

SCA Youth Combat

Hockey Helmet Buying Guide

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“The easiest way to get head protection is to go buy a hockey helmet” is oft heard advice from a YC marshal to the parent of a child just starting in the program. As the parent reads through various rules sets, they might find some additional direction on this. The helmet must be constructed of a continuous rigid material. Segmented or jointed helmets are not permitted. Some rules include: Minimum 1-piece hockey helmet with externally mounted metal face cage.

This doesn't seem too difficult to comply with. Yet these guidelines do not touch on many aspects of helmet selection that should be considered.

Keep in mind the purpose of the helmet: to cushion the blow and distribute the force over a larger area than the impact point. It is meant to protect the fighter from strikes by both the foam-covered parts of weapons and their bare hafts. The occasional fall to the ground or even boot upon the helm will happen as well. In conjunction with the gorget, it must cover the head and neck areas. Additional pieces may be needed, such as an aventails, camail and bevor, to account for differences in length and size of the neck and chin, as well as a gap at the rear over the spine.

What to look for, and avoid, in hockey helmets:

LOOK FOR: Truly single piece designs were common many years ago, but now most hockey helmets have two-piece shells with fasteners that allow for adjustment where the shells overlap. Tightening the fasteners allows us to consider the entire shell rigid.

AVOID: two-piece helmets designed for hockey goalies, where the rear panel is attached to the front by a non-rigid textile, usually elastic straps. Many kingdoms do not permit this style of helmet.

The Jofa 280 pictured below is a true single piece helmet from years ago and recommended. Many current “one piece” helmets, including some Lacrosse helmets, have adjustments in the rear that effectively make the section over the base of the skull narrow and unsupported by the balance of the shell, reducing its effectiveness. This is not much more effective than goalie helmets.



CCM HT04 Hockey Helmet Combo
Regular Price: \$54.99
Our Price: **\$44.99**



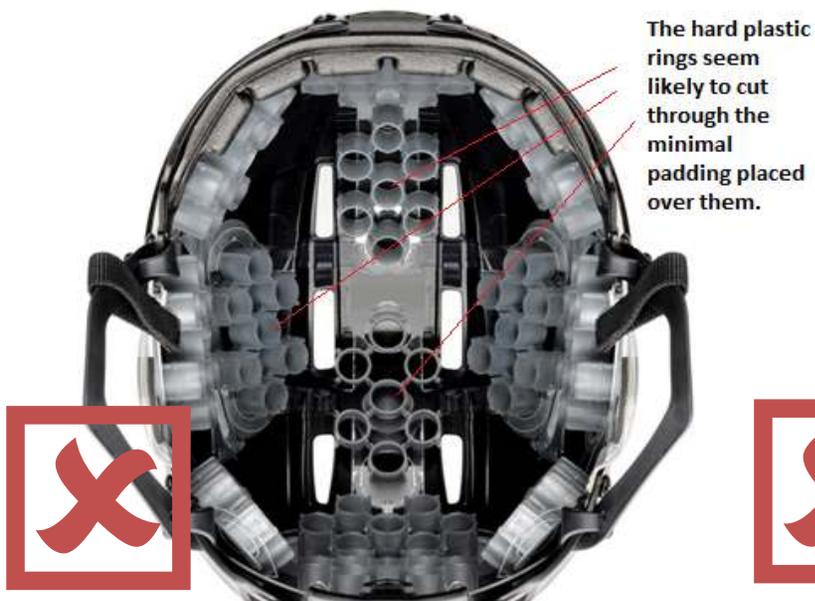
CCM HT04 Hockey Helmet
Regular Price: \$44.99
Our Price: **\$29.99**

Hockey helmets are often sold without face protection, usually referred to as a cage or shield. Some come with plastic shields, some have partial plastic with metal, and others have only a half-height plastic shield instead of full metal grills. **Avoid them.** Keep in mind that not all metal grills extend around the chin well. Designs vary by manufacturer, era, and styling. Some grills include a chin cup that cannot be repositioned, while other grills allow the strapping for the chin cup to pass through the grill bars, such as shown above left. A separate metal grill will almost always cost more than \$15, so buying a combo with a grill that protects well at a reasonable price is a real plus.

