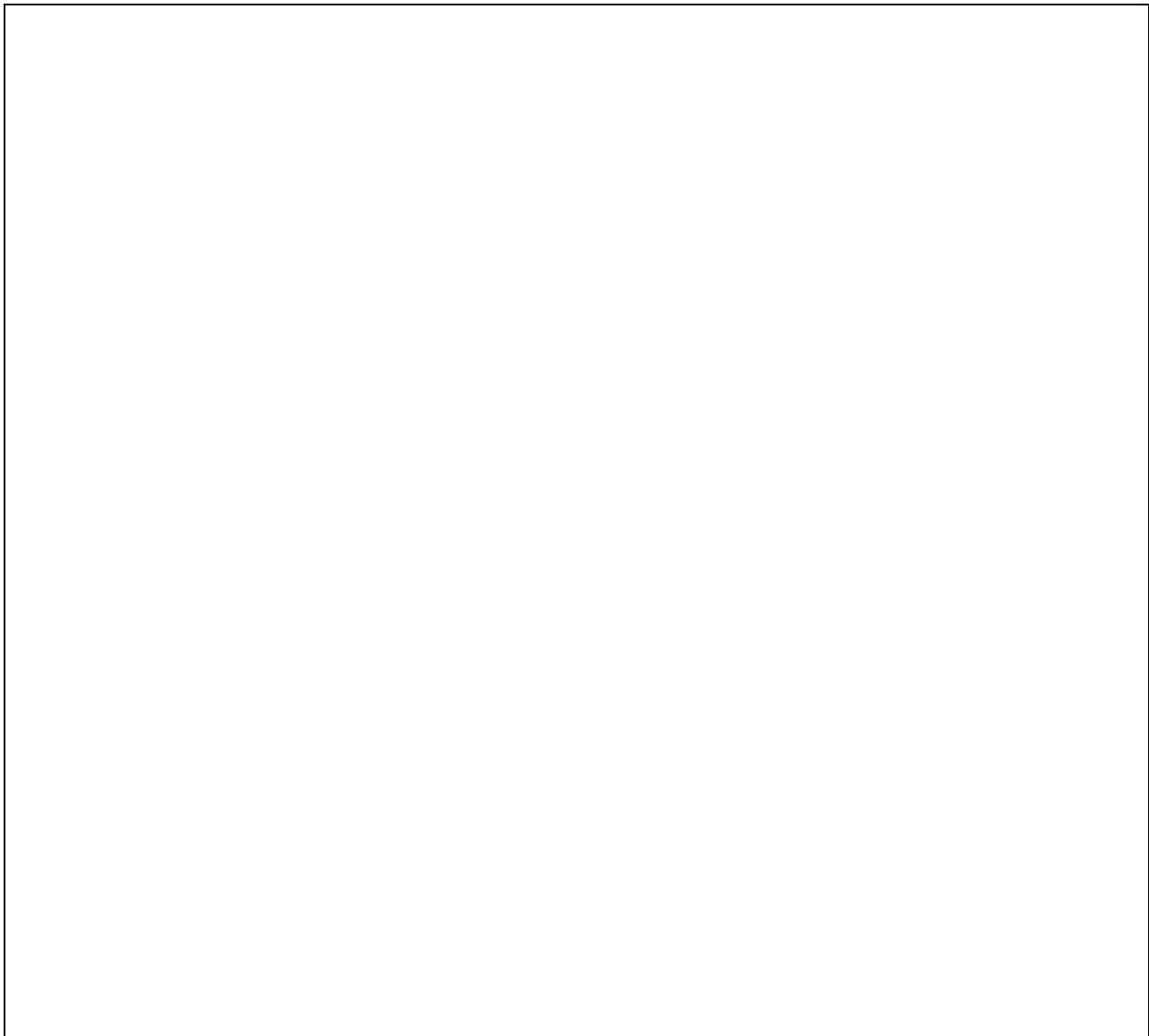
*Imaginary* Imagine your shoulders and hips form an even square box which you want to keep in perfect shape.

*Imaginary* Imagine your abdominals as a natural corset. Lace the corset as much as needed in order for your lower back and your shoulders to stay relaxed.

*Imaginary* The movement is fluent and has neither a beginning nor an end.

*Imaginary* Imagine your hip and shoulder joints are filled with soft butter.

Notes



PELVIC CURL

APPLIED MECHANICAL PRINCIPLES

Segmental Spinal Movement • Breathing • Extremity Alignment

EXERCISE AIMS & BENEFITS

---



---

STARTING POSITION

*Supine.*

- The heels are slightly closer to the sit bones.
- The palms turned to the floor.

MOVEMENT & BREATHING PATTERN

*Exhale* Engage abdominals, move the pubic bone towards the sternum and let your lower back sink into the mat.  
Starting with the tailbone, lift one vertebra after the other from the mat until the weight rests evenly between your shoulder blades.

*Inhale* Maintain the lift. The pelvis is tilted slightly posterior.

*Exhale* Let the ribs melt and sink, imprint one vertebra after the other onto the mat until the sacrum is back on the floor.

*Inhale* Realign the pelvis into neutral position.

Repeat the exercise 5 – 10 times.



PELVIC TILT



HAMMOCK



SHOULDER BRIDGE



MAIN MUSCLES

STABILIZING MUSCLES

PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

## PELVIC CURL

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### HAMMOCK

Curl up only to your lower thoracic spine and let your lower back relax in a soft Hammock position.



#### PELVIC CURL & ARM CIRCLE

The arms are relaxed, parallel to the body.

*Exhale* Peel the spine vertebra by vertebra from the mat.

*Inhale* Extend both arms up to the ceiling and bring them in a long half arc behind your head.

*Exhale* Imprint the spine vertebra by vertebra onto the mat.

*Inhale* Return to the starting position by drawing big semicircles with your arms.



#### PELVIC CURL & ARM ARCS

Start with the arms extended up to the ceiling or over head with palms facing upward/forward.

*Exhale* Curl up into the Bridging position, simultaneously lower the arms towards the floor.

*Inhale* Press the arms lightly into the floor.

*Exhale* Imprint vertebra by vertebra, simultaneously lift the arms up to the ceiling or over head.

*Inhale* Realign the pelvis. The arms can be positioned overhead.



## PELVIC CURL

PELVIC CURL with Arms Behind Head

Hands are interlaced behind the head.



### PELVIC CURL & KNEE SQUEEZES

In Shoulder Bridge.

*Exhale* Close the knees.

*Inhale* Open the knees to pelvic width.



### PELVIC CURL & KNEE SQUEEZE VARIATION

*Exhale* Peel the spine off the mat segmentally.

*Inhale* Close the knees.

*Exhale* Imprint vertebra by vertebra back onto the mat.

*Inhale* Open the knees pelvic width and realign the pelvis into neutral position.

The breathing pattern may be varied.

### PELVIC CURL & HIP SHIFT

Starting in Shoulder Bridge.

*Exhale* Shift the pelvis to one side in the frontal plane (without rotation).

*Inhale* Realign/centre the pelvis and spine.

After two repetitions (one to the left, one to the right) lower the spine one or two vertebra and repeat in new position. Repeat until the lowest ribs are on the floor.





## PELVIC CURL

### PELVIC TILT & LEG EXTENSION

*Exhale* Tilt the pelvis back and lift off the floor.  
The lowest ribs stay on the floor.

*Inhale* Maintain the Pelvic Tilt position.  
The pelvis is tilted posteriorly and the lumbar spine is in a long flexion.

*Exhale* Extend one leg while stabilising the pelvis in the tilted position.

*Inhale* Lower the foot to the floor.

Repeat the exercise 2 – 5 times on each side, then lower the spine vertebra by vertebra into neutral position.



### PELVIC CURL & KNEE LIFT

Starting in Shoulder Bridge.

*Exhale* Lift one knee.  
Stabilise the pelvis 3-dimensionally.

*Inhale* Lower the foot to the floor.

Repeat the exercise 1 – 3 times on each side, then lower the spine vertebra by vertebra into neutral position.



### PELVIC PRESS

The spine stays in neutral position.

*Exhale* Lift the pelvis with neutral position of the spine into a Bridging position.

*Inhale* Maintain the neutral position of the pelvis and the spine while lowering the upper body to the floor.



## PELVIC CURL

### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

- Technical* Keep the knees at a 90° angle (or even a little bit more) and shift the weight slightly forward onto the balls of your feet to engage calves and hamstrings more strongly.
- Technical* For more engagement of the hip extensors reduce the angle of the knees (less than 90°) and shift the weight slightly back onto your heels.
- Technical* Initiate the movement with a Pelvic Tilt.
- Technical* The abdominals and hamstrings contract evenly.
- Kinaesthetic* Feel the perfect synergy of your abdominals and hamstrings.
- Kinaesthetic* Draw your pubic bone towards the sternum and your sit bones towards the knees.
- Kinaesthetic* Feel the hip flexors relaxing in the shoulder bridge.
- Kinaesthetic* Feel the back muscles getting warmer and softer with each repetition.
- Kinaesthetic* Press the ball below the big toe into the mat to engage the adductors and support the alignment of the knees.
- Kinaesthetic* Lengthen out of the knees when in the Bridging position.
- Imaginary* Imagine your spine is a piece of sticky tape and the mat is a precious painting. Slowly and carefully peel the sticky tape away from the painting.
- Imaginary* Imagine a string pulling your tailbone in the direction of the ceiling.
- Imaginary* Imagine a tail as an extension of your tailbone; curl it up between the knees.
- Imaginary* Imagine you are laying on a thin sheet of ice. Be careful not to break the ice while rolling up and down.
- Imaginary* Imagine a metal ball rolling along your spine as you are rolling up. When the ball is between the lower part of the shoulder blades, let it roll down the spine while you are imprinting one vertebrae at the time, until it's centred on the sacrum again.
- Imaginary* Let your ribcage melt into your abdominal cavity to initiate the roll down.
- Imaginary* Anchor the sacrum when the pelvis is on the floor.

