



## Information on playing sports with braces

**CONTACT SPORTS:** A contact sport is one which involves significant physical contact between opposing players and therefore could endanger the safety of the teeth. The risk of tooth damage is also increased in physical sports where speed or moving objects - such as bats and balls - are involved. Studies have shown that between 13% and 39% of all dental injuries are sports related and about one in four children in the UK will injure and sometimes lose a front tooth at some stage<sup>2</sup>.

**PROTECTING YOUR ASSETS AND PLAYING IT SAFE:** With numbers of contact sport participants on the increase, traumatic accidents resulting in dental injuries are also on the rise. Because of this the dental profession as a whole is lobbying for the mandatory use of mouthguards for all school children or club players participating in contact sports. Some dental insurance plans will not pay out if damage occurs during contact sports (including training sessions) and a mouthguard was not worn to mitigate the risk.

**MOUTHGUARDS:** According to The British Orthodontic Society it is important for anyone with a brace to wear a mouth guard over their fixed brace to avoid a laceration to the mouth from the brace; to avoid damage to the brace; and to prevent injury to the teeth. Fortunately the brace itself gives a lot of support to the teeth so the main function of a mouthguard over a brace is to protect the brace and the mouth. The first recorded use of a mouthguard was by boxers and in the 1920s professional boxing was the first sport to make mouthguards mandatory. In those days, the mouthguard or toothguard, as it was then called, was a preformed, thick semi circle of rubber, which was worn over the top teeth. Technology has improved vastly since those early days of tooth protection and companies are now fabricating mouthguards which are pliable and made from impact absorbing materials such as polyethylene vinyl acetate (pEVA). This is an odourless, tasteless, non-toxic polymer which offers resistance to abrasion and is durable enough to last at least a whole season of sports competition and training.

**MOUTHGUARDS WITH BRACES:** New mouthguards are designed to fit comfortably in the mouth and are not bulky, allowing easy speech, swallowing and breathing. The British Orthodontic Society advises that conventional mouthguards do not work with braces because the teeth are shifting, which means they become ill fitting very quickly. Fortunately there are several different types of ortho-guard mouthguards specially designed to fit over fixed braces and the British Orthodontic Society recommends that this is the best type to use with a fixed brace. The orthodontist will be able to supply an appropriate mouth guard or advise the patient where to obtain the most suitable one to suit their needs:

- ✓ Ortho guards. Some companies are now making special off the shelf ortho-guard mouthguards for patients with braces which feature a channel or trough to accommodate the brace and allow for tooth movement.
- ✓ Boil and bite mouthguards can be shaped to fit by softening in boiling water and then sucked to mould to the contours of the mouth. This means that as the teeth move, the mouthguard can be remoulded to adapt to the new shape of the mouth. ✓
- ✓ Custom-made mouthguards. Because of the movement of teeth during orthodontic treatment, a tailor-made gumshield would need to be changed frequently, so may not be a viable option for the orthodontic patient unless the fixed appliance has been fully fitted before the mouthguard is made. The custom-made mouthguard supplier should make the guard so it allows the teeth to move during treatment and must instruct the user about how to modify the mouthguard if it becomes too tight. If a great deal of tooth movement takes place wearers may need a second mouthguard after about a year's treatment.

## KEY FACTORS WHEN SELECTING THE RIGHT MOUTHGUARD FOR YOU:

- It should be comfortable, well-fitting and not prone to dislodging on impact.
- It should provide adequate thickness of material (4mm) over vulnerable areas to reduce impact forces.
- When biting lightly on the guard, large areas of its biting surface should be in contact with the teeth in the opposing jaw, so minimising the risk of jaw fracture.

**SPORTING CHANCE:** Advocacy by the American Dental Association led to the mandatory use of mouthguards for high school football as early as 1962 and currently, the US National Collegiate Athletic Association requires mouthguards for four sports (ice hockey, lacrosse, field hockey and football), however, the American Dental Association recommends the use of mouthguards in 29 sports and exercise activities. In the UK, alongside the British Orthodontic Society, the British Dental Association, Rugby Football League Association, British Boxing Council, English Hockey Association and Rugby Football Union, to name but a few, emphatically recommend a gumshield should be part of the sports kit. The Rugby Football Association's website comments that in the best interests of players safety, we strongly recommend that all players wear a mouthguard during any contact sports including:

American football	Horse riding	Netball
Bike riding	Ice hockey	Roller skating
Boxing	Ice skating	Rounders
Cricket	Judo	Rugby
Cycling	Kick boxing	Skateboarding
Football	Lacrosse	Skiing
Hockey	Martial arts	Wrestling