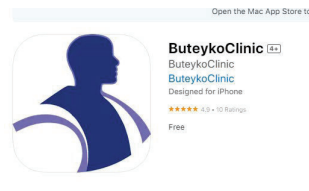


## IMPROVE SLEEP & NASAL BREATHING

1. Read Dr. Carson's handouts on improving nasal breathing & sleep hygiene
2. If allergies are a concern, look into "Wyndly.com" or see your allergist
3. Download Buteyko App and follow the program for improved nasal breathing
4. If nose is clear, mouth/lip tape at night



Recommended over the counter products:

Rinses: Xlear, Neil-Med sinus rinse, ocean spray, Azelastine Astelin Nasal Spray

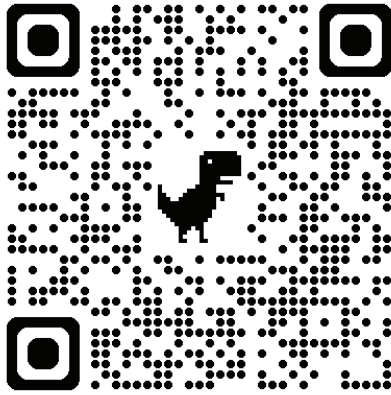
Aromatherapy oils: Ponaris nasal emollient, Netistick or boom boom nasal stick

Nasal dilators: Intake Breathing nasal strips, breathe right strips, mute nasal cones

Mouth/lip tape: Myotape, 3M micropore tape, 3M Nexcare sensitive skin tape

## Improved Nasal Breathing Resources

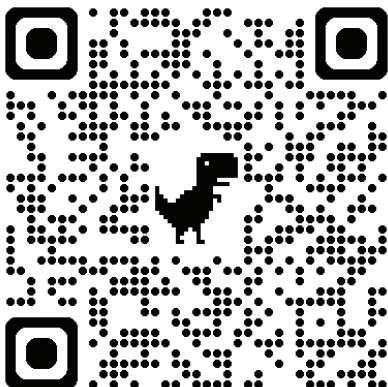
Oral-Vitality Products:  
(mouth-tape, nasal strips, Improved Sleep & Breathing Kits)



Dr Carson's TEDx talk:



Oral-Vitality Website:



# The Importance of Nasal Breathing and How to Improve It

## Why Nasal Breathing Matters

Breathing through the nose is essential for overall health, affecting every internal organ, heart rate, digestion, sleep, mood, athletic performance, and the autonomic nervous system. Ideally, breathing should occur through the nose more than 90% of the time.

### Key Benefits of Nasal Breathing:

- **Filtration & Immune Support:** The nasal passages filter and humidify air, trapping pathogens and pollutants, while nasal blood vessels support immune function. This natural filtration system reduces the risk of respiratory infections, allergies, and airborne irritants affecting the lungs and overall immune response.
- **Nitric Oxide Production:** Nasal breathing enhances nitric oxide absorption, increasing oxygen intake by up to 18%, improving circulation, and promoting efficient oxygen exchange in the lungs. Nitric oxide also has antimicrobial properties, supporting lung function and cardiovascular health while enhancing cognitive performance.
- **Autonomic Nervous System Regulation:** Slow nasal breathing activates the parasympathetic (relaxation) response, reducing stress hormones like cortisol and improving cardiovascular and metabolic health. This helps regulate heart rate, lower blood pressure, and promote a sense of calm and emotional stability.
- **Athletic Performance & Weight Management:** Nasal breathing optimizes oxygen utilization, enhances endurance, speeds recovery, and reduces exertion levels while maintaining hydration. By improving CO2 tolerance, nasal breathing supports efficient muscle function, reduces lactic acid buildup, and encourages fat metabolism, aiding in weight management and energy efficiency.
- **Posture & Musculoskeletal Health:** Proper nasal breathing encourages better head and neck posture, reducing strain on the spine, TMJ, and muscles. Good posture also supports proper airway alignment, reducing tension headaches, neck stiffness, and chronic pain associated with poor breathing mechanics.
- **Sleep Quality:** Healthy breathing during sleep is essential for proper rest and recovery. Nasal breathing is the optimal way to breathe at night, as it supports deep, restorative sleep by ensuring proper oxygen exchange and airway stability. Mouth breathing, on the other hand, is linked to negative outcomes such as snoring, increased stress responses, fragmented sleep, and even sleep apnea. Snoring results from airway restriction and sleep apnea—characterized by repeated interruptions in breathing—can lead to serious health issues such as cardiovascular disease and chronic fatigue. Ensuring nasal breathing at night through techniques like mouth taping can promote uninterrupted sleep, lower stress levels, and enhance overall health.
- **Oral Health:** Mouth breathing dries out oral tissues, leading to bad breath, gum disease, and increased cavity risk. Nasal breathing helps maintain a healthy pH balance in the mouth. By keeping saliva production stable, nasal breathing protects teeth from decay, reduces inflammation in the gums, and decreases the risk of oral infections.