### Notes



## CURL UP

### APPLIED MECHANICAL PRINCIPLES

Centring • Breathing • Shoulder Organisation

### EXERCISE AIMS & BENEFITS

---



---



---

### STARTING POSITION

*Supine.*

- The hands are behind the head to support the neck.

### MOVEMENT & BREATHING PATTERN

*Exhale* Engage the centre.  
Lift head and shoulders off the floor and curl up to the tips of your shoulder blades.  
The chest is open and relaxed; the elbows are in peripheral vision.

*Inhale* Expand the back of the ribcage.

*Exhale* Roll down slowly until head and shoulders are back on the floor.

*Inhale* Relax.

Repeat the exercise 5 – 8 times.

The breathing pattern may be shortened or lengthened.



### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

## CURL UP

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### CURL UP DIAMOND

All exercise variations can be executed with the legs in 'Diamond Position'.

- In 'Diamond Position' the legs are opened to the sides. The soles of the feet are also open.

#### CURL UP with Ball

All exercise variations can be executed with a ball between the knees.

- The ball can be held without pressure to support the alignment of the legs; or you can gently press the knees into the ball to engage the adductors.

#### CURL UP BUTTERFLY

The exercise can be executed with or without a ball between the knees.

- If possible, the elbows are relaxed on the floor in starting position.

*Exhale* Engage the centre.

Lift the elbows slightly off the floor.

*Inhale* Lift the elbows higher so that they point to the ceiling.

The chest stays open.

*Exhale* Lift head and shoulders and draw a big arc with the elbows until they point to the knees.

*Inhale* Expand the back of the ribcage.

*Exhale* Open the elbows.

*Inhale* Close the elbows.

*Exhale* Roll slowly back down.

*Inhale* Open the elbows and relax.




---



---



---



---

CURL UP

OBLIQUE CURL UP I

Head and shoulders are on the floor, elbows in peripheral vision.

*Exhale* Lift head and shoulders up in a diagonal line.  
Draw the ribcage in direction of the contralateral iliac crest.

*Inhale* Lower head and shoulders slowly.



OBLIQUE CURL UP II

Head and shoulders are lifted off the floor in a forward contraction.

*Exhale* Rotate the thoracic spine in one direction.  
Draw the ribcage in direction of the contralateral iliac crest.

*Inhale* Return to a centred forward contraction.



CURL UP & ARM CIRCLE

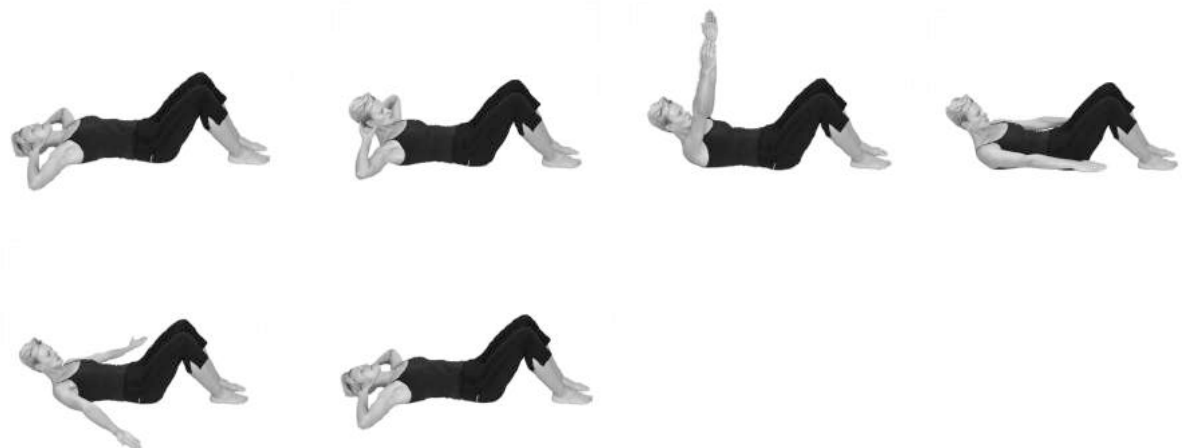
Head and shoulders are on the floor.

*Exhale* Curl up head and shoulders.

*Inhale* Extend arms up towards the ceiling.

*Exhale* Lower the arms to the floor.

*Inhale* Semicircle the arms back and place the hands behind the head.  
Lower head and shoulders.



## CURL UP

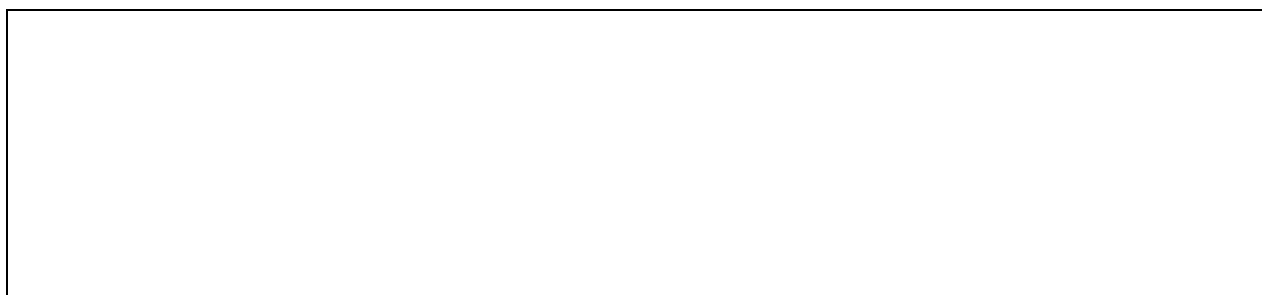
### OBLIQUE CURL UP & ARM CIRCLE

The breathing pattern is the same as in CURL UP & ARM CIRCLE.



### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

- Technical* The pelvis and the alignment of the legs stay in a neutral position.
- Technical* The gaze of the eyes follows the movement. Start with gazing just above the knees towards the corner of the room to lengthen the neck. Let the gaze travel to the knees and the thighs as you curl up and reverse it on the way back.
- Technical* The centre is engaged strongly and the belly wall is flattened.
- Kinaesthetic* Engage pelvic floor and deep abdominals first and then slide the sternum towards the pubic bone as you curl up and lift head and shoulders off the floor.
- Kinaesthetic* Feel the muscle fibres of your abdominals glide together as you curl up and notice how smoothly the fibres glide apart as you lower head and shoulders back onto the floor.
- Kinaesthetic* Stay open through the chest and shoulders. Your elbows should be just in your peripheral vision.
- Kinaesthetic* Lengthen your neck in supine position. Lift head and shoulders in a big arc off the floor with this new length.
- Tactile* Accompany the movement with a light touch to the back of the participant's ribcage.
- Imaginary* Imagine an egg tucked in between your chin and throat; try not to drop nor break it.
- Imaginary* Tighten your imaginary corset to the maximum as you lift head and shoulders off the floor. Hold the tension until you're back in supine and neutral position. Relax.
- Imaginary* Anchor the sacrum to the floor.



HUNDRED

APPLIED MECHANICAL PRINCIPLES

Centring • Breathing • Shoulder Organisation

EXERCISE AIMS & BENEFITS

---



---



---

STARTING POSITION & PREPARATION

*Rest Position in Supine.*

*Exhale* Engage the centre and lift head and shoulders off the floor.  
 Bring the legs into Table Top position or extend them almost vertically to the ceiling.  
 The position of the legs is either parallel or in Pilates V.  
 Extend the arms forward at hip height.

MOVEMENT & BREATHING PATTERN

*Inhale* Hold the forward contraction and expand the back of the ribcage.

*Exhale* Keep the centre strongly engaged and draw the belly wall in.

Hold the position for 10 breaths.

The traditional Pilates breath is, inhale for 5 counts and exhale for 5 counts; therefore 10 breaths add up to 100 counts. This is the reason the exercise is called 'The Hundred'. In Contemporary Pilates we are also satisfied with 80, 60 or 50 counts though ☺.

Trainer's Tip: I recommend you practise the various leg positions with your participants prior to performing 'Hundreds'; otherwise it is hard for people to choose the most suitable variation for their ability. You don't need to break the flow of the class when practising the different positions, turn them into a separate exercise and integrate it smoothly into your lesson plan.



HUNDRED Table Top



HUNDRED legs straight and parallel



HUNDRED Pilates V

---



---



---



## HUNDRED

### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### HUNDRED NEUTRAL

Head and shoulders stay on the floor.

- This position can be chosen for all variations of HUNDRED.

#### TRADITIONAL HUNDRED

*5- Beat Percussion Breath* The palms are facing down.  
Pump the arms up and down, keeping the movement small.  
The shoulders show no movement and stay open.

*5- Beat Slow Inhalation* The palms are facing up.  
The arms stay still and extended.

#### ANGEL ARMS

*Inhale* Sweep the arms up to shoulder level.

*Exhale* Sweep them back and increase abdominal contraction.



#### HELICOPTER

*Inhale* Extend the arms up to the ceiling.

*Exhale* Draw the arms overhead.  
Keep the height of the forward contraction.

*Inhale* Lower the arms to shoulder level.

*Exhale* Sweep arms back to starting position.  
If possible, intensify the forward contraction.



