Visit Sports Trader's website for more product knowledge: www.sportstrader.co.za

Fitting a cycling helmet

Our cut-out-and-keep series to assist retailers with product knowledge

Words: Carin Hardisty. Compiled with the help of www.bergzeit.co.uk, www.consumerreports.org, www.evanscycles.com, helmets.org, and mipsprotection.com.

Our National Road Traffic Act states that it's compulsory for all cyclists to wear a helmet – and it specifically states that the helmet has to *fit* and the strap properly fastened under the chin.

Since not all heads are the same size and shape, it's important that your customer fits the helmet in store so that he can try different brands and models to get the best fit.

- A helmet should fit snug, but not be uncomfortable.
- When putting the helmet on, the head should partially compress the soft pads inside before the straps are tightened;
- It should sit level on the head and must fit correctly at the temples;
- The forehead shouldn't be exposed, therefore, as a guide, the helmet shouldn't sit higher than around 2-3cm above the eyebrows;
- It shouldn't be too loose: no more than finger width of space should be between the back of the helmet and the head.
- The front and back straps must be snug and form a V shape under and slightly forward of each earlobe;

Does the helmet fit right?

- Push the front of the helmet up firmly: if it moves back, it's too loose;
- Move the helmet side to side and front to back: the skin at the temples should wrinkle with the motion;
- Pull the back tip up over the head to the front: if the front slips down, shorten the back straps;
- Ask the customer to open his mouth halfway to test if the buckled chin strap is tight enough: the helmet should press down on the top of the head when doing so.

If the helmet is likely to be worn with a ponytail hairstyle, a hat or cap underneath, sunglasses, etc. it should be fitted while wearing these to ensure optimal fit and that these won't cause pressure to the head. Some helmets are designed to accommodate ponytails.

Straps can become looser over time so recommend to your customer that he checks the helmet's fit each time before he heads out for a ride by wiggling the helmet – if it moves around he should tighten the straps again and make sure they fit as above.

Different construction

In-mold: a hard plastic outer shell that is relatively thin, but can stop minor penetrations, and EPS (expanded polystyrene) foam inners that compress on impact and distributes the force over a wider area and dissipates it;

- A lightweight, sleek design with good ventilation options.
- Most often used.

Hard shell: the EPS inner shell and outer shell are two separate components that are connected in specific areas;

- The closed outer shell protects more against penetration from sharp objects;
- Not used as often as in-mold.

Many helmets now feature the MIPS (Multi-directional Impact Protection System) technology, which allows the inner and outer shell to move independently of each other. This reduces how much energy is transferred to the head and lowers the rotational force (thought to be a factor in concussions).

Depending on the helmet construction, MIPS is incorporated into the helmet as either a low friction, interface layer coated with Teflon on the outer shell and liner, or a layer inside the helmet.

Photo: Omnico SA.

Match the helmet to the activity

The type of cycling that your customer intends to use the helmet for makes a difference in the kind of helmet he might need.

- **Commuter:** the brighter the colour, the more likely the cyclist is to be seen by other road users.
  - Some helmets feature reflective elements, which will be handy in low light conditions.
- **Speed road cycling:** a lightweight helmet will decrease the strain on the neck during long rides at high speeds when cycling more aggressively.
  - Aerodynamic shape to shave seconds off his time.
  - Air vents to cool him down.
  - Usually don't use visors as they wear sunglasses and/or cycling caps to protect the eyes. A visor could also obstruct the cyclist's view if he has a more aggressive style of riding.
- **MTB:** when a MTBer falls, it'll be onto rough terrain littered with items such as stones, branches, etc. so he needs more head coverage. Thus, the helmet will also have fewer air vents through which these can stick into and hurt the head. Visors also shield the face from low hanging obstructions.
  - These helmets usually feature visors as sunglasses can make denser tree-covered areas too dark and tricky to safely navigate through. MTBers also sit more upright so visors don't obstruct their vision.
- **Downhill and extreme off-road cycling:** they need full-face helmets that include a chin piece and visor, which not only protect from the sun, but also from mud splashing into the face and eyes and hindering vision.
  - These are heavier and less ventilated.
- **Urban helmets** (old-style round helmets):
  - Doesn't offer much ventilation.
  - This style is often worn by freestyle or BMX cyclists. Some commuters also wear this, but it'll be more about the look.

When to replace a helmet

- If it's been in any kind of accident – if it appears damaged or not. The foam is *damaged* and won't work as needed if there's a second accident.
- After four or five years; sooner if it's been damaged. Over time the helmet is subjected to UV radiation and temperature fluctuations that can affect the materials.