



GIRO HELMETS



HELMETS 101

WHY WEAR A HELMET?

Helmets are so light, cool and comfortable that they practically disappear when you put one on, and they are the single most effective means of preventing and reducing the severity of cycling-related head injuries (anywhere from 45-85% of the most commonly reported brain injuries for cyclists). Plus, they are available in a variety of colors and styles for every type of rider, so there is really no good argument against wearing a helmet.

HOW ARE HELMETS MADE?

Most cycling helmets are made with three basic components:

1. A tough outer shell (usually polycarbonate, ABS plastic or laminated fiber like carbon fiber)
2. An impact absorbing interior liner (usually EPS or similar foam)
3. An adjustable fit/stability system with straps (like our **Roc Loc**® systems)

In-Mold helmet construction, used for models like the **Aeon**™ and **Xar**™, fuses the outer shell and the inner, impact-absorbing foam liner together permanently using pressure and steam in a mold. This often creates a lighter helmet because the shell reinforces the foam like a skin, eliminating extra adhesives and hardware, and allowing the use of a thinner polycarbonate shell.

Injection-molded construction, used on models like the **Remedy**™ and **Surface**™, uses a pre-molded plastic or polycarbonate shell and foam liner that are formed separately then bonded together. While this creates a slightly heavier helmet that generally is not as vented as In-Mold helmets, the thicker shell often resists dents and dings more easily and is less intensive and expensive to engineer and manufacture.

HOW DO HELMETS WORK?

During impact, as from a fall or crash, the helmet's EPS foam liner compresses like an airbag to absorb energy so that the brain doesn't move around the inside of the skull with as much force. By absorbing this energy, a helmet reduces the likelihood of the most common brain injuries, such as concussions and hemorrhaging.

Regardless of how a cycling helmet is made, each part of the helmet contributes to the overall effectiveness of the helmet as part of a system:

The Outer Shell

Regardless of the material or construction method used to create a cycling helmet, the outer shell serves three main purposes:

1. By helping distribute impact energy.
2. By helping to protect against penetration by sharp objects.
3. By helping to protect the impact-absorbing liner from abrasions and knocks during day-to-day use that could compromise its' performance in the event of a crash.

The Interior Liner

The most common brain injuries in cycling, including concussions, result from falls where impact energy is transferred to the brain rapidly, causing the brain to be jarred and bruised inside the skull. Giro® helmets feature EPS (expanded polystyrene) foam liners that can help to prevent or reduce brain injury by absorbing some of the energy generated by an impact through its own compression or destruction (much like an airbag used in automobiles). By absorbing some of the impact energy, the brain does not move and bounce around inside the skull with as much force, reducing the likelihood and severity of injuries in many cases.



While there are other materials that can be used in helmets to reduce impact energy transmission, we use EPS most often for three reasons:

1. Gram for gram, EPS is the most efficient material when it comes to absorbing impact energy, which allows us to make lighter helmets that can reduce fatigue and improve comfort compared to a heavier helmet.
2. EPS is relatively unaffected by temperature and weather, and therefore offers more consistent performance whether you ride in warm or cold conditions, wet or dry.
3. EPS often shows signs like cracking or compression when damaged, making it easier to see that the helmet has been compromised and should be replaced.

The Straps and Fit System

Giro® helmets feature rugged nylon and adjustable fit / stability systems that are designed to fit the helmet comfortably and securely to the wearer's head. By creating a more secure and comfortable fit, these systems help to keep the helmet properly positioned and stable on the wearer's head, and can help prevent the helmet from coming off during a crash.

OVERVIEW OF CYCLING HELMET SAFETY STANDARDS

Helmet standards help to govern the design and integrity of helmets so that riders get products that are well-designed for the type of riding they enjoy. All cycling helmets should be certified to the most relevant standards for the type of riding the wearer is participating in, and must be certified for the market they're sold in. Here's a simple breakdown of key standards:

U.S.

CPSC – the U.S. federal government's standard for cycling helmets. All cycling helmets sold in the U.S. must comply with the CPSC standard.

ASTM F1952-09 – a voluntary standard specific to helmets for downhill MTB riding that requires a lower test line to help manage falls most commonly associated with more advanced off-road riding.

E.U.

CE EN-1078 – the European Union standard for cycling helmets. All helmets sold in European Union must meet a CE standard for protective equipment.

AUS / NZ

AS / NZS 2063 – the Australian standard for cycling helmets. All helmets sold in Australia must meet a government standard for protective equipment.

You can determine which standard a **Giro**® helmet meets by looking at the box label and on the label inside the helmet.