## The Importance of Nasal Breathing and How to Improve It

- **Children's Development:** Nasal breathing supports proper facial and cognitive development. Sleep-disordered breathing in children can contribute to behavioral issues and learning disabilities. Long-term mouth breathing in children can lead to altered facial growth, narrow dental arches, misaligned teeth, and a higher risk of orthodontic problems, making nasal breathing essential for proper craniofacial development.

### How to Improve Nasal Breathing

#### 1. Assess Your Breathing Ability:

- Can you breathe through your nose comfortably and consistently?
- Do you wake up with a dry mouth, have frequent headaches, or experience bad breath? These may indicate mouth breathing.
- Record your breathing patterns throughout the day and night to identify habits that may need adjustment.

#### 2. Practice Lip & Mouth Taping:

- Use medical tape (such as 3M micropore) or specially designed lip tape to train nasal breathing, starting with short periods and progressing to overnight use.
- Try taping during low-activity periods such as reading or watching TV to develop nasal breathing habits.

#### 3. Clear Nasal Passages:

- Use nasal rinsing (e.g., NeilMed Sinus Rinse or neti pot) and saline sprays to reduce congestion.
- Consider anti-inflammatory diets and allergy management to prevent chronic nasal blockage.
- Perform nasal clearing exercises such as **Buteyko breathing** and the **3-blow technique** to improve airflow and reduce congestion naturally.
- Use steam inhalation and essential oils like eucalyptus to further support nasal passage clearance.
- Nasal Strips are a good way to improve your ability to breathe through your nose – check out the resource QR code.

#### 4. Strengthen Breathing Muscles:

- **Buteyko Breathing Method:** Reduce over-breathing by practicing slow, nasal breaths and CO2 retention techniques.
- **Box Breathing:** Inhale for 4-8 seconds, hold, exhale, and hold again for the same duration.

## The Importance of Nasal Breathing and How to Improve It

- **Alternate Nostril Breathing:** A yogic technique to improve nasal airflow and relaxation.
- Incorporate diaphragmatic breathing exercises to enhance lung capacity and improve breath control.

### 5. Address Structural Issues:

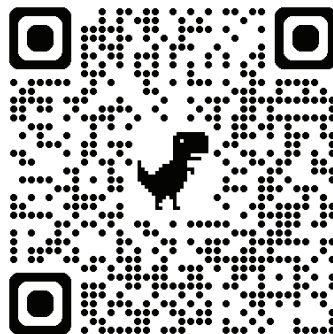
- If nasal breathing remains difficult, consult an ENT specialist to check for obstructions like a deviated septum or enlarged turbinates.
- Ensure proper jaw and midface development, as these play a crucial role in maintaining an open airway. Visiting a dentist trained to evaluate and improve jaw and midface structure can be beneficial in addressing underlying issues that may impede nasal breathing.
- Use nasal expanders or external nasal strips if structural limitations are causing airflow restriction.