Helmets with a few pounds of weight resist motion when a blow lands. Extremely light helmets do not. Shown is an Easton E700 which weighs only 12.5 ounces. It is a “one-piece” helmet with EPP foam. The helmet is sized using a suspension system that holds it in place during movement, but the helmet may move a fair distance before coming to rest against the head. **It is not well suited to our use.**



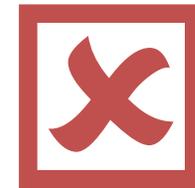
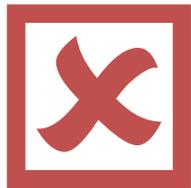
Some models, including some very expensive helmets, have design aspects that are not compatible with our use. Strongly advised against are EPP (Expanded Polypropylene) foam for use in division 2 and 3, and Seven Technology in any division. The Seven Technology’s hard plastic rings are shown below on the left, with the minimal padding of the Cascade M11 helmet removed. Many Bauer helmets now use this technology. A Bauer 9900 helmet with Fused EPP, XRD Poron and comfort foam is shown below right.



Helmets with aged Vinyl Nitrile foam in them do not cushion very well. It is too stiff to compress except from excessive blows. This is important if looking at used helmets. Even some new helmets, such as the Tour Spartan GX which uses EVA foam, seem to have very stiff foam. **Avoid foam that does not compress reasonably**, or re-pad the helm with appropriate foam. Keep in mind that the color of the foam is not an indicator of the type or age. In the photos below, the left helmet has two layers of VN foam (dual density soft white foam inside firmer black foam) while the photo on the right has only one layer (single density grey) VN foam.



Open ears holes (Gretzky style helmets) have insufficient coverage. A Gretzky single piece JOFA 235 is shown on the left. A two piece JOFA 390, which has whole ear protection, is shown in the center . Few modern helmets offer ear protection nearly as good as this. Shown on the right is a Tour Spartan GX with a removable ear piece. Modern ear pieces such as this are seldom robust or padded well beneath them.



Wire mesh trim packages are to be avoided as the wires may become needles when the mesh falls apart from repeated blows. Shown is a Tour Spartan GX. Ours had to have the foam removed for use.



Some grills are meant to stop movement toward the face by resting against the chin. Not all helmets and grills are built this way. Many use a pair of “J” clips to stop the grill from closing too tightly. On most helmets, including the Spartan GX on the left, there are two fastening screws to mount these on each side of the face, near the sideburn area. Styles vary from manufacturer to manufacturer. A basic J clip costs about \$1 per pair. Note that there is a high and low mounting position. In cages where the chin cup is mounted to it and cannot be relocated, the J clip can still be used to reduce impact on the chin from a blow to the cage.



Stress at adjustment fasteners leads to cracks in the shells. While Div 1 has a touch calibration that might withstand some cracks, in general the helmet is insufficient if it develops cracks in these areas and steps are not taken to cure the crack or replace the helmet. Multiple fastener designs, and fasteners mounted below the height of the shell, help with this problem.



Often a washer, bonded to the helmet with epoxy, can be placed beneath the screw to strengthen the cracked area. But if the crack continues to grow, the helmet should not be used, especially in Div 2 and 3.

Recessed screws are less susceptible to cracking stress.

What do the stickers mean?



HECC (The Hockey Equipment Certification Council, Inc.) is a 501(c)6 non-profit organization that was created at the request of USA Hockey in 1978.

If your helmet has this sticker, it indicates the year of manufacture. Helmets sold in Canada are required to have this.



The HECC was created to establish an independent certification body for amateur hockey equipment, primarily head protection. HECC does not write standards, it merely adopts standards already developed by recognized standard writing organizations such as ASTM (American Society for Testing and Materials) and CSA (Canadian Standards Association).

The HECC certification sticker affixed to your helmet provides the date when the HECC certification will end. HECC certification for helmets has been lowered several times and is now 6-1/2 years. After the expiration date on the HECC sticker has passed, most US hockey leagues require that the helmet be replaced with another HECC certified helmet. Damaged helmets should be replaced immediately.

The expiration date on the HECC sticker indicates when the helmet will probably no longer offer an approved level of protection. Though currently 6-1/2 years from production date for all helmets, it's typically 4 to 5 years from consumer purchase. HECC has been putting the expiration date on their stickers since about 2003, so if you have an HECC sticker without an expiration date, that helmet has expired.

