

ZenSleep



ZENSLEEP

Advanced Nylon Sleep Appliance

WHAT IS THE NYLON SLEEP APPLIANCE?

Nylon Mandibular Repositioning Appliance (MRA)

Our mandibular advancement devices are digitally manufactured using **3D-printed medical-grade nylon**. The ultra-thin, lightweight design maximizes tongue space and improves patient comfort compared to traditional acrylic appliances.

The durable nylon material resists cracking, wear, and breakage, while a **vapor-polished** surface creates a smooth, fluid-resistant finish for improved hygiene and long-term performance.

WHY USE THE NYLON SLEEP APPLIANCE?
Our mandibular advancement devices are fabricated using advanced 3D printing technology and medical-grade laser-sintered nylon. This innovative material allows for an ultra-thin, lightweight design that maximizes tongue space and enhances patient comfort compared to traditional acrylic appliances.

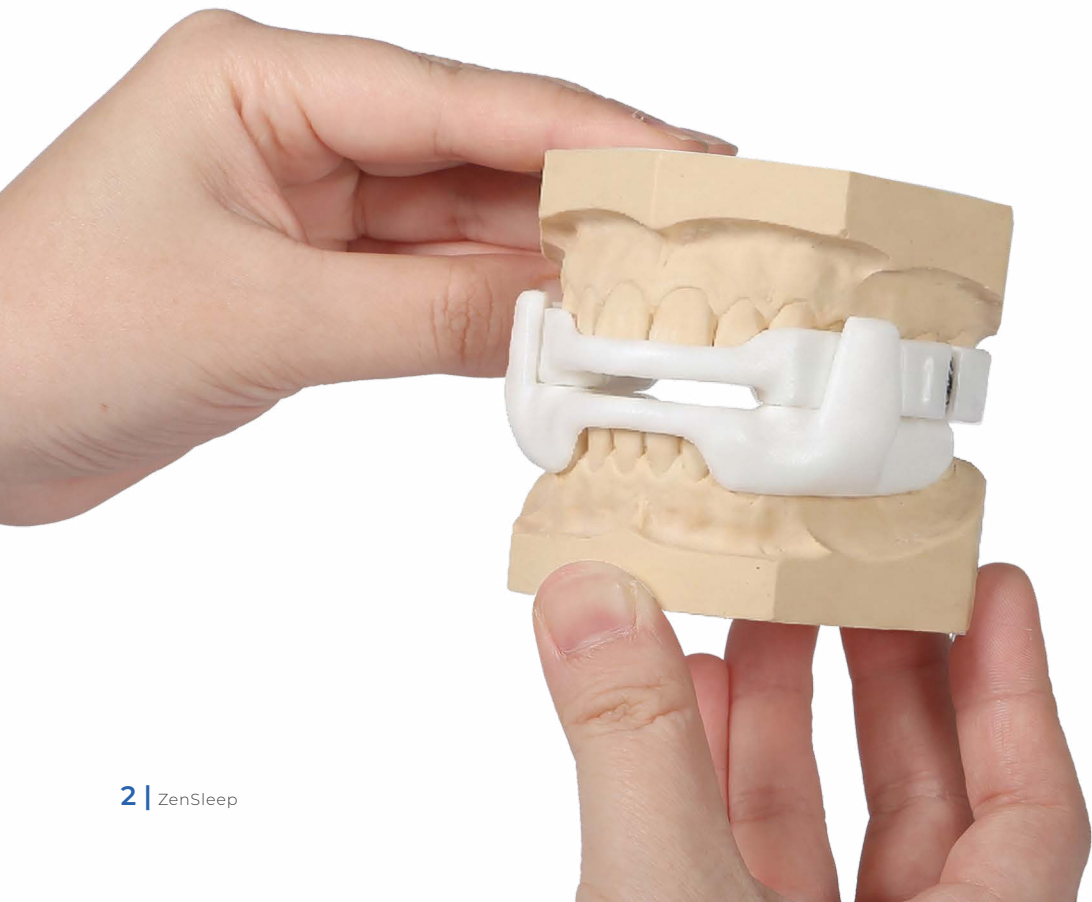
Nylon is highly durable and resistant to cracking, wear, and breakage, allowing the appliance to withstand daily clenching and grinding forces. Our vapor polishing process seals the surface, creating a smooth finish that is more resistant to fluids and stains.



WITHOUT DEVICE
Airway is obstructed



WITH DEVICE
Airway is open



SMOOTH AND POLISHED SURFACE

Patented Finishing Technique

Vapor polishing is a specialized technique used to improve the surface finish of 3D-printed objects.

We have developed a **unique vapor polishing formula** in which the nylon object is placed in a chamber filled with biocompatible solvent vapors, which gently softens the outer layer of the material.

This softening allows for the smoothing of any surface imperfections, resulting in a glossy, polished appearance.



Non-Vapor Polished



Vapor Polished



Custom
Made



Ultra-
thin



Light-
weight



Hypo-
allergenic



BPA
free



Stainless



Comfortable

IMPROVED COMFORT
Our nylon devices are fabricated using advanced 3D printing technology, resulting in a posterior thickness as thin as 0.5 mm. This design is less bulky and maximizes tongue space compared to acrylic options, helping patients adjust quickly and comfortably.

