

## How to Buy a Motorcycle Helmet

There is much to know before you select the only piece of apparel that is likely to save your life. Arm yourself before shopping. By **Art Friedman**



*You can find helmets, like this Nolan, offering all sorts of features, but you may not want or need them all.*

For a new rider, buying a helmet may be more daunting than choosing a bike. Unless he or she has studied the subject, asked a lot of people for information, and done some window shopping, the matter may be an afterthought at the end of a bike sale or something that you have to rush to get done before riding the used bike you are buying. As a result, you may simply buy a helmet that looks like you want it to or one that the dealer suggests. Doing so can make your riding experience substantially less enjoyable than if you get a helmet that works properly on your head.

Even an experienced rider who is just replacing an old helmet may find the process intimidating and difficult. Dealers may not carry the make, model or size you are interested in. You may not even be sure what size to ask for. Friends may offer advice about fit or comfort that isn't true in your case because your head is different. There is a maze of certifications and features that you aren't sure about. You might have specific graphic requirements in mind. And you don't know which ones offer the best protection.

### **Why Bother?**



*The April 2003 issue of Motorcycle Cruiser included a comparison of modular (or flip-up) helmets, including this Arrow. Photo by Jim Brown.*

Let's stop and discuss the claims that you are more likely to get in an accident if you are wearing a helmet. All studies of the matter from U.S. and other places in the world, indicate that riders who wear helmets crash less frequently and suffer fewer injuries and deaths if they do crash. They are less likely to suffer long-term or permanent disablement caused by head or neck injuries. A helmet that meets the D.O.T. standard offers significant protection if you crash. By cutting down ambient wind noise, helmets can actually help you hear other sounds