What does this mean for Youth Combat? It's a helpful indicator, especially considering that some foams, such as Vinyl Nitrile (VN), seem to stiffen over time. Interestingly, many old (10+ years) helmets have foam that seems appropriate in softness where as 5 or 6 year old helmets are too stiff. Does the validity date help indicate a level of safety, or just drive more helmet sales? It seems to be some of both. But if you are buying a modern helmet with VN foam on eBay, this can help give you an idea of the useful lifespan of the foam by the ASTM standards.

What about Baseball helmets?

They might work for you. Many use open cell foam, which is not appropriate for use except perhaps for Division 1.



Some baseball helmets lack a “nasal”. The opening at the eyes and top of the nose is open from side to side. A pole arm haft could enter and strike the nose. While this is not very likely in Division 1, these helmets present a hazard if this is not addressed in Division 2 and 3. The metal cage also extends quite far from the chin and additional work may be needed to cover the opening. You might want to check with your local marshal before investing in one of these.

Would a Lacrosse helmet work?

Lacrosse is a very “hip” sport at this time. The costs of helmets are quite high compared to mid and low range hockey helmets. But they likely will work.

In general, the same concerns apply for them as for hockey helmets. EPP and Seven Technology are very common. Suspension fitting systems are also out there. Single piece helmets with narrow adjustment bands at the rear of the helmet are a concern. Chose wisely.



Cascade helmets often include Seven Technology, which is not suitable for our use.



I saw this helmet on eBay and wondered..

Why not? Customize it as needed. But be careful of the gage: Too thin and the metal can be dented relatively easily. You will probably need to pad it yourself. Some children are too young to give good fit feedback, so expect to repad several times until it fits for little ones. But they look marvelous.



I'll put my heavy list helm on Junior and he'll be fine...

Apples to apples, an adult heavy helmet will probably offer more protection than a hockey helmet when properly fitted. Many Division 3 fighters sport adult kits, and they look great. But if your child cannot get off the field rapidly because of the helmet weight, then it is a hazard to them and to others during melee.

My personal helm is almost 15 pounds. It takes a shot well. But many Division 2 children struggle to stand up wearing it. It's rather comical at demos when they place it upon their head. But I've heard very unflattering comments from pediatricians regarding this much weight on undeveloped bodies. Please be careful with heavy helmets.

Keep in mind that an ill-fitting helm that needs an aventail or camail to cover gaps can end up weighing considerably more than expected.



How do we find the right size helmet?

Protection:

- Snug fit to prevent any shifting and maximize protection.
- Adjustable chinstrap that gently makes contact under the chin when fastened. Some face cages have permanently mounted chin cups. If it is slightly too low, reverse the hinges that the grill mounts through, which moves the whole cage upward. You may need to select a different size or style of cage to properly protect the chin and neck.

Comfort:

- Don't settle for uncomfortable equipment. Although most helmets are lined with protective foam, some helmets will feel better than others. Try different brands for fit and comfort.

Estimating size:

- Measure the circumference of the fighter's head approximately 1" above the eye brows.
- Most helmets are not adjustable side to side, only front to back. If the side to side fit is uncomfortably tight, try the next size up. If it's too loose, try the next size down.

Fit:

- Loosen the screws and open the helmet to its largest setting, then put it on and gradually compress the helmet. When a comfortably snug fit is achieved, tighten the screws.
- The helmet should rest on the head so that the rim is one finger width above the eyebrow and making contact with the top of the fighter's head.

Shopping Do's and Don'ts

Do:

- Buy a comfortable, well fitted helmet.
- Ensure the helmet, cage and gorget cover the head and neck well, or be willing to modify them to do so.
- Check for closed cell foam that is not hard.
- Obtain a metal face cage, a chin cup and a chin strap.
- Put J clips on the helmet.
- Consider the HECC expiration date.

Don't:

- Buy a helmet type unless it's allowed in your Kingdom.
- Buy an uncomfortable helmet
- Purchase Seven Technology helmets, and be careful if selecting EPP foam helmets.
- Take home a helmet with hard or stiff closed cell foam.
- Buy a "Gretzky" style helmet.
- Mess with wire mesh trim.
- Buy a cracked helmet.