## HUNDRED

## BASIC HUNDRED

- Place one hand on the lower belly for tactile feedback.
- The other hand is positioned behind the head for neck support.



## TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS &amp; IMAGERY

*Technical* Keep breathing in an even and flowing rhythm.

*Technical* Connect your ribs to the hips; let the lower back lengthen but keep a strong and balanced pelvic alignment.

*Technical* The centre is strongly engaged, the belly wall is drawn back.

*Technical* The neck muscles are relaxed, the shoulders are open, the gaze of the eyes goes towards the thighs.

*Kinaesthetic* Lift up your pelvic floor and draw inward at the magic point below your belly button. Feel the deep abdominal connection.

*Tactile* Place your hands behind the participant's upper back so they may lower their head onto your forearms.

*Imaginary* Relax your neck muscles and keep chest and shoulders open - a big smile spreads across your chest.

*Imaginary* Anchor your sacrum to the floor and lace the corset tighter with each exhaling breath.

*Imaginary* Visualise a belt with 10 notches around your waist. Tighten the belt one notch with each exhalation.

## Notes

## SIDE TO SIDE

### APPLIED MECHANICAL PRINCIPLES

Centring • Breathing • Segmental Spinal Movement • Extremity Alignment

### EXERCISE AIMS & BENEFITS

---

---

---

### STARTING POSITION

*Supine.*

- The legs are adducted and in Table Top position.
- The arms are extended out to the side; let them be relaxed on the floor with the hands just below the shoulders and the palms turned upwards.

### MOVEMENT & BREATHING PATTERN

*Inhale*            Move the legs 45° to the side, at the same time turn your head to the opposite shoulder.  
The thoracic spine rotates whilst the lumbar-pelvic stability is maintained.  
The legs stay together.

*Exhale*            Return to starting position and centre the spine, pelvis and legs.

Repeat the exercise 5 times on each side.



### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

## SIDE TO SIDE

## REGRESSIONS, PROGRESSIONS, VARIATIONS &amp; MODIFICATIONS

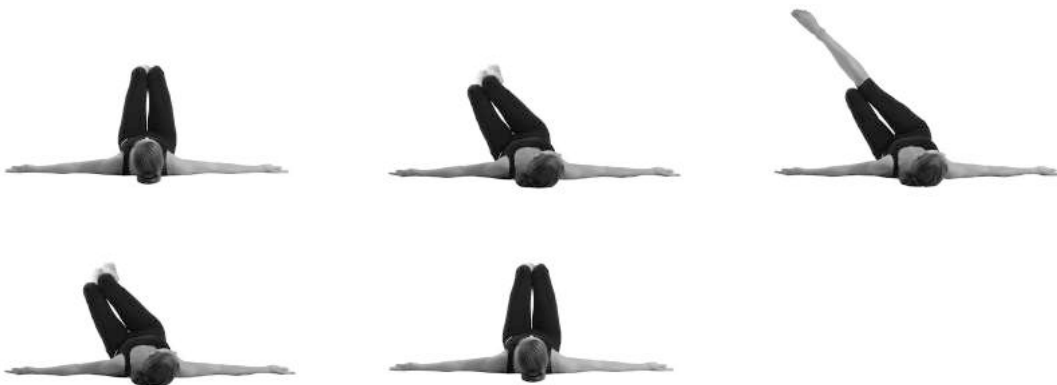
## SIDE TO SIDE &amp; SINGLE LEG EXTENSION

*Inhale* Move the legs 45° to the side and turn your head to the opposite shoulder.

*Exhale* Extend the upper knee.  
The thighs stay together.

*Inhale* Bend the upper knee.

*Exhale* Return to starting position.



## SIDE TO SIDE &amp; DOUBLE LEG EXTENSION

The breathing and movement pattern is correspondent to SINGLE LEG EXTENSION. The only difference is that both legs are extended.

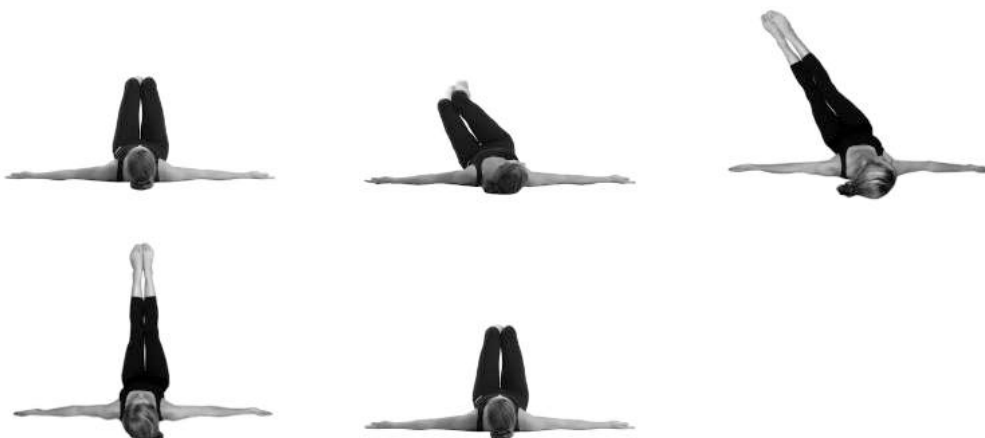
## PENDULUM

*Exhale* Move the legs 45° to the side and turn your head to the opposite shoulder.

*Inhale* Extend the legs.

*Exhale* Return to starting position keeping legs extended.

*Inhale* Bend the knees to Table Top position.



## SIDE TO SIDE

### BASIC SIDE TO SIDE

The feet or tips of your toes are in contact with the floor in the starting position.



### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

- Technical* The centre is strongly engaged and the lumbar-pelvic stability is maintained.
- Technical* The tilting movement of the pelvis and the legs is small. One side of the pelvis is slightly lifted off the floor.
- Technical* The legs are together; the knees and ankles stay in contact.
- Kinaesthetic* The chest is open, the arms are long and relaxed, the neck rotates with ease.
- Kinaesthetic* Your arms feel weightless.
- Kinaesthetic* Imagine the left side of your ribcage is drawn outwards when you rotate your legs to the right.
- Kinaesthetic* During rotation lengthen out of the upper knee.
- Tactile* Place your hands on the participant's costal arch. Close the ribs with soft pressure while the person is rotating.
- Imaginary* Visualize a precious diamond between your knees. You do not want to let go of it.
- Imaginary* When in the starting position feel your lowest ribs melting into the mat.
- Imaginary* Imagine you are laying in warm water. Your shoulders are very relaxed and open and your hands are placed slightly below your shoulders.

### Notes

## SINGLE LEG STRETCH

### APPLIED MECHANICAL PRINCIPLES

Centring • Breathing • Extremity Alignment

### EXERCISE AIMS & BENEFITS

---



---

### STARTING POSITION & PREPARATION

*Rest Position in Supine.*



The left hand is resting on the outside of the left ankle; the right hand on the inside of the left knee.

*Exhale* Engage the centre, extend the right leg towards the ceiling, simultaneously lift head and shoulders off the floor.

Maintaining neutral position in the pelvis, the right leg is slowly lowered. Range of motion is adapted to the existing degree of lumbar-pelvic stability.

The lumbar spine elongated.

### MOVEMENT & BREATHING PATTERN

*Inhale* Bend the right leg; place the right hand on the outside of the right ankle and the left hand on the inside of the right knee.

*Exhale* Extend the left leg.

Repeat the exercise 5 times on each side; alternating right and left.



### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

## SINGLE LEG STRETCH

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### BASIC SINGLE LEG STRETCH

Hold on to one knee with both hands instead of placing one hand on the ankle and one hand on the knee.



#### SINGLE BREATH

*Exhale* Extend the right leg.

*Inhale* Extend the left leg.

- Repeat the exercise for 10 breaths.
- Rest Position.
- Repeat reversed for another 10 breaths.

#### PERCUSSION BREATH

1. *Percussion Breath* Extend the right leg.

2. *Percussion Breath* Extend the left leg.

*Slow Inhalation* Extend the right leg slowly.

#### SINGLE LEG STRETCH ARM VARIATIONS



Arms parallel to the floor



Arms pointed to the ceiling

#### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Technical* Keep the gaze of your eyes on your thighs, neck long.

*Technical* Keep the pelvis stable, the centre strongly engaged and the belly wall drawn back throughout the exercise.

*Technical* Keep the forward contraction at the same height during the whole exercise.

*Technical* Reach to the ankle of the bent leg with every exhalation.

*Technical* The movement of the legs is rhythmic, the knees stay in alignment with the hip joints.

*Kinaesthetic* Strength emanates from your pubic bone through your centre and upwards when the leg is extended.

*Kinaesthetic* Feel the space in your hip joint when you stretch the leg.


*Kinaesthetic* Feel the length and lightness of the extended leg.

## SINGLE LEG STRETCH

## TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS &amp; IMAGERY

- Imaginary*     Imagine you want to reach the wall in front of you with your big toe.
- Imaginary*     Visualize white paint on your big toe. Paint a dot on the opposite wall as you extend your leg.
- Imaginary*     Feel a light breeze blowing through the hip joint of your extended leg.
- Imaginary*     Imagine a wide leather belt that is strapped over your hips and fastens them to the floor.

## Notes





## CRISSCROSS

### APPLIED MECHANICAL PRINCIPLES

Centring • Breathing • Extremity Alignment • Movement Integration

### EXERCISE AIMS & BENEFITS

---

---

---

### STARTING POSITION & PREPARATION

*Rest Position in Supine.*

The hands are placed behind the head to support the neck, the elbows are wide apart, but still in your peripheral vision.

