

# FACT SHEET

FS No. 12-002-0321

## INJURY PREVENTION: FACT VS FICTION SERIES MOUTHGUARDS CAN PREVENT INJURIES

### Why wear a mouthguard?

A mouthguard is a piece of equipment designed to reduce the risk of injury by cushioning and redistributing the force from an impact.<sup>1,2</sup>

The primary reason to wear a mouthguard is to prevent sports-related injuries to the teeth, jaw, and surrounding structures (mouth, lip, tongue, inside cheeks). These are referred to as orofacial injuries.<sup>3,4</sup>

Military personnel must wear mouthguards<sup>5</sup> for specific military training activities, including obstacle and confidence courses; hand-to-hand combat; rifle/bayonet training; and pugil stick training.

Commanders are required to enforce the use of mouthguards during these activities.<sup>5</sup>



U.S. Army Photo, APHC by Ben Bunger

### Why are mouth injuries a concern for the Army?

Due to the nature of military training activities and sports, orofacial injuries are common among Army Soldiers. Orofacial injuries result in lost time from work for treatment, and depending on the severity, can be accompanied by significant, long-standing functional, esthetic, and psychological complications.<sup>2</sup>

### Do mouthguards really prevent injuries?

Scientific evidence has indicated that mouthguards prevent the occurrence and severity of orofacial injuries. One Army study showed over a 70% reduction in dental injuries during combat training once mouthguards were provided.<sup>6,7</sup>

Though mouthguards can reduce a persons' risk of orofacial injuries, not all mouthguards are alike. Some offer more protection than others do, though other factors such as comfort and cost should be considered when deciding which to use. (See table on next page.)



U.S. Army Photo, APHC by Ben Bunger

### When should you wear a mouthguard?

In addition to the military training activities for which they are required, mouthguards are highly recommended for any activity that has the potential to harm the face or mouth seriously from head-to-head contact, falls, teeth clenching, and blows to the mouth.

The American Dental Association and the International Academy of Sports Dentistry identified 29 sports/ exercise activities during which mouthguards should be worn.<sup>1,2</sup> Hazardous popular sports among military members include football, basketball, martial arts, wrestling, soccer, skiing, extreme sports, volleyball, racquetball, softball, skateboarding, lacrosse, rugby, and equestrian events. These activities, as well as various Army training activities pose notable orofacial injury risk.

## How well do different types of mouthguards prevent injuries?

Three types of mouthguards commonly used in sports and recreational activities vary in comfort, fit, protection, and cost. Invest in a mouthguard that is not only comfortable but also offers good protection.

Type	Description	Level of Protection	Comfort and Fit	Cost
<b>Custom-made<sup>a</sup></b>	<ul style="list-style-type: none"> <li>Impression of individual's mouth is taken by a dentist</li> <li>The mouthguard is then created from the impression to custom fit the individual</li> </ul>	<ul style="list-style-type: none"> <li>Offers the best level of protection</li> <li>Made from high quality materials to ensure fit and stay in place</li> </ul>	<ul style="list-style-type: none"> <li>Provides highest level of comfort and fit of the three types of mouthguards</li> </ul>	<ul style="list-style-type: none"> <li>Expensive</li> <li>Obtained through dentist's office</li> </ul>
<b>Boil and bite</b>	<ul style="list-style-type: none"> <li>Wearer softens mouthguard in hot water and inserts into mouth after cooling</li> <li>Tray is molded and shaped to wearer's bite using fingers, lips, and tongue</li> </ul>	<ul style="list-style-type: none"> <li>Not as good as custom, but more protection than the stock "ready to wear" types</li> <li>May lose thickness and cushioning throughout use</li> </ul>	<ul style="list-style-type: none"> <li>May inhibit speaking when worn</li> <li>May not stay in place in mouth</li> </ul>	<ul style="list-style-type: none"> <li>Inexpensive</li> <li>Widely available in sporting goods stores</li> </ul>
<b>Stock, "ready-to-wear"</b>	<ul style="list-style-type: none"> <li>Use "as bought" with no preparation</li> <li>Must be held in place by clenching teeth during use</li> </ul>	<ul style="list-style-type: none"> <li>Offers least protection of the three types of mouthguards</li> <li>Mouth must be closed to provide protection (falls out if mouth is open)</li> </ul>	<ul style="list-style-type: none"> <li>May inhibit breathing or speaking when worn</li> <li>Limited adaptability</li> <li>Sizes are limited</li> </ul>	<ul style="list-style-type: none"> <li>Inexpensive</li> <li>Widely available in sporting goods stores</li> </ul>
<p><b>Note:</b>  <sup>a</sup> Many Army dental treatment facilities can manufacture a custom-fitted mouthguard at a Soldier's request.</p>				

### Tips for Mouthguard Care<sup>3,4</sup>

- RINSE with cold water or mouthwash before and after use. You can also clean it with a toothbrush and toothpaste.
- STORE in a durable, perforated container to prevent damage and allow air flow. To prevent the mouthguard from losing its shape, keep it away from direct sunlight, hot water, or other hot environments.
- INSPECT and REPLACE the mouthguard if there are holes/tears, bite-throughs, or distortions. Mouthguards wear out over time and do not provide the same level of protection once they become damaged or loose.

### References:

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