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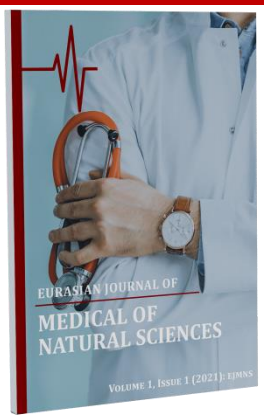

THE IMPORTANCE OF DENTAL MOLDS: A GUIDE TO ORAL HEALTH

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ABSTRACT

Taking care of your oral health goes beyond just a bright smile and fresh breath. Studies have shown a clear link between gum disease, also known as periodontal disease, and various chronic diseases. Gum disease is inflammation of the gums caused by the buildup of plaque, a sticky film of bacteria that forms on your teeth. If left untreated, gum disease can lead to tooth loss and even affect your overall health. Research has shown that gum disease increases the risk of developing chronic diseases such as heart disease, diabetes, respiratory infections, and even some types of cancer. This connection may be due to the fact that bacteria from gum disease can enter your bloodstream and travel to other parts of your body, causing inflammation and damage.

Although evidence of dentistry dates back thousands of years to the Indus Valley Civilization in 7000 BC, dental impressions are relatively new. We've used versions of them for centuries; over time they evolved into the high-tech ones available today. The first impressionists in the 1700s used beeswax to create a reverse or negative impression to create a stone casting. It was a complex and error-filled method. By the 20th century, scientists had made breakthroughs in plastics, especially thermoplastics. With the development of manufacturing, it has become easier to make impression trays from alginate than from silicone-based materials. These mouth guards could capture surface details more accurately than their ancestors.

Today's baking sheets still use 20th century innovations, but with greater precision, stability, durability, comfort, taste and other factors. We even have digital impressions created using intraoral scanners that use 3D geometry to capture all facets of the surfaces of the upper and lower teeth.

Common Types of Dental Shapes Today

The "plastic revolution" of the 20th century resulted in three commonly used materials that are preferred by dentists and dental laboratories today:

Polyethylene (PE)

Vinylpolysiloxane (VPS)

PVES, hybrid of PE and VPS

Each has its own advantages and disadvantages, but they are all flexible, safe and reliable.

The type of material chosen depends on the dentist's preference and whether the impression will be used for dentures, bridges, crowns, partial dentures, night guards, or other appliances.

Polyethylene

In the 1900s, manufacturers saw the potential of plastic dental molds, but controlling the moisture content of these impressions was difficult. Polyethylene, a material from the plastics family, solved this problem by allowing the creation of detailed shapes that would not detract from the liquid. Because polyethylene molds have incredible attention to detail, reproducing lines finer than a human hair, this was a huge advance in printing.

Both materials: Biocompatibility

Free of gluten, BPA, phthalates, latex, sodium lauryl/laureth sulfate and MMA. Durable enough to withstand all but the heaviest teeth grinding (for this we'll use more abrasion-resistant materials like acrylic). The family of polyethylene plastics is ideal for night guards, crowns and dentures that require rigidity and flexibility.

Vinyl Polysiloxane

Vinyl polysiloxane, commonly called VPS, followed polyethylene around the 1970s. VPS materials are made from ingredients that form chemical compounds reaction, unlike other silicone-based materials, which increase product stability.

Adding a protectant helps protect the VPS from moisture. Impression detail and high rigidity combined with odor and tastelessness make VPS the preferred choice for many dental molds.

Hybrid (PVES)

PVES (polyvinyl ether silicone) materials use a combination of PE and VPS to provide the benefits of both with fewer disadvantages. You get the stability, resilience and flexibility of VPS with the wettability of polyethylene. However, this material is relatively new in dentistry and still remains an analogue of IPS and PE, and not “better than”. PVES provides dentists and laboratory professionals with three solid materials to choose from when developing dental mold kits.

A Dental Mold Kit

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Whether you order a dental mold kit to use at home or your dentist makes your impression at the office, the tools will look similar.