*Exhale* Engage the centre, bring the legs into Table Top and simultaneously raise head and shoulders off the floor.



### MOVEMENT & BREATHING PATTERN

*Exhale* Straighten the left leg and rotate your upper body to the right.

*Inhale* Return to the centre and bend the left leg again.

Repeat the exercise 5 - 6 times on each side, alternating sides each time.

Trainer's Tip: CRISSCROSS is a coordinative challenging exercise for most participants, it also requires a sound 'understanding' of pelvic stability, disassociation, shoulder organisation and movement integration. Therefore I highly recommend teaching the exercise progressively and starting with the variations described underneath.



### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Neutral Lumbar Spine

Core Strength

Elongated Lumbar Spine

Segmental Spinal Movement

## CRISSCROSS

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### BASIC CRISSCROSS I

- One foot is planted firmly on the floor.
- Extend and bend the gesture leg. The thighs stay parallel to each other.
- The spine rotates in direction of the stationary leg while exhaling. Return to centred flexion with the inhalation.



#### BASIC CRISSCROSS I with Stationary Torso

- One foot is planted firmly on the floor.
- Extend and bend the gesture leg. The thighs stay parallel to each other.
- The spine is held in position (flexion and rotation).



#### BASIC CRISSCROSS II

- Correspondent to BASIC CRISSCROSS I.
- The gesture leg is in Table Top position. The spine rotates.



#### BASIC CRISSCROSS II with Stationary Torso

- Correspondent to BASIC CRISSCROSS I
- The gesture leg is in Table Top position. The spine is held in position.



## CRISSCROSS

### CRISSCROSS & LEG STRETCH

- The thoracic spine is held in position (flexion and rotation) toward the stationary leg.
- Extend and bend the gesture leg.
- The hands may be positioned behind the head or the ipsilateral hand may point to the ceiling. The shoulder blade is in slight protraction.



### RHYTHM CHANGE

The breathing rhythm may be altered (for example descend slower, retract faster) and movement pauses inserted.

### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Technical* The weight is distributed evenly on both sides of the pelvis.

*Technical* Keep the pelvis stable, the centre strongly engaged and the belly wall drawn back throughout the exercise.

*Technical* The legs stay in perfect alignment with the hip joints.

*Technical* Keep the distance between the collar bones and the length in both sides of the waist while rotating (avoid lateral flexion).

*Imaginary* Imagine a cross on your belly and while exhaling you draw opposite ends together.

*Kinaesthetic* Move in a flowing and rhythmical way.

*Tactile* **CRISSCROSS LEG STRETCH** When rotating to the left, support the rotation and lift of the shoulder with one of your hands on the participant's right shoulder blade and your other hand in front of the person's right elbow to maintain openness of the chest and shoulder.

### Notes

**DOUBLE LEG STRETCH**

**APPLIED MECHANICAL PRINCIPLES**

Centring • Breathing • Disassociation

**EXERCISE AIMS & BENEFITS**

---



---



---

**STARTING POSITION**

*Rest Position in Supine.*

**MOVEMENT & BREATHING PATTERN**

- Exhale* Engage the centre and lift head and shoulders off the floor.  
Simultaneously move legs to Table Top position.  
Extend the arms alongside the body, parallel to the floor, with palms facing down.  
Turn the gaze of the eyes towards your thighs.
- Inhale* Place the back of the hands together above the knees.
- Exhale* Raise arms above the head and bring them back to your hips in wide semi-circle.  
Keep the gaze of your eyes on the thighs.
- Inhale* Return to the Rest Position.

Repeat the exercise 5 – 10 times.



*BI: Prepare*



*BO: Curl up and extend arms*



*BI: Place the back of your hands together*



*BO: Sweep the arms around in a big semicircle*



*BI: Rest*

---



---



---



---

## DOUBLE LEG STRETCH

Trainer's Tip: DOUBLE LEG STRETCH requires well developed coordination, shoulder organization, flexibility and good core strength. It is therefore a challenging exercise for many participants. I recommend the following:

- Repetition 1*      Instruct the movement with head and shoulders on the floor and let the breath flow naturally; the focus is on the movement of arms and legs. Provide key cues for the different parts of the exercise.
- Repetition 2 to 4*      Keep head and shoulders on the floor and perform the movement using the correct breathing pattern of the exercise. Reinforce the key instructions.
- Repetition 5 to 10*      Integrate forward contraction and execute DOUBLE LEG STRETCH as described above.

### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

- Core Stability       Core Strength   
Neutral Lumbar Spine       Elongated Lumbar Spine       Segmental Spinal Movement

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### LEG VARIATIONS

Extend the legs parallel or into Pilates Stance.

### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

- Technical*      In Rest Position the back is relaxed and the pelvis is tilted slightly posterior. During the forward contraction the pelvis is neutral and the lumbar spine is elongated.
- Technical*      Continue looking at the thighs and keep the shoulders at the same height while performing the movement of the arms.
- Kinaesthetic*      Increase the abdominal work to maintain the height of the shoulders while performing the semicircle.
- Kinaesthetic*      Every second inhalation gives the opportunity for a short break. Use it to relax your whole body.
- Kinaesthetic*      Feel the contrast between tension in the forward contraction and total relaxation in the Rest Position.

### Notes

## SINGLE LEG CIRCLE

### APPLIED MECHANICAL PRINCIPLES

Centring • Breathing • Disassociation • Extremity Alignment

### EXERCISE AIMS & BENEFITS

---



---



---

### STARTING POSITION

*Supine.*

- The gesture leg is either in Table Top or extended vertically to the ceiling.

### MOVEMENT & BREATHING PATTERN

*Inhale* Move the gesture leg out to the side (abduction) and start to draw a semicircle with the knee (Table Top) or the big toe (extended leg).

*Exhale* Finish the D-shaped movement in completing the semicircle/lowering the leg slightly and retracting it in a linear movement back to starting position.

Repeat the exercise 5 – 6 times counter clock-wise.

*Inhale* Lower the leg in a line, with the hip.

*Exhale* Move the leg out to the side, draw a semicircle to finish the D-shaped movement and return to starting position.

Repeat the exercise 5 – 6 times clock-wise. Change sides.



### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

## SINGLE LEG CIRCLE

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### SINGLE LEG CIRCLE with extended supporting Leg

- The supporting leg is in alignment with the hip joint, extended on the floor.

*Inhale* Cross the gesture leg over the supporting leg (adduction).

*Exhale* Lower the leg, start drawing a circle away from the centre (abduction), finish the circle and return to starting position.

Repeat 5 times clock-wise and 5 times counter clock-wise.



#### BASIC SINGLE LEG CIRCLE

The gesture leg is flexed.



#### HIP RELEASE

Perform the movement of SINGLE LEG CIRCLE with the gesture leg on the floor.

*Inhale* KNEE DROP – lower the right knee to the side.

*Exhale* LEG SLIDE – slide the leg in a lateral rotation along the floor and straighten it.

*Inhale* Rotate the leg back to a parallel alignment.

*Exhale* LEG SLIDE – slide the leg back to starting position.



## SINGLE LEG CIRCLE

## TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS &amp; IMAGERY

- Technical* The shoulders are relaxed, the chest is open, the arms lie lightly alongside the body.
- Technical* Keep the circles very small to start with and increase the diameter according to your core strength, flexibility and lumbar-pelvic stability.
- Technical* Keep your eyes on the supporting knee. This knee is a good indicator of the stability of the pelvis; if it's wobbling around, there is a good chance that the pelvis is moving too. In this case, engage the centre more strongly or decrease the size of the circles. If the knee is completely motionless, the pelvis and lower back are stable.
- Kinaesthetic* Press the foot of the supporting leg lightly into the floor and engage the adductors of this side.
- Kinaesthetic* Let the gesture leg sink back heavily into your hip socket.
- Kinaesthetic* Feel the thigh bone circling, rolling and gliding through the hip joint.
- Tactile* Guide the participant's leg.
- Imaginary* Imagine your pelvis is filled with gold and serves as a solid base for the moving.
- Imaginary* Draw circles the size of a frisbee, then of a beach ball, then of a hula hoop ring; if you like, stay on one of these levels or increase the size of the circles steadily according to your flexibility and strength.
- Imaginary* Imagine your leg is a long brush drawing a 'D' on the ceiling; the movement is light and effortless.
- Imaginary* Imagine your leg is a heavy metal pole slowly scratching a 'D' into the ceiling; the movement is slow and purposeful.

## Notes





## GRAND BATTEMENT

### APPLIED MECHANICAL PRINCIPLES

Centring • Breathing • Disassociation • Extremity Alignment

### EXERCISE AIMS & BENEFITS

---



---



---

### STARTING POSITION

*Supine.*

- The gesture leg is extended vertically to the ceiling.

### MOVEMENT & BREATHING PATTERN

*Inhale* Lower the leg in a linear movement.  
The foot is pointed (plantar flexion).  
The pelvis is stable and the pubic bone gives a slight pull in direction of the sternum.

*Exhale* Lift the leg in a straight line.  
The foot is flexed (dorsi flexion).  
The pelvis is stable and the sit bones give a slight pull towards the feet.

Repeat the exercise 8 – 10 times with the right leg, then 8 – 10 times with the left leg.



### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

## GRAND BATTEMENT

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### PERCUSSION BREATH

Integrate percussion breath and match the rhythm of the breath with the rhythm of the movement.

#### BASIC SINGLE LEG EXTENSION

Starting from Table Top position, extend the gesture leg.



#### ARM VARIATION

Extend the arms to the ceiling.

### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Technical* The pelvis is stabilised in a neutral position.

*Technical* Move the leg in perfect linear alignment with the hip joint.

*Technical* Press the foot of the supporting leg slightly into the mat.

*Kinaesthetic* Let the pelvis be heavy and the leg be light.

*Kinaesthetic* Your upper body is still and relaxed with the shoulders melting into the floor.

*Kinaesthetic* Perform controlled and rhythmic movements that seem to require no strength at all.

*Kinaesthetic* When the leg is lowered, feel the strength of your core flowing from your pubic bone upwards through the centre of your body.

*Kinaesthetic* Reach out of your sit bones to the opposite wall as the leg 'swings' back up.

*Tactile* Hold the participant's ankle and pull the leg slightly toward you when they are lowering the leg. This will create a feeling of space in the hip joint and a sense of length in the hip flexors.

*Imaginary* Imagine your leg is a pendulum that is swinging in a steady, even rhythm.

*Imaginary* Imagine your ankle is tied to the ceiling with strong elastic. Feel the resistance when lowering your leg; feel the support when lifting it.

*Imaginary* Imagine you're touching the opposite wall with your big toe when lowering the leg.

#### Notes

## SCISSORS

## APPLIED MECHANICAL PRINCIPLES

Centring • Breathing • Disassociation

## EXERCISE AIMS &amp; BENEFITS

## STARTING POSITION

*Rest Position in Supine.*

*Exhale* Engage the centre and lift head and shoulders off the floor.  
Extend the legs towards the ceiling and simultaneously lower the arms to hip height.



## MOVEMENT &amp; BREATHING PATTERN

*Exhale* Hold on to the left calf gently.  
Lower the right leg and draw the left leg slightly towards your chest.  
The pelvis stays in neutral position.

*Inhale* Bring the right leg back up and change the grasp of the hands to the right leg.

Repeat the exercise 5 – 6 times on each side.



## MAIN MUSCLES

## STABILIZING MUSCLES

## PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

## SCISSORS

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### SINGLE BREATH

*Exhale* Hold the left leg and lower the right leg.

*Inhale* Hold the right leg and lower the left leg.

- Repeat the exercise for 10 breaths.
- Rest.
- Repeat the exercise for 10 breaths starting with the other leg.

#### DOUBLE PERCUSSION BREATH

*Double Percussion Breath* Draw the gesture leg in a double beat towards your chest.

*Slow Inhalation* Change sides.

#### FLEX & POINT

- The ankle of the upper leg is in dorsi flexion.
- The ankle of the lower leg is in plantar flexion.



#### ARM VARIATION

- The arms are stretched above the floor at hip height alongside the body.



#### BASIC SINGLE LEG STRETCH

- BASIC SINGLE LEG STRETCH is a regression of SCISSORS.



### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Technical* The pelvis is neutral and the centre is strongly engaged, drawing back the belly wall.

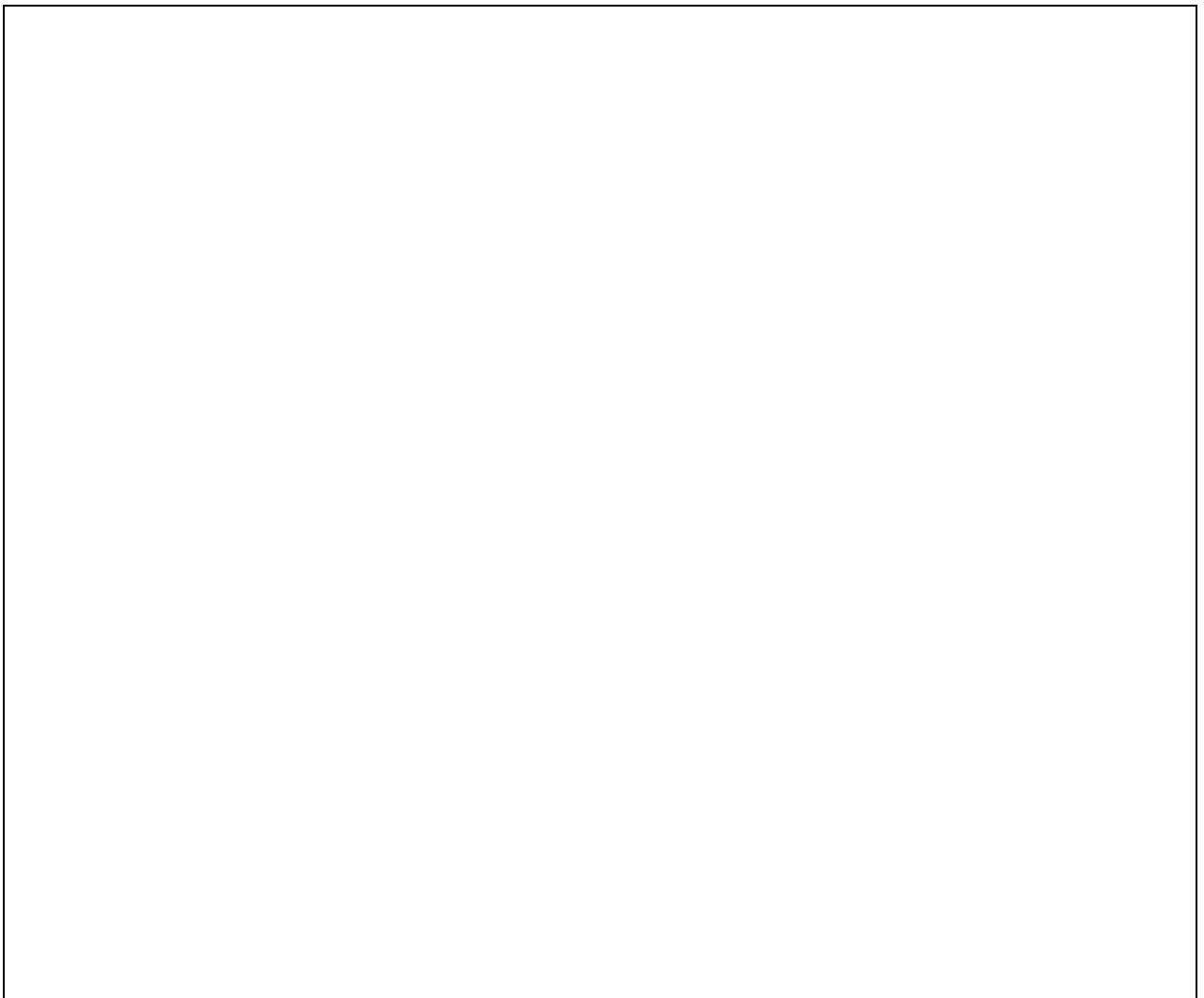
*Technical* The legs move in a perfect straight line, in alignment with the hip joints.

## SCISSORS

## TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS &amp; IMAGERY

- Technical* Control the lowering leg; it never touches the floor.
- Technical* The abdominal muscles keep the shoulders lifted and at a constant height, the hands only support the stretch (do not pull on the leg).
- Kinaesthetic* Reach out of your sit bones to the opposite wall when drawing the leg towards the upper body.
- Kinaesthetic* With each repetition feel the leg muscles relax more and more and become longer and softer like warmed up rubber.
- Kinaesthetic* Lengthen the lowering leg and create space in the hip joint.
- Kinaesthetic* Feel the slight stretch in the hip flexors when you lower the leg.
- Kinaesthetic* Feel the legs and movements getting lighter with every breath you take.
- Imaginary* Imagine your toes are drawing big, smooth rainbows in the sky.

## Notes



## ARM- AND UPPER BODY POSITIONS

---

Exercises in the Side Lying Position can vary. Here's a selection of possible choices:

### PILATES ESSENTIALS & PILATES FLOW

#### With Knees Bent

- The knees are bent in a 90° angle.
- The angle in the hip joint can vary. We mostly use an alignment where the toes, the hip joint and the shoulder joint are in one line.
- The upper hand lies on the floor or is placed on the hip. It may also be extended to the ceiling.



#### With Knees Extended

- The legs are extended and in alignment with the hip joints.
- As an option, the hip joint may be slightly flexed.
- The upper hand lies on the floor or is placed on the hip. It may also be extended to the ceiling.



### PILATES FLOW ADVANCED

#### On the Forearm

- The elbow is positioned slightly outside the shoulder joint.



#### With Hands Behind the Head

- The hands are interlaced behind the head and the elbow provides a base of support.



## LEG LIFT SERIES

### APPLIED MECHANICAL PRINCIPLES

Disassociation • Extremity Alignment

### EXERCISE AIMS & BENEFITS

---



---

### STARTING POSITION

*Side Lying.*

- The legs are extended in line with the body.

### BASIC ABDUCTOR LEG LIFT

- The lower leg stays on the floor.

### MOVEMENT & BREATHING PATTERN

*Exhale* Lift the upper leg.  
Maintain lumbar-pelvic stability.

*Inhale* Lower the leg.



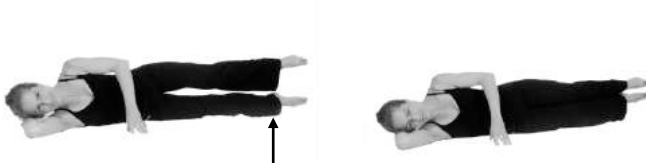
### ADDUCTOR LEG LIFT

- The upper leg is extended at hip height.
- The lower leg is lifted slightly off the floor.

### MOVEMENT & BREATHING PATTERN

*Exhale* Lift the lower leg and touch the top leg lightly.  
Maintain lumbar-pelvic stability.

*Inhale* Lower the leg.