HIGH DURABILITY
Medical-grade nylon is tough and resistant to cracking, wear, and breakage, unlike traditional acrylic, which can be brittle. With high tensile strength (≥ 47 MPa) and modulus (≥ 1650 MPa), these devices can handle daily use and the stress from clenching and grinding teeth.

FAST LABORATORY TURNAROUND
Appliances are produced with an in-lab turnaround time of approximately 5 days (excluding shipping), supporting efficient workflows for dental practices.

OUR RANGE OF SOLUTIONS

Product Portfolio

Our Solutions for Nylon Mandibular Repositioning Appliances (MRA). A comprehensive range of nylon sleep appliances engineered for comfort, precision, and reliable snoring and sleep apnea management.



ZENSLEEP SERENE
A highly durable device with a proven screw advancement mechanism that requires no elastic replacements for consistent, effective treatment.



ZENSLEEP EMA
Designed to allow greater lateral movement, making it an ideal solution for patients with bruxism while effectively managing snoring and sleep apnea.



ZENSLEEP TAP
Features an anterior hook mechanism that prevents vertical jaw drop while maintaining precise mandibular advancement throughout the night.



ZENSLEEP SILENSOR SL
A compact mandibular advancement device with reduced bulk on the sides of the mouth for improved comfort and discreet overnight use.

ADVANCED MATERIAL TECHNOLOGY

Ultra-Thin Design
The nylon construction allows a posterior thickness as thin as 0.5 mm, reducing bulk compared with traditional acrylic appliances and improving appliance acceptance.

Flexible and Comfortable Fit
The lightweight material provides flexibility while maintaining a stable fit, allowing natural jaw movement during sleep.

DURABLE AND HYGIENIC APPLIANCE DESIGN

High Durability
Medical-grade nylon offers excellent resistance to cracking, wear, and breakage, allowing the appliance to withstand nightly use and occlusal forces such as clenching or grinding.

Hygienic Surface Finish
The vapor-polishing process seals the nylon surface, creating a smooth and stain-resistant appliance that is impermeable to fluids and free from BPA

VAPOR POLISHING TECHNOLOGY

Improved Surface Quality
A specialized vapor-polishing process smooths the outer layer of the nylon appliance, removing surface irregularities and creating a polished finish. This results in improved hygiene, enhanced comfort, and a refined appliance surface.

PROVEN SCREW ADVANCEMENT MECHANISM

Highly effective and durable architecture. The **ZenSleep Serene** requires no consumable elastic replacements



IS YOUR PATIENT AT RISK?

Clinical Insight

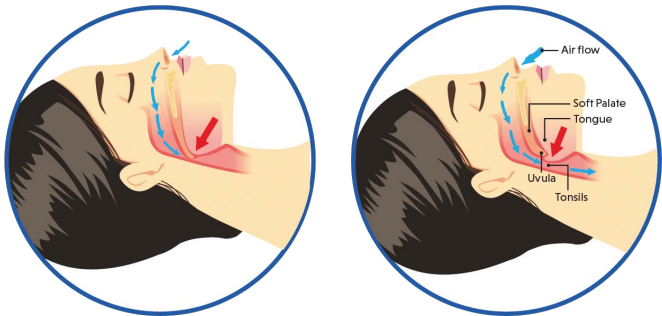
WHAT IS OBSTRUCTIVE SLEEP APNEA (OSA)?

Obstructive Sleep Apnea (OSA) is a sleep-related breathing disorder in which the airway repeatedly collapses during sleep, causing partial or complete interruptions in breathing. These episodes reduce oxygen levels and disrupt normal sleep patterns.

In dental sleep devices, MRA Mandibular Repositioning Appliance are commonly **used as a non-invasive treatment option for patients with snoring or mild to moderate OSA**. These custom oral appliances reposition the lower jaw forward during sleep, helping to maintain an open airway and improve airflow.

Did you know that as many as 2 out of 3 people snore? In addition to raising the risk of high blood pressure, heart disease, and diabetes, untreated OSA can also lead to the following risk factors or symptoms!

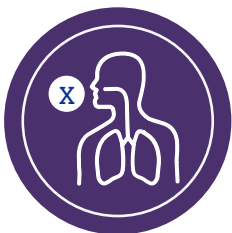
31% of adults have opted for a „sleep divorce,“ or sleeping in another bed to accommodate a bed partner.* Snorers were more than twice as likely to be involved in a traffic accident compared to non-snorers.



COMMON SYMPTOMS OF OSA



Loud, chronic snoring



Choking or gasping for air while sleeping



Poor work performance or low energy



Nocturia or frequent urination at night



Loud, chronic snoring



Morning headaches

*American Academy of Sleep Medicine. (2025). A ‚sleep divorce‘ is common among couples. # Taipei Times. (2007). Study finds snorers have higher risk of accidents

GET IN TOUCH

Ready to improve your patients' sleep quality?

Upgrade your workflow with ZenSleep, advanced nylon mandibular advancement devices designed for comfort, durability, and effective sleep apnea and snoring management.

With ultra-thin, lightweight construction and high-strength medical-grade nylon, ZenSleep appliances provide reliable performance while maximizing patient comfort and compliance.

Start offering next-generation sleep therapy or contact us for more information.

EFFICIENT PRODUCTION

Fast Laboratory Turnaround: Appliances are produced with an in-lab turnaround time of approximately 5 days, excluding shipping.

WARRANTY

ZenSleep appliances include a **1-year warranty** covering manufacturing defects during normal intraoral use.





Trees for All