To make a copy of your teeth, you'll need some form of plaster to create the dental cast. Picture a ball of Play-Doh, but without the nasty taste and *with* food-grade ingredients (ignoring what you may have eaten as a kid). The malleable plaster is adjusted so that it spreads across a tray as it sits in your mouth. When you bite down on the tray, the teeth leave impressions in the plaster, providing a 3D copy of your teeth and gums. This copy is then sealed in a container or plastic bag, where it can set without anything affecting it.

What Makes a Good Dental Mold Kit Stand Out

Although the materials used by reputable manufacturers are typically durable and fast-setting, there are a few factors that make dental mold kits stand out from each other.

Since your teeth are full of edges and fine lines, plasters that can capture those details are preferable. However, the material used to make the impression needs to be the perfect balance of moldable and quick-setting.

Our kits use the latest technology — no Play-Doh involved — to ensure a detailed impression is made before you return your mold. We even check it for you when you send us a picture of the impression by text, email, or on our app!

Once the kit sets, our lab pours material into the impression, forming a cast. The impression materials, like polyethylene, are then used to create the oral appliance.

DIY Molds Versus Professional Molds

Because of the expense and hassle of going to the dentist's office for a mold, at-home DIY kits have skyrocketed in popularity. Technology and professional labs like ours at JS Dental Lab allow you to make and receive your oral appliance without walking past your mailbox. The key is to choose legitimate, reputable manufacturers who use professional-grade materials alongside excellent customer service. That way, if you have any questions, you can get help during any step of the process.

General Steps for a DIY Impression Kit

Regardless of where you get your kit, always follow the instructions. A common mistake is to read one step at a time, but creating a dental mold is a time-sensitive process. Be sure you read *all* the instructions before taking any action steps. Whether you're making an upper or lower impression, start by brushing your teeth and rinsing thoroughly. This eliminates any debris that could compromise the details in the mold.

Choose the right size tray

Then use the included trays to find the size that best fits your mouth. You don't want the fit to be perfect or tight. It's best to use a slightly larger tray so that the putty has enough space to do its job.

Stretch out your baby muscle movements and roll the putty in your (clean) hands. Mix the two colors together, stirring them thoroughly in a worm shape until no more purple appears; everything should be one consistent color.

Make your impression

Follow the instructions included with the kit, placing the mouth guard in your mouth and holding it firmly so that it does not move for the specified time. For upper teeth, it should cover the last molar. The lower teeth should also be completely covered. When the time is up, pull the mouth guard down (for the top) or up (for the bottom) and carefully remove the mouth guard from your mouth. If necessary, take a photo and submit it for approval, then place it in the provided bag or container for return to us.

When are professional uniforms needed?

DIY kits are ideal for night guards used to reduce general teeth grinding or for teeth whitening. They are also suitable as basic mouthguards to prevent injuries during sports.

But sometimes a professional mold is needed, for example during:

Prosthetics

Orthodontics

Dental restorations

If your problem is medical in nature, it is best for you to see a doctor right away to get the best care.

Braces

For example, if you need to move your teeth, you need a professional to guide you through the process of using braces.

The orthodontist will monitor movements as they occur, adjust treatment if necessary, and install a retainer after the braces are removed.

Dental crowns and implants

Impressions for dental crowns and implants are also required and must be made in the dentist's office. Placing a crown or implant is a surgical procedure; The impression kit they use is specifically designed for this purpose. If you have a tooth extracted, a different type of kit is used to create a temporary tooth while you wait for an implant.

Prostheses

And of course, if you need dentures, you shouldn't go it alone either. You may end up with false teeth that don't fit in your mouth, are completely uncomfortable, or look fake. When it comes to replacing real choppers with replicas, you want the new ones to look like real human teeth. Denture teeth must be high quality and designed specifically to fit your unique mouth shape.

Conclusion

Taking dental impressions is more common these days as a solution to oral health problems and is nothing to be afraid of. Technology has come a long way over thousands of years. We now have professional hardware fixes for your upper and lower teeth, or a kit with everything you need for a home night watchman.

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