### 6. Myofunctional Therapy & Posture Work:

- Train proper tongue posture (tongue resting against the roof of the mouth) to encourage nasal breathing.
- Improve head and neck alignment to support airway function.
- Engage in facial and oral exercises to strengthen airway muscles and reinforce nasal breathing habits.

Nasal breathing is a simple yet powerful tool to enhance overall health, improve sleep, and optimize physical and cognitive performance. Making conscious efforts to breathe through the nose can significantly impact long-term well-being.

Check out the resource QR code for Oral-Vitality products designed to aid with improved nasal breathing



## Sleep Basics & Sleep Hygiene

### Understanding Sleep Cycles

Sleep cycles between **NREM (Non-Rapid Eye Movement)** and **REM (Rapid Eye Movement)** sleep every **90-110 minutes** throughout the night.

- **First half of the night** → Dominated by **deep NREM sleep**, responsible for pruning unnecessary neural connections.
- **Second half of the night** → Primarily **REM sleep**, which strengthens connections and processes information.

### Sleep Stages:

1. **Stage 1** (Light sleep) – Lasts a few minutes, easy to wake from.
2. **Stage 2** (Transition stage) – Brain waves slow down, still fairly light sleep.
3. **Stage 3 & 4** (Deep sleep) – Harder to wake from; body repairs, grows, and boosts immunity.
4. **REM Sleep** – Brain activity increases, dreaming occurs, and long-term memories are stored.

### The Importance of Sleep

Both **quality and quantity** of sleep are essential. Experts like Matthew Walker emphasize that anything less than **7 hours impairs** brain and bodily functions. Signs of **good quality sleep** include:

- ✓ Sleeping **long enough**
  - ✓ Falling asleep **within 30 minutes**
  - ✓ Waking up **no more than once per night**
  - ✓ Staying awake **less than 20 minutes** after falling asleep
- 

### Sleep Hygiene: Tips for Better Sleep

#### Routine & Environment

- ✓ **Consistent bedtime** – Sleep and wake at the same time **7 nights a week** (most crucial factor!).
- ✓ **Bedroom temperature** – Keep it **below 68°F** for optimal rest.
- ✓ **Use bed only for sleep & intimacy** – No work, screens, or other activities.
- ✓ **Create a relaxing bedtime routine** – Reading, meditation, or warm tea.
- ✓ **Dim lights an hour before bed** – Signals the brain to wind down.
- ✓ **Use calming colors (blue/green) & minimal decor** – Promotes relaxation.
- ✓ **Increase humidity & consider an air purifier** – Supports breathing.
- ✓ **Block noise** – Use a **white noise machine** if needed.
- ✓ **Total darkness** – Blackout curtains or an **eye mask** help.

## Sleep Basics & Sleep Hygiene

### Daily Habits for Better Sleep

- ✓ **Sunlight exposure** – At least **1 hour per day**.
- ✓ **Exercise** – At least **30 minutes daily** (avoid right before bed).
- ✓ **Short breaks during the day** – Reduces stress for better sleep.
- ✓ **Avoid naps** – Especially if struggling with nighttime sleep.

### What to Avoid

- ✗ **Caffeine after noon** – Stays in your system for hours.
- ✗ **Alcohol before bed (at least 4 hours)** – Disrupts sleep quality.
- ✗ **Heavy meals late at night** – Digestion interferes with rest.
- ✗ **Screens 1 hour before bed** – Suppresses melatonin (including backlit e-readers).
- ✗ **Sleeping pills** – Limit use; try natural sleep aids first.
- ✗ **Smoking & tobacco** – Stimulants negatively affect sleep.

### Additional Sleep Aids

- ✓ **Warm bath or shower** – Helps transition to sleep.
- ✓ **Lavender or chamomile scents** – Naturally relaxing.
- ✓ **Comfortable, hypoallergenic bedding** – Invest in a good mattress & pillows.
- ✓ **Leave phone in another room** – Avoid distractions before sleep.
- ✓ **Meditation or deep breathing exercises** – Helps calm the mind.
- ✓ **Orange light for reading** – White light suppresses melatonin.