## LEG LIFT SERIES

### ABDUCTOR LEG LIFT

- The lower leg is lifted slightly off the floor.

### MOVEMENT & BREATHING PATTERN

*Exhale* Lift the upper leg.  
Maintain lumbar-pelvic stability.

*Inhale* Lower the leg.



### DOUBLE LEG LIFT

- The lower leg is lifted slightly off the floor.
- The legs are connected, the ankles touch.

### MOVEMENT & BREATHING PATTERN

*Exhale* Lift both legs off the floor.  
Keep the length in both sides of the waist.

*Inhale* Lower the legs to the floor.

Repeat each exercise version 8 – 10 times.



### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

## LEG LIFT SERIES

## REGRESSIONS, PROGRESSIONS, VARIATIONS &amp; MODIFICATIONS

## BASIC ABDUCTOR LEG LIFT

The bottom leg is bent and on the floor and only the top leg moves up and down.



## BASIC ADDUCTOR LEG LIFT

The top leg is bent and supported by placing the foot or knee on the floor.

*Exhale* Lift the bottom leg.

*Inhale* Lower the leg.



## TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS &amp; IMAGERY

*Technical* The upper hand is on the floor to aid balance; avoid bearing weight on it.

*Technical* Connect the heels when using the 'Adductor' version.

*Kinaesthetic* The front of the ribcage is softly closed, the lumbar spine is in neutral alignment and the hip bones are stacked on top of each other.

*Kinaesthetic* Imagine the bottom leg being lifted up by the pelvic floor.

*Kinaesthetic* Feel the space in the hip joint of the gesture leg; enlarge the space with each repetition.

*Tactile* Hold the participant's ankle gently and lengthen the top leg while they move the bottom leg.

*Imaginary* Feel the length of your upper waistline and imagine a 'mouse house' underneath your lower waistline; maintain the 'mouse house' throughout the exercise.

*Imaginary* Lengthen the top leg. Imagine your big toe is a pencil with which you want to draw short and even lines onto an imaginary wall in front of your toe.

*Tactile: Starting position* Place one hand onto the hip bone and give a light pull away from the centre to create a feeling of length in the upper waist and a feeling of 'being lifted up' in the lower waist.

*Imaginary: ABDUCTOR* Imagine your ankles are tied together with sticky tape; the upper leg lifts the lower leg up. The focus lies on the abductors.

*Imaginary: ADDUCTOR* Imagine your heels are magnetic and the bottom one is drawn up to the top one.

*Imaginary: ADDUCTOR* Let your top leg relax and rest on the bottom leg; the bottom leg is then lifting the top leg. The focus lies on the adductors.

## BALANCE

### APPLIED MECHANICAL PRINCIPLES

Axial Elongation • Shoulder Organisation • Extremity Alignment

### EXERCISE AIMS & BENEFITS

---

---

---

### STARTING POSITION & PREPARATION

*Side Lying.*

- The legs and supporting arm are stretched out on the floor.

*Inhale*                      Lift the top leg slightly.

*Exhale*                      Lift the bottom leg and connect it with the top leg.  
The ankles are connected.

*Flowing Breath*        Lift the shoulders and slide the supporting elbow towards the torso.  
The spine is in a lateral flexion.  
Extend the top arm to the ceiling.  
Turn the head towards the extended arm.

### MOVEMENT & BREATHING PATTERN

Hold the pose for 5 – 10 breaths.



---

---

### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

## BALANCE

## REGRESSIONS, PROGRESSIONS, VARIATIONS &amp; MODIFICATIONS

## BASIC BALANCE

- The upper body is on the floor, the legs are lifted and the top arm is extended to the ceiling.



## BALANCE MODIFIED

- The forearm is on the floor.
- Keep the bottom leg on the floor and lift the top leg only or lift both legs off the floor.



One leg lifted

or



Both legs lifted

## BALANCE SUPPORTED

- The hand of the top arm is on the floor as a means of support.



## BALANCE CHALLENGE

- Lower and lift the top arm carefully.
- For even more challenge the upper hand can hold a Toning Ball or a light dumbbell.



## BALANCE

### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

- Technical* Lift the lower ribcage.
- Kinaesthetic* Draw the bone of the upper arm back into the shoulder socket and feel the muscles around the shoulder joint stabilizing.
- Kinaesthetic* Keep the hip bones stacked on top of each other.
- Kinaesthetic* The position of the spine is a long and even lateral flexion. The neck is long and forms a natural extension of the rest of the spine.
- Kinaesthetic* Find the perfect point of balance between the upper and lower body.
- Tactile* Place one hand onto the participant's top hip to lengthen the waistline and the other hand underneath the ribcage to support the lift and create more axial elongation.
- Imaginary* Imagine your body is a slide with a long and even curve; your left arm is the ladder, strong and supportive.
- Imaginary* Imagine your ankles are lying in a sling which is attached to the ceiling.
- Imaginary* Imagine your body is a beautiful and even crescent moon.

### Notes

## HOT POTATO

### APPLIED MECHANICAL PRINCIPLES

Disassociation • Extremity Alignment • Breathing

### EXERCISE AIMS & BENEFITS

---



---



---

### STARTING POSITION & PREPARATION

*Side Lying.*

- The legs are extended in line with the body.

*Exhale*                      Lift the upper leg to hip height.  
                                     Flex the foot (dorsi flexion).  
                                     Rotate the thigh inwards so the toes are pointing downwards.

### MOVEMENT & BREATHING PATTERN

*Double Percussion Breath*      Lightly touch the floor twice with the big toe.

*Inhale*                              Return to starting position.

Repeat the exercise 10 times.

You can combine this exercise with LEG LIFT and/or HIP CIRCLES.



### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

## HOT POTATO

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### BASIC HOT POTATO

The lower knee is flexed at a 90° angle.

#### BREATHING VARIATION

Use a simple, slow breathing pattern instead of Double Percussion Breath.

#### HOT POTATO BALANCE

Extend the top arm to the ceiling.

#### HOT POTATO LEG LIFT

Lift the upper leg higher than hip height with the inhalation.

#### HOT POTATO FRONT & BACK

*Double Percussion Breath* Tap the floor in front of the resting leg (slight hip flexion).

*Inhale* Centre the leg and lift it up to hip height.

*Double Percussion Breath* Tap the floor behind the resting leg (slight hip extension).

*Inhale* Centre the leg and lift it up to hip height.



### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Technical* Keep the centre engaged throughout the exercise to stabilize the pelvis and prevent 'flying ribs'.

*Technical* Rotate inward from the hip joint, the ankle stays neutral.

*Technical* Draw the toes towards the knee and the outer edge of the foot upward.

*Kinaesthetic* Feel the thigh spiralling inward.

*Tactile* Stabilize the pelvis of your participant.

*Tactile* Take hold of the top ankle of your participant. Guide the leg movement and maintain the medial rotation of the thigh.

*Imaginary* Tap with your big toe onto a hot potato; lift it off quickly so as not to get burnt.

*Imaginary* Touch the floor very lightly with your big toe; imagine the floor is like a hot tarmac in the summer and you don't want your toe to get burnt.

## HIP CIRCLES

### APPLIED MECHANICAL PRINCIPLES

Disassociation • Extremity Alignment • Breathing

### EXERCISE AIMS & BENEFITS

---



---



---

### STARTING POSITION & PREPARATION

*Side Lying.*

- The legs are extended in line with the body.

*Exhale*            Lift the upper leg to hip height.  
                          Flex the foot (dorsi flexion).  
                          Rotate the thigh inwards so the toes are pointing downwards.

### MOVEMENT & BREATHING PATTERN

*Exhale*            Perform three little circular movements in a clockwise direction.

*Inhale*            Perform three little circular movements in a counter-clockwise direction.

Repeat the exercise for 5 to 10 breaths.




---



---

### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement



## HIP CIRCLES

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### BASIC HIP CIRCLES

- The lower knee is flexed at a 90° angle.

#### LEG VARIATIONS

- Keep the gesture leg in parallel alignment.
- Keep the gesture leg in a lateral rotation.

#### RANGE OF MOTION

- Increase or decrease the size of the circles.

#### NUMBER OF CIRCLES

- Vary the number of circles.

#### BREATHING VARIATIONS

- Let the breath flow freely.
- Let the breath flow freely; perform the exercise only in one direction, then change direction.

#### ARM VARIATION

- Extend the top arm to the ceiling.

### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Technical* Be your own teacher and scan your whole body checking for a perfect alignment: control the position of the pelvis, the engagement of the pelvic floor and the length in your top and bottom waistline. Make sure that the shoulders are relaxed and that your neck is an even elongation of your thoracic spine. The supporting hand ensures only the balance and carries no weight.

*Kinaesthetic* Feel the strength radiating from your centre so the pelvis remains completely still and the movement of your upper leg is light and effortless.

*Kinaesthetic* Lengthen the top leg out of the hip joint.

*Imaginary* Imagine your leg is a wooden spoon that is smoothly stirring a creamy soup.

*Imaginary* Imagine colourful paint on your heel with which you're painting small circles onto the opposite wall.

*Tactile* Draw the top hip bone gently away from the upper body.  
Close the rib cage softly.  
Stabilize the pelvis.  
Guide the circular movement.  
Elongate the top leg.  
Align the shoulders.

CLAM

APPLIED MECHANICAL PRINCIPLES

Disassociation • Extremity Alignment • Breathing

EXERCISE AIMS & BENEFITS

---



---



---

STARTING POSITION

*Side Lying.*

- The knees are flexed at a 90° angle; the hip flexion is more open. The heels are in line with the sit bones and the shoulders.
- Give (yourself) tactile feedback for a perfect alignment of the pelvis.