It is important to note that no one standard is superior to the others. They all cover many aspects of a helmet's design, performance and certification and they all have merit. However, the helmet you buy must be certified for sale and use in the market where it is purchased. Also note that proper fit is essential to a helmet's performance. If a helmet doesn't fit properly, it's less effective, regardless of the standard the helmet is designed to.





HOW TO CREATE A GREAT, COMFORTABLE FIT

Proper Fit is Essential to Performance and Comfort

A helmet must fit right and be worn properly in order to be effective. To offer the best fit and match for the body's size and proportion, Giro makes helmets in a wide range of sizes and styles as follows:

Adult **Super Fit™** Sizes

S	51-55 cm
M	55-59 cm
L	59-63 cm

Adult **Universal Fit™** Sizes

U Women's	50-57 cm
U	54-61 cm

Youth Sizes

Toddler	48-52 cm
U Child	50-55 cm
U Youth	50-57 cm

STEP 1 - Sizing a Helmet Correctly

To determine the correct size, you should measure the circumference of the head. To do this, just wrap a measuring tape around the head, keeping the tape just above the ears and level front to back.

Once you've determined the correct size, you can check to make sure the helmet fits comfortably and securely. If the helmet you own now doesn't fit on your head with just a little room between your head and the headband when the fit system is loose, you should replace it with one that does. You should always wear the helmet positioned low enough in the front to protect your forehead, but not so low that it hinders your vision. Once you've got a helmet that is the right size and positioned it properly, you can adjust the fit for best comfort and security.



STEP 1

STEP 2 - Adjusting the Straps at the Side of the Helmet

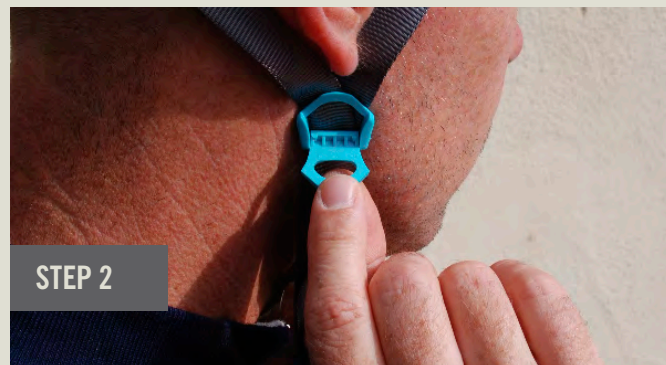
With a proper fit, the front and rear straps should join at a point slightly below the ears.

To adjust the strap positioning, open the **Tri Loc™** adjusters on the straps, put the helmet on and slide the straps through the adjusters until they are located comfortably under the ears. Make sure there is no slack in any of the straps. Then, close and lock the **Tri Loc™** adjusters.

STEP 3 - Adjusting the Chinstraps and Buckle

It is important that the chinstrap is comfortably snug and sits back against the throat, NOT on the point of the chin. It should be snug enough to prevent rolling-off, but loose enough so that the rider is able to open their mouth wide enough to eat.

Make sure the loose ends of the strap pass through the rubber O-ring near the buckle. If it does not, the strap may slide loose and the helmet can come off accidentally.



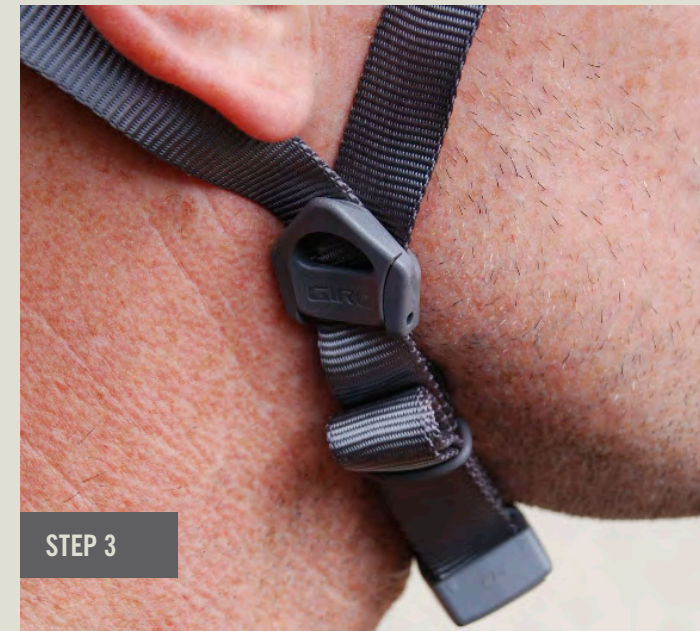
STEP 2



STEP 4 - Adjusting the Circumference of the Fit Stabilizing System

A helmet should fit snugly on the wearer's head, so that the skin on the forehead moves slightly when the helmet is moved back and forth. It should not cause a headache or be uncomfortably tight.

