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An American National Standard

# Standard Practice for Care and Use of Athletic Mouth Protectors [1]

This standard is issued under the fixed designation F697; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This practice covers the care and use of intraoral mouth protectors as protective equipment for sports. Mouth protectors includes what are commonly termed mouth guards.

1.2 Mouth protectors, as described herein, refer to either Type I, Type II, or Type III mouth protectors as classified in Section 3.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

## 2. Terminology

2.1 *Definitions of Terms Specific to This Standard:*

2.1.1 *mouth protector*—a resilient device or appliance placed inside the mouth (or inside and outside), to reduce mouth injuries, particularly to teeth and surrounding structures.

## 3. Classification

3.1 Mouth protectors covered by this practice shall be of the following types and classes:

3.1.1 *Type I—Thermoplastic Type:*

3.1.1.1 *Class 1a*—Vacuum-formed.

3.1.1.2 *Class 1b*—Vacuum-formed adjusted.

3.1.1.3 *Class 1c*—Mouth-formed.

3.1.1.4 *Class 2a*—Pressure laminated.

3.1.1.5 *Class 2b*—Pressure laminated adjusted.

3.1.2 *Type II—Thermosetting Type:*

3.1.2.1 *Class 1*—Mouth-formed.

3.1.3 *Type III*—Stock type.

## 4. Significance and Use

4.1 Intra-oral mouth protectors have been found usable and effective in all physical sports activities where mouth hazard exists.

4.2 Considerable evidence indicates that the use of mouth protectors reduces forces on dentition and can potentially mitigate orofacial injuries.

## 5. Design Considerations

5.1 For maximum protection, cushioning, and retention (that is, to reduce the chance of dislodgement), the protector should cover all the remaining teeth of one arch, customarily the upper, less the third molar (except with a prognathic lower jaw). The borders of the mouth protector should cover as much of the alveolus and extend to the depth of the vestibule intraorally, without interfering with the movement of the intra-oral tissues.

5.2 The use of both a separate maxillary (upper) and mandibular (lower) mouth protector is seldom recommended due to no demonstrated benefit, reduced comfort with lack of compliance from individuals. The use of a combined (dual arch) maxillary and mandibular mouthguard is an acceptable design.

5.3 Consideration needs to be given to how the mouth protector occludes with the opposing teeth. The mouth protector needs to have contact with as many teeth in the opposing arch and contact evenly on as many teeth as possible.

5.4 Mouth protectors that attach to headgear via a strap should be adjusted to fit as described above (for non-strap attached).

## 6. Special Limitations

6.1 The fitting of mouth protectors is best accomplished under the supervision of trained athletic, medical, or dental staff familiar with the specific mouth protector to be used.

6.2 Players wearing orthodontic appliances or having mouth malformations (abnormalities) should be provided with a mouth protector only under the supervision of a dentist.

6.3 Players wearing removable partial dentures should remove them before being provided with a mouth protector.

6.4 Players wearing complete dentures should be fitted with a mouth protector (with or without the denture in place) as decided and supervised by a dentist.

6.5 If the changing dentition, due to the age of the player, is judged to be a problem, the use of a thermally moldable mouth

[1] This practice is under the jurisdiction of ASTM Committee F08 on Sports Equipment, Playing Surfaces, and Facilitiesand is the direct responsibility of Subcommittee F08.53 on Headgear and Helmets.

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