Starting position



Starting position with tactile feedback

MOVEMENT & BREATHING PATTERN

*Exhale* Lift the upper knee and perform a lateral rotation in the hip joint.  
The big toes stay in contact.

*Inhale* Lower the leg.

Repeat the exercise 10 times, followed by one or two other CLAM variations.



MAIN MUSCLES

STABILIZING MUSCLES

PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

## CLAM

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### CLAM Supported

- Perform the exercise against a wall.

#### BASIC CLAM

- The focus lies on the abductors.
- Decrease the range of motion.



#### REVERSE CLAM

- The focus lies on the abductors.

*Inhale* Lift top leg lightly.

*Exhale* Press the knee down against an imaginary resistance.



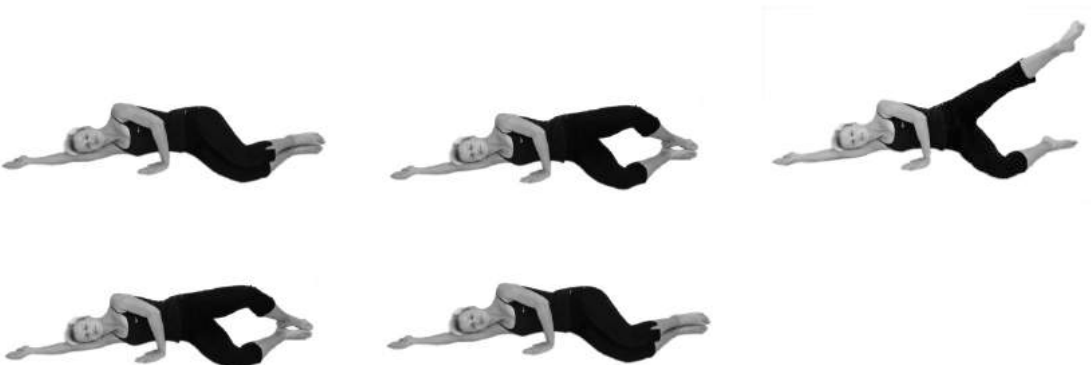
#### CLAM & LEG EXTENSION

*Exhale* Lift the upper knee.

*Inhale* Maintain the alignment of the upper thigh and straighten the knee.

*Exhale* Maintain the alignment of the upper thigh and bend the knee until the big toes touch.

*Inhale* Lower the leg and return to starting position.



#### REVERSE CLAM & LEG EXTENSION

- The breathing pattern of CLAM & LEG EXTENSION can be reversed.

## CLAM

## FLOATING CLAM / REVERSE FLOATING CLAM • CLAM &amp; LEG EXTENSION / REVERSE CLAM &amp; LEG EXTENSION

- Lower legs and feet are lifted off the floor.
- The movements are correspondent to the described CLAM variations.



## CLAM VARIATION

- The focus lies on the gluteal muscles.
- Tilt the pelvis in the transversal plane slightly to the front (in Side Lying the upper hip bone is now positioned slightly in front of the bottom one).
- Stabilize the pelvis with one hand on the sacrum.



## TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS &amp; IMAGERY

*Technical* The pelvis is stable and the spine in a neutral position.

*Kinaesthetic* Feel your thigh bone rolling through the joint capsule; with every inhalation a splash of oil drops into the capsule, spreading out and making the movement smoother and smoother.

*Kinaesthetic* Feel your thigh spiralling out and around as you lift the knee.

*Imaginary* Imagine you are leaning against a wall. Your hip bones stay 'stacked on top of each other' while the upper knee is lifted.

*Imaginary* Imagine your knees are like a clam that opens and closes.

*Imaginary REVERSE CLAM* Imagine a heavy spring between your knees, feel the resistance and press the knees together.

*Imaginary REVERSE CLAM* Engage your pelvic floor as you exhale. Feel how the drawing upwards and inwards of the pelvic floor closes the legs.

*Tactile LEG EXTENSION* When the knee is lifted after the first inhalation let the participants place their top arm in the same angle as the lifted thigh. Get them to extend the leg 5 to 10 times without changing the angle of the thigh. You can also give tactile support to align the thigh.





## LEG EXTENSION

## APPLIED MECHANICAL PRINCIPLES

Disassociation • Extremity Alignment • Breathing

## EXERCISE AIMS &amp; BENEFITS

## STARTING POSITION &amp; PREPARATION

*Side Lying.*

- The knees are flexed at a 90° angle; the hip flexion is more open. The feet are in line with the hip joints and the shoulders.

*Exhale* Lift the top leg to hip height, make sure that the leg is parallel to the floor.

## MOVEMENT &amp; BREATHING PATTERN

*Exhale* Move the gesture leg to the back.  
The hip joint is either neutral or slightly extended.

*Inhale* Move the gesture leg to the front until the hip joint is flexed at a 90° angle.

*Exhale* Straighten the knee.  
The foot is either in a plantar flexion or a dorsi flexion.

*Inhale* Bend the knee to a 90° angle.

Repeat the exercise 8 – 10 times.



## MAIN MUSCLES

## STABILIZING MUSCLES

## PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

## LEG EXTENSION

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### LEG FLOAT



Starting position



BO: Glide the leg to the back



BF: Glide the leg to the front

#### BREATHING VARIATION

- LEG EXTENSION in one breath.

#### FOOTWORK

- Add plantar and dorsi flexion when the leg is extended in front (hip flexion and knee extension).

#### HIP FLEXOR STRETCH

- Hold the position of hip extension for a couple of breaths.
- Draw the pubic bone slightly to the breast bone with the exhalation.

#### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Technical* To disassociate the leg, focus on the muscles of the centre that stabilise the pelvis.

*Technical* Let the leg travel on one plane; watch out for the knee bouncing up and down.

*Kinaesthetic* Maintain the length through the sides of your waist and move the leg in an even and smooth motion.

*Kinaesthetic* Draw the femur back into the hip joint when you stretch the leg to the front.

*Kinaesthetic* Draw the pubic bone up slightly when you extend at the hip.  
Reach out of your sit bones as you flex at the hip.

*Tactile* Stabilize the pelvis of your participant with your hands and reinforce the above described instructions with tactile feedback.

*Imaginary* Imagine your leg is on a platform of ice. Let the leg slide effortlessly at the same height.



## BODY TENSION

### APPLIED MECHANICAL PRINCIPLES

Segmental Spinal Stability • Shoulder Organisation

### EXERCISE AIMS & BENEFITS

---



---



---

### STARTING POSITION & PREPARATION

*Relaxed in prone.*

- The legs are hip width apart. The elbows are placed underneath the shoulders, palms touching. Start with your body completely relaxed.



Go through the cues step by step:

- Engage the abdominals and the pelvic floor.
- Lift up your chest and press the forearms into the mat.
- Lift your pelvis off the floor.
- Lift up your head, elongate the neck and look at your fingertips.
- Widen across the shoulders and collar bones. Press the palms together and the elbows apart.
- Extend your toes and lift the knees off the floor.

### MOVEMENT & BREATHING PATTERN

- Let the breath flow freely.
- Repeat the exercise for 10 – 12 breaths. Repeat a second time.
- The duration of the exercise can be prolonged over several lessons.



### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement



## BODY TENSION

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### BASIC BODY TENSION

Keep the knees on the floor.



#### HAND PLACEMENT

Place the hands palms down on the floor.



#### MOVING BODY TENSION

Shift your weight forward and backward.

#### BODY TENSION & TRIANGLE

*Inhale* Lift up the pelvis. The sit bones reach out to the ceiling.

*Exhale* Lower the pelvis back to BODY TENSION.



---

### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Technical* Stabilize the pelvis and lumbar spine with a strong engagement of the abdominals.  
Stabilize the shoulder girdle with the muscles of the upper back.

*Technical* Keep head and neck in perfect alignment.

*Technical* Draw the heels back.

*Technical* Let the breath flow freely during the whole exercise.

*Kinaesthetic* Vitalize your body with every inhalation.  
Feel the oxygen spread into every muscle fibre with each inhalation.

*Tactile* Place your hands onto the participant's shoulders drawing outwards and downwards to assist width across the chest and length in the neck.

## BODY TENSION

### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Imaginary*      Imagine a magnet on your lower belly and one on your sacrum; feel the pull with every exhalation.

*Imaginary*      Tighten your imaginary corset with every exhalation.

*Imaginary TRIANGLE*    Imagine your tailbone is connected to the ceiling by a string. With every inhalation you are pulled upwards from your tailbone and your body folds up like a triangle.

### Notes



## DART

### APPLIED MECHANICAL PRINCIPLES

Axial Elongation • Segmental Spinal Movement • Breathing • Shoulder Organisation

### EXERCISE AIMS & BENEFITS

---

---

### STARTING POSITION & PREPARATION

*Prone.*

- The arms are stretched alongside the body with the palms facing up. The hands are either on the floor or slightly lifted.

### MOVEMENT & BREATHING PATTERN

*Inhale* Lift head and shoulders up and extend the thoracic spine segmentally. Keep the arms relaxed or slightly lifted off the floor.

*Exhale* Maintain the extension of the thoracic spine and lengthen out of your tailbone.

*Inhale* Maintain the extension of the thoracic spine and lengthen out of the crown of your head.

*Exhale* Lower head and shoulders to starting position.

Repeat the exercise 6 – 10 times. Execute the exercise in one breath.



### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### DART & NECK TWIST

*Inhale* Extend the thoracic spine segmentally.

*Exhale* Maintain the extension and turn your head to one side.

*Inhale* Maintain the extension and turn your head to the other side.

*Exhale* Return your head to starting position.

## DART

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### DART & ARM ROTATION

- Inhale* Extend the thoracic spine segmentally.
- Exhale* Rotate the arms laterally, palms facing down.
- Inhale* Rotate the arms medially, palms facing up.
- Exhale* Lower head and shoulders to starting position.



#### DART & TRICEPS

Starting from extension of the thoracic spine.

- Exhale* Lengthen out of the little fingers and lift the arms. Keep the distance between the shoulder blades.
- Inhale* Lower the arms.



### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

- Technical* Keep the neck long and maintain the lateral distance across the shoulders. The shoulder blades lie flat on the ribcage.
- Technical* Keep your eyes on the floor and your neck in a natural elongation of the thoracic spine.
- Technical* The pubic bone, the hip bones and lowest ribs remain in contact with the floor when the upper back extends.
- Technical* The pelvis is neutral and the lower back elongated.
- Kinaesthetic* Keep legs and hips as relaxed as possible.
- Kinaesthetic* Engage your pelvic floor and feel the pleasant stretch of your lower back via the lengthening of the tailbone.
- Kinaesthetic* If you manage to extend your spine with minimal effort then you're on the right track.
- Tactile* Take hold of the participant's head gently and lengthen the neck with a mild pull.
- Imaginary* Imagine your breast bone is an aeroplane. Let it glide forward and upward in a long arch with the inhalation.

## ALTERNATE ARM & LEG LIFT

### APPLIED MECHANICAL PRINCIPLES

Shoulder Organisation • Disassociation • Extremity Alignment

### EXERCISE AIMS & BENEFITS

---

---

---

### STARTING POSITION

*Prone.*

- The arms are shoulder width (or a little more) apart and extended over head.
- The legs are hip width apart.

### MOVEMENT & BREATHING PATTERN

*Exhale* Lift the right arm and the left leg off the floor.  
Pelvis and spine remain in a neutral position.

*Inhale* Lower arm and leg and return to starting position.

Repeat the exercise 5 – 6 times on each side.



### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

## ALTERNATE ARM & LEG LIFT

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### ARM VARIATION

Rotate the upper arm laterally when lifting. The thumb points upward.



#### ALTERNATE LEG LIFT

Lift and lower only the legs alternately.

#### ALTERNATE ARM LIFT

Lift and lower only the arms alternately.

#### STAR STRETCH

Lift both arms and legs simultaneously off the floor.



### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Technical* Keep the weight distributed evenly on both sides of the body.

*Technical* The pubic bone and hip bones stay in contact with the floor when lifting the legs.

*Technical* Keep the centre engaged, the pelvis neutral and the lumbar spine elongated throughout the exercise.

*Kinaesthetic* The neck stays long and relaxed.

*Kinaesthetic* Lengthen your body all the way from the middle finger to the big toe as if you are trying to touch the wall in front and behind you.

*Kinaesthetic* Draw the upper arm gently back into the shoulder joint.

*Kinaesthetic* Draw the pubic bone in slightly as you lift up your leg.

*Imaginary* Imagine your shoulder blades are connected to your hip bones with a strong rubber band; feel the shoulder blades sliding towards the hips before you lift the arm, then notice how the arm follows the movement of the shoulder blade without effort.

*Tactile* Place your fingertips gently on top of the participant's shoulder to give them a feeling of relaxation and width.

*Tactile* Place one hand on the sacrum and one hand on the junction of the lumbar and thoracic spine to lengthen the lower back gently.

*Imaginary* Imagine there is an ice cube underneath your belly button; draw the lower belly away from the ice cube as you exhale and maintain the lift when you inhale.

## SWIMMING

### APPLIED MECHANICAL PRINCIPLES

Axial Elongation • Segmental Spinal Stability • Shoulder Organisation • Extremity Alignment

### EXERCISE AIMS & BENEFITS

---

---

---

### STARTING POSITION & PREPARATION

*Prone.*

- The arms are alongside the body, palms turned up.

*Inhale* Lift head and shoulders off the floor and extend the thoracic spine segmentally.

*Exhale* Lift both legs off the floor.

*Inhale* Sweep both arms in a big semicircle overhead and keep the arms extended.

### MOVEMENT & BREATHING PATTERN

*Flowing Breath* Move legs and arms up and down in a swimming motion.

Maintain a stable pelvis and a long lumbar spine.

Perform the exercise for 8 – 12 breaths.



---

---

### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement



## SWIMMING

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### SPEED

'Swim' faster or slower.

#### ARM VARIATION

Rotate the upper arms laterally so the thumbs point up.

#### SUPER WOMAN

Hold the extension of the thoracic spine and keep arms and legs extended and lifted off the floor.



#### BASIC SWIMMING

Keep one hand and one leg on the floor.



#### SWIMMING LEGS

'Swim' with the legs only.



#### BASIC SWIMMING LEGS

The hands remain on the floor to support the upper body. 'Swim' with the legs only.



### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

- Technical* Keep the weight distributed evenly on both sides of the body.
- Technical* Hold the neck in perfect alignment with the spine, keeping the ears between the upper arms.
- Technical* Keep the centre strongly engaged, the pelvis neutral and the lower spine elongated.
- Technical* Hip bones, lowest ribs and pubic bone stay connected to the floor while the legs and upper body are lifted off the floor.
- Technical* Perform small, even and rhythmical arm and leg movements.

## SWIMMING

### TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

- Kinaesthetic*     Feel the muscles of your shoulders, upper back and hips working together in perfect harmony.
- Kinaesthetic*     Feel the length from the tailbone to the heels via the engagement of the pelvic floor.
- Imaginary*         Imagine you are frozen in a block of ice from the hips to the lowest ribs. Only your arms and legs move freely.
- Imaginary*         Imagine you are balancing your hips and stomach on a block of marble; your arms and legs are free to move.

### Notes

## BREAST STROKE

### APPLIED MECHANICAL PRINCIPLES

Axial Elongation • Segmental Spinal Stability • Shoulder Organisation • Extremity Alignment • Movement Integration

### EXERCISE AIMS & BENEFITS

---

---

---

### STARTING POSITION & PREPARATION

*Prone.*

- The arms are alongside the body, palms turned up.

*Inhale* Lift head and shoulders off the floor and extend the thoracic spine segmentally.

*Exhale* Lift the legs off the floor and as an option rotate them slightly outward. *Inhale.*

*Exhale* Clap the heels together in a steady rhythm, keeping the movements small.  
*Let the breath flow freely.*



### MOVEMENT & BREATHING PATTERN

*Exhale* Sweep both arms in a big semicircle overhead.  
Keep clapping the heels together in a steady rhythm.

*Inhale* Return the arms in a big semicircle alongside the body.  
Keep clapping the heels together in a steady rhythm.

Repeat the exercise 6 – 10 times.

Trainer's Tip: I recommend you teach the exercise progressively to remind the participants that they can choose any option that is challenging but manageable for their own body.



## BREAST STROKE

### MAIN MUSCLES

### STABILIZING MUSCLES

### PLANE OF MOVEMENT

Core Stability

Core Strength

Neutral Lumbar Spine

Elongated Lumbar Spine

Segmental Spinal Movement

### REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

#### HEEL CLAPS

Clap the heels together in thoracic extension without moving the arms.

#### SINGLE BREAST STROKE

*Exhale* Lift the legs off the floor.

*Inhale* Extend the thoracic spine segmentally.

*Exhale* Sweep both arms in a big semicircle overhead.  
Clap the heels together in a steady rhythm.

*Inhale* Return the arms in a big semicircle alongside the body.  
Keep clapping the heels together in a steady rhythm.

*Exhale* Lower the legs.

*Inhale* Lower head and shoulders.

#### SINGLE ARM BREAST STROKE

Perform the arm movement with only one arm at a time.



#### ARM VARIATION

*Exhale* Sweep the arms to shoulder height, bend the elbows and bring the fingertips together in front of your forehead.

*Inhale* Extend the arms and bring them back alongside the body.



BREAST STROKE

REGRESSIONS, PROGRESSIONS, VARIATIONS & MODIFICATIONS

EXTENDED BREAST STROKE

Extend the whole spine with the inhalation.



TECHNICAL, KINESTHETIC, TACTILE INSTRUCTIONS & IMAGERY

*Kinaesthetic* Maintain a long neck, wide shoulders and let the shoulder blades glide over the ribcage freely.

*Kinaesthetic* Your shoulder blades mirror your arm movement; they glide outwards and upwards as you move your arms overhead and downwards and inwards as you move your arms back alongside your body.

*Kinaesthetic* Feel the shoulder blades massaging your upper back while swimming.

*Kinaesthetic* Lengthen your spine from the tailbone to the back and out of the crown of your head to the front.

*Imaginary* Imagine you are swimming with generous arm strokes through the ocean.

*Imaginary* Feel the resistance of water when returning your arms to your hips.

*Imaginary* Imagine a little rubber ball between your ankles that you are squeezing at a steady rhythm.

*Imaginary* Imagine you are swimming through semi-liquid honey; the leg movement is slow and sticky and the arms draw big and slow semicircles.

Notes

Dear Pilates Essentials Practitioner

I sincerely hope the teacher training course has enriched your movement life both personally and professionally, and that you share my passion for Contemporary Pilates with all its facets and limitless possibilities.

Thank you for your participation and all the best on your Pilates journey!



**Karin Gurtner**

Founder & Creator

art of motion training in movement® & Slings Myofascial Training®

art of motion training in movement GmbH  
Switzerland

info@art-of-motion.com  
www.art-of-motion.com