To adjust the fit tension of **Roc Loc®** or **Acu Loc™** systems while the helmet is on the wearer's head, rotate the dial adjuster on the back of the system to tighten or loosen the fit as needed.



STEP 3

To adjust the fit tension of **Auto Loc™** systems you must remove the helmet, and move the snap anchor forward or back to adjust the fit as needed.

For safety reasons, we recommend that you do not attempt to adjust the fit of a helmet while you are riding.

Step 5 - Adjusting the Height of the Fit Stabilizing System (not a feature of all systems)

You can adjust the fit even more on **Roc Loc®** and **Acu Loc™** systems that offer height adjustment which allows the helmet's fore/aft tilt to be optimized. Simply slide the system's occipital pads (at the back of the helmet) up or down for comfort and best coverage. Experiment until you get a fit that is most comfortable.



STEP 4 Roc Loc®



STEP 4 Auto Loc™



STEP 5 In-Form™



STEP 5 Roc Loc 5™

Step 6 - Checking the Fit

Once you think a proper fit has been achieved, grab the helmet with both hands and twist lightly it to the left and right. If the helmet fits properly, the skin on the forehead will move as the helmet moves.

If it does not, the helmet is too loose.

Next, grab the helmet with both hands and try to remove it by rolling the helmet forward and backward. THIS IS IMPORTANT. If you can roll it off the head completely, roll it forward so far that it blocks vision, or backward far enough to expose the forehead, it doesn't fit correctly.

If you cannot adjust the helmet to fit properly according to these instructions, DO NOT USE THIS HELMET. Replace it with a different size or model.

Once you are satisfied that the helmet fits correctly and that all straps are properly adjusted and tightened, take a short test ride. Pay attention to overall comfort and helmet stability while riding. Make any minor adjustments to improve comfort and stability. If you have questions about fit, call our Consumer Service group at (800) 456-2355 or e-mail us at: feedback@giro.com.

WHAT ABOUT FIT FOR WOMEN?

While it is obvious that anatomical differences between men and women can dictate different design and fit for items worn on the body, the head and skull are somewhat unique.

When measuring men and women's heads, there is no significant difference in the skull shape, location of skull features or the scale of the ears, eyes and nose between men and women.



Based on this finding, we do not create a unique "women's fit" helmet. Instead, we offer a range of *Women's Series™* helmets in multiple sizes that provide every bit of the performance and value you expect from a Giro helmet, with attention to styling and detail that women appreciate. The result is that every female rider gets a wider choice of sizes, styles and colors to choose from, so that they can get a helmet that fits, looks and feels like it was made just for them.

Women's Series *Super Fit™* Sizes

- S 51-55 cm
- M 55-59 cm

Women's Series Size

- U Women's 50-57 cm



HELMET CARE GUIDELINES

Cleaning Helmets

Helmets are made of materials that can be damaged by many common cleaners. Petroleum-based solvents or cleaners are especially dangerous. For best results, clean the helmet using a soft cloth or sponge, warm water and mild soap (such as a mild dish soap).

Storing Helmets

Excessive heat can damage the helmet (Heat damaged helmets will appear to have uneven or bubbly surfaces). After each use allow the helmet to air dry and then store in a cool, dry place. If you have any questions as to the condition of a helmet please call us for information or to set up a free inspection.

Painting and Stickers Helmets

We strongly advise against painting, stickering or otherwise modifying a helmet because all of these modifications can damage the helmet and/or reduce its protective capabilities.

HELMET REPLACEMENT & WARRANTY

What If a Helmet Becomes Damaged?

Helmets don't last forever. If the helmet is visibly damaged (cracked outer shell, crushed or cracked foam liner or any other damage) don't use it. Some or all of the helmet's protective capacity is used up when impacted. Damage to a helmet is not always visible. If you have any questions about the condition of a helmet call us for information or to get a free inspection.

How Often Should a Helmet Be Replaced Under Normal Wear and Tear?

Giro has a general recommendation of replacing a helmet every three (3) years. If you have any questions as to the condition of your helmet please call us for information or to set up a free inspection.

What Kind of Warranty Does Giro Offer?

Any **Giro®** helmet determined by Giro to be defective in materials or workmanship within one (1) year from the date of original purchase will be repaired or replaced, at Giro's option, free of charge when received at the factory freight prepaid, together with proof of purchase. If you have questions regarding the condition of your helmet or the warranty coverage on your helmet, contact us or refer to the helmet owner's manual before sending your helmet in for inspection or replacement consideration.

Giro Customer Service

735 Pacesetter Dr.
Rantoul, IL 61866
(800) 776-5677

Online: ebsdealersupport.com