Custom-made mouth guards reduce athletes' risk of Concussion, study shows

Many have speculated that mouth guards can prevent some sports-related concussions, by helping to absorb shock, stabilize the head and neck, and limit movement caused by a direct hit to the jaw. But, there has been little evidence until a recent study published in the May/June 2014 issue of General Dentistry, the peer reviewed clinical journal of the Academy of General Dentistry.

The study found that high school football players wearing store-bought mouth guards were more than twice as likely to suffer mild traumatic brain injuries as those wearing properly fitted, custom mouth guards.

"Researchers and, most importantly, parents, are looking for ways to better protect children against concussion," said lead author Jackson Winters, DDS, a pediatric dentist who also served as a high school and collegiate football official for 28 years. "Consumers may believe that today's advanced helmet design provides sufficient protection, but our research indicates that, when compared to over-the-counter versions, a custom-made properly fitted mouth guard also is essential to player safety."

The study followed 412 players across six high school football teams. There teams (220 players) were randomly assigned to wear custom-made mouth guards, while the remaining three teams (192 athletes) wore standard store-bought mouth guards of their own choice. All players used the same style of helmet during the study.

The findings showed that 8.3 percent of the athletes wearing using over-the-counter standard mouth guards suffered brain injuries. However, only 3.6 percent of the players wearing custom mouth guards suffered concussions.

The study also indicated that mouth guard thickness is a factor in the level of protection from mouth guards. The average thickness of custom-made mouth guards worn in the study was 3.5 millimeters, while the average thickness of the over-the-counter mouth guards was only 1.65 millimeters.

"Although more research on this topic is needed, out study shows the value of a custom-made mouth guard," Dr Winters said. "The benefits of protecting your child far outweigh the costs associated with a dental or medical injury, which is likelier to occur with a store-bought model."

A major factor, these thicker mouth guards engage neuromuscular energy by opening osteopaths within the temporomandibular joint, helping balance and strengthen the neck and upper trunk. Thinner guards
tend to collapse the joint when “overclenched” which can lead to several symptoms related to Temporomandibular Dysfunction. Neuro muscular appliances are formed fitted to optimize orthodontic alignment and are designed to correct imbalances in the bite. http://www.biteadvantages.com news page has recent research supporting this theory. New neck strength data, reviewed by Dr. Cantu, supports a stronger neck in helping protect against concussion.

Story Source:
Materials provided by Academy of General Dentistry. Note: Content may be edited for style or length.
<www.sciencedaily.com/releases/2014/05/140501101133.htm>
MOUTHGUARD CARE INSTRUCTIONS

Caring For Your Athletic Mouthguard While In Use

DO NOT CHEW ON YOUR MOUTHGUARD. Any time we have something in our mouths, we have a strong desire to chew. It’s just human instinct. When you have gum in your mouth, you want to chew. When food enters your mouth, you unconsciously start chewing it. So it is easy to see why some get into the habit of chewing on their mouthguards, especially while participating in nerve-wracking sports games! Unfortunately, chewing on your mouthguard will drastically shorten its life.

So, if you find yourself wanting to bite your mouthguard while you’re not in the game, try taking it out until you get back into the game so that you can extend its life. But please do remember to put it back in! Your teeth need protection.

Storing Your Athletic Mouthguard

STORE YOUR MOUTHGUARD IN A CASE. Once the game is over (and hopefully won), most players are focused on celebrating the victory and simply toss their custom mouthguard anywhere it will fit.

Many football players get into the habit of storing their mouthguards in their face-guards, helmets, or backpacks. If the mouthguard is shoved in a tight place, it can easily get distorted. Since custom mouthguards are made out of a soft plastic, any unnatural pressure can distort them and will result in a poor fit the next time they are used.

Ideally, you should get the cast of your teeth that your dentist used to make the mouthguard and put the mouthguard on that cast after each use. That way, the mouthguard will conform to the cast and retain its custom fit.

However, you should store your mouthguard in the case that your dentist has provided. Be sure to keep it in a cool, dry place as heat can distort your mouthguard. Leaving your mouthguard in a parked car on a hot summer day will also seriously distort it!

Cleaning Your Athletic Mouthguard

CLEAN YOUR MOUTHGUARD ASAP AFTER USE. Hopefully, you’re not just using and storing your mouthguard without cleaning it! Like any dental appliance that sits in your mouth for a long period of time, custom mouthguards need to be cleaned. Without regular cleanings, bacteria will multiply and cause unpleasant odors to develop.

Cleaning your mouthguard is quite simple. After you are done using it, simply rinse it off with cold water. That’s all. Many people want to use hot water since they think that will get it cleaner. Heat can distort your mouthguard. You may also be tempted to use alcohol, denture cleaning products, or toothpaste to clean your mouthguard. All of these cleaners can harm your mouthguard, especially the denture products and toothpaste since they are generally more abrasive.

You can periodically deep clean your mouthguard with a solution of soap and water. A mild liquid hand soap will work well for this.
Mouth Guard Consent

Please read the following information carefully so that you will understand the conditions under which individuals are being seen. Participation in this service will enable you to receive a custom-constructed mouth guard. It will not, however, make you a patient of record at the office of Dr. Jack Elder or Family 1st Dental. In order to do that, an examination appointment must be scheduled.

I hereby give consent to Dr. Jack Elder and his team at Family 1st Dental to perform on my child the treatment necessary to construct a custom athletic mouth guard.

I furthermore understand that although the athletic mouth guard is protection for the teeth and soft tissues of the mouth, injuries to these areas are still possible while wearing this appliance and I can claim no liability for these injuries against Dr. Elder or Family 1st Dental. If mouth guard is lost, one replacement can be made at no cost. Any additional replacements can be done at a cost of $250.00 each.

I have been informed that there are some risks inherent in all dental procedures including impression taking and the examination of the teeth and soft tissues of the mouth. I have had an opportunity to discuss any concerns regarding the construction of the athletic mouth guard. I understand and agree to the conditions set forth above.

Athlete's Name

Team

Signature of Parent or Guardian

Date

Printed Name of Parent or Guardian

Phone

Address