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### Home Care Solutions for Snoring & Sleep Apnea

Snoring and sleep apnea can disrupt sleep quality for both the individual and their partner. Here are **home remedies** that may help:

#### Sleep Position & Breathing Adjustments

- ✓ **Sleep on your side** – Reduces airway obstruction compared to sleeping on your back.
- ✓ **Use an anti-snore pillow** – Helps keep the head and neck aligned for better airflow.
- ✓ **Try nasal strips or dilators** – These help open nasal passages and improve breathing.
- ✓ **Mouth tape or chin straps** – Encourages nasal breathing instead of mouth breathing.

#### Lifestyle & Environmental Changes

- ✓ **Maintain a healthy weight** – Excess weight can narrow the airway, worsening snoring.
- ✓ **Elevate the head of the bed** – Sleeping with a slight incline can prevent airway collapse.
- ✓ **Increase bedroom humidity** – Dry air irritates airways; use a humidifier.

## Sleep Basics & Sleep Hygiene

- ✓ **Avoid alcohol and sedatives before bed** – These relax throat muscles, leading to snoring.
- ✓ **Quit smoking** – Smoking increases airway inflammation and worsens sleep apnea.

### Nasal & Airway Support

- ✓ **Use saline nasal spray or neti pot** – Clears congestion for better breathing.
- ✓ **Steam inhalation before bed** – Helps open nasal passages and reduce airway irritation.
- ✓ **Consider an air purifier** – Reduces allergens that can cause congestion and breathing issues.

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### Home Sleep Tests: A Convenient Screening Tool

It is **beneficial to have a sleep study done**, as it can not only diagnose potential sleep-breathing issues such as **Upper Airway Resistance Syndrome (UARS)** and **Obstructive Sleep Apnea (OSA)** but also **identify other factors** that may contribute to poor sleep quality. Sleep disturbances can affect **overall health and well-being**, leading to issues such as daytime fatigue, brain fog, cardiovascular risks, and metabolic imbalances.

For those looking for an accessible way to assess their sleep before committing to an in-lab sleep study, **home sleep tests** provide an excellent **screening tool**.

#### Benefits of Home Sleep Tests:

- ✓ **Non-Invasive & Comfortable** – Most devices are lightweight and easy to wear.
- ✓ **Tracks Sleep Quality & Breathing Patterns** – Provides data on **sleep stages, interruptions, and respiratory disturbances**.
- ✓ **Detects Early Signs of UARS & OSA** – Helps identify potential airway resistance issues before they become severe.
- ✓ **Monitors Heart Rate Variability (HRV)** – A key indicator of **stress, recovery, and autonomic nervous system function**.
- ✓ **Measures Sleep Efficiency & Cycles** – Helps understand how restorative your sleep actually is.
- ✓ **Monitors Oxygen Desaturation** – Provides insight into oxygen drops that may indicate sleep apnea.
- ✓ **Convenient & Affordable** – Can be done from **home** without the hassle of an overnight stay in a lab.
- ✓ **Cloud-Based Data & AI Analysis** – Provides **detailed insights** to help guide sleep improvement strategies.

A **home sleep test** is an **excellent first step** in identifying sleep disturbances, but if results indicate potential issues, following up with additional medical supervision is recommended for a **comprehensive diagnosis and treatment plan**.

## THE 3 BLOW METHOD FOR IMPROVING NASAL BREATHING

### Patient Education Handout



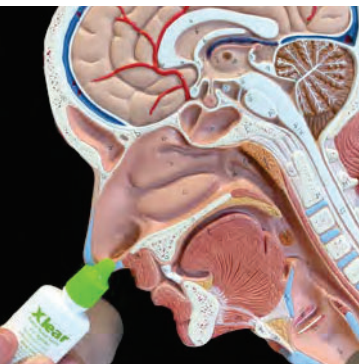
**Step 1:** review the nasal anatomy and note that nasal passages run parallel in a line to the back of your head.

**Step 2:** Blow your nose alternating sides to get the big stuff out.

**Step 3:** Orient your bottle of Xlear nasal spray parallel as explained in Step 1.



**Step 4:** Maintain the parallel bottle relationship to your nose while you angle your head down about 30 degrees. This keeps you from spraying too much liquid into your nose. Spray twice then sniff back the fluid. Don't sniff at the same time you spray to avoid getting spray into your lungs. Let the Xlear nasal spray stay in your nose for at least 30 seconds and then blow your nose a second time. Now your nose is clean and ready for decongestant medication if still needed.



**Step 5:** If you have moderate to severe nasal congestion, or you are on a doctor's directed prescription nasal spray schedule, proceed with spraying it into your nose. Typically an over the counter regime would be to use Flonase Dymista with two sprays per nostril using the same "parallel" positioning as described above.

**Step 6:** Wait for at least 60 seconds before blowing your nose again and only blow if you are uncomfortable. Otherwise, let the medicine do its job to shrink the swollen membranes in your nose to improve your ability to breathe through your nose. Use Flonase for severe nasal congestion nightly for no more than 4 weeks and encourage an ENT referral. Azelastine Astelin Nasal Spray is a great anti-histamine nasal spray to use in place of Flonase that has less rebound side effects.

# How to Start Lip Taping

## Getting Started with Lip Taping

Lip taping is a simple and effective way to encourage nasal breathing, especially during sleep. It helps train your body to rely on your nose for breathing, improving overall respiratory health and sleep quality. If you're new to lip taping, follow these steps to get started safely and comfortably.

## Choosing the Right Tape

- **Medical-Grade Tape:** The best option is 3M Micropore medical tape, available in paper and plastic varieties. It is gentle on the skin and easy to remove.
- **Specialized Lip Taping Products:** Consider options like Somnifix or Myotape, which are designed specifically for mouth taping and may provide added comfort.
- **Avoid Strong Adhesives:** Do not use duct tape, packing tape, or other adhesives that may be too harsh on the skin.

## Testing Your Nasal Breathing

Before starting lip taping at night, ensure you can breathe comfortably through your nose:

1. Try breathing through your nose for several minutes while awake.
2. If you feel congested, use a saline rinse, nasal strips, or antihistamines to clear your airways.
3. Practice nasal clearing exercises, such as the Buteyko method (search "Buteyko nose clearing" on YouTube for instructions).

## Daytime Practice

If you're unsure about nighttime taping, start during the day while performing light activities like reading or watching TV:

- Place a small vertical strip of tape over your lips to act as a reminder to keep your mouth closed.
- Gradually extend the duration of taped breathing to get accustomed to the sensation.

## How to Apply the Tape for Sleep

1. **Start Small:** Begin with a single vertical strip of tape at the center of your lips. This keeps your mouth closed but allows for emergency opening.
2. **Try the "X" Method:** Place two small strips diagonally across your lips in an X shape for a looser, yet effective hold.
3. **Full Lip Coverage:** Once comfortable, apply a horizontal strip across your lips for a stronger seal.
4. **Adjust as Needed:** If you wake up and find the tape removed, don't worry—it takes time to adapt. Simply reapply it and continue the practice.

# How to Start Lip Taping

## Addressing Common Concerns

- **Congestion:** If you experience nasal congestion, try steam inhalation, saline rinses, or nasal decongestants before taping.
- **Anxiety About Taping:** Start with loose tape or a breathable option like Myotape to ease into the practice.
- **Discomfort:** If irritation occurs, switch to a hypoallergenic tape or a specialized lip taping product.

## Additional Tips for Success

- Keep your nasal passages clear with daily rinses or sprays.
- Maintain good oral hygiene to prevent bacteria buildup.
- Sleep in a slightly elevated position if you have nasal congestion.
- Be patient—adjusting to nasal breathing takes time, but the benefits are worth it!

By consistently practicing lip taping, you'll experience deeper sleep, improved oxygen intake, and enhanced overall health. Give it a try and enjoy the benefits of better breathing!