ONE OF OUR RESPONSIBILITIES as certified athletic trainers and therapists is to make the competitive environment as safe as possible in the hope of reducing the likelihood of injury. According to the NATA role-delineation study, a subcategory of injury prevention is selecting and properly fitting protective equipment. In addition, athletic trainers must take steps to ensure that high-quality athletic equipment is being purchased, constantly worn, maintained, and reconditioned. The purpose of this column is to describe the proper fit and maintenance of ice-hockey helmets and provide clinicians educational resources to teach athletes about proper care of their equipment.

**Fit and Maintenance**

The helmet’s role is to absorb the kinetic energy from high-mass (athlete) and low-velocity (speed of athlete) collisions, as well as low-mass (puck) and high-velocity (speed of puck) collisions. Helmets are designed to decrease the risk of focal and diffuse head injuries by means of a firm outer shell, intended to distribute impact loads over larger areas, and a rebound liner, which is intended to absorb the energy from the blow and decelerate the head slowly. In order for the helmet to adequately protect the head, however, it must fit correctly and be maintained properly over time.

Athletic trainers and therapists should be as proficient in fitting a hockey helmet as they are with football helmets and helmets used in other sports. In settings where certified equipment managers are not available, such as high schools or lower division colleges, members of the sports-medicine team might be called on to make sure that helmets are fitted correctly and maintained over time.

Although most ice-hockey helmets are sized based on hat size (circumference of the head measured 1 in. above the eyebrows), it is still necessary for the clinician, parent, or coach to make sure the helmet is fitted properly (see the sidebar). When one is fitting an ice-hockey helmet, the athlete’s hair should be wet to simulate the sweat that he or she would produce during a practice or game. The helmet should be placed on the athlete with the chin strap fastened and the face mask, if mandated, secured. Once the helmet is on, it should sit level on the athlete’s head (Figure 1). The clinician should check that the helmet sits no lower on the forehead than one to two finger widths above the eyebrows and then try to move the helmet to check that it does not move freely, slide, or rotate on the head (Figure 2). If the helmet does rotate or move, it should

### Requirements for Proper Fitting of a Hockey Helmet

- Helmet sits one to two finger widths above the eyebrows.
- Helmet sits level on the head.
- Maximum of two fingers fit between the neck and chin strap.
- If the helmet rotates or moves, it causes the scalp to move.
- Helmet does not move freely move, slide, or rotate on the head.
- The face mask fits properly into the J-clips.
- The chin sits in the chin cup.

*Note: Adapted from references 5, 6, and 7.*
do so with the scalp also moving below it. The helmet itself should not move across the head when being pushed on or rotated. The chin strap should be checked to make sure there are no more than two finger widths between the strap and the neck (Figure 3) and that the athlete’s chin sits directly in the chin cup. In fitting a helmet with a face shield, the face shield should fit to allow one finger width between the bottom of the athlete’s chin and the chin cup of the face shield. The face shield should also be checked to make sure it fits properly into the J-clips on the helmet (Figure 4).

In addition to a proper fit, it is important to evaluate the helmet’s condition throughout the season and from season to season. A sample maintenance checklist using items from the Sports Medicine Council of Alberta, Hockey Canada, and USA Hockey is included in the sidebar on the next page. Current recommendations are to replace the helmet every 2–3 years.

Unlike football or lacrosse helmets, currently there are no recertification procedures for ice-hockey helmets. The National Operating Committee on Standards for Athletic Equipment (NOCSAE) currently has standard performance specifications and laboratory procedural guidelines for newly manufactured helmets and those needing recertification. According to Dr. David Halstead, technical director for the Biomechanics Impact Research Lab of NOCSAE (personal communication, April 30, 2004), however, until the NCAA or other governing bodies require the use of a certified ice-hockey helmet, the standards are of limited value. The best possible outcome for hockey-helmet certification and recertification would be for all governing bodies to come to a consensus about the issue and develop a certification and recertification procedure similar to that used for lacrosse helmets. Until that time, all helmets should bear their original certification stickers from the Canadian Standards Association or the Hockey Equipment Certification Council (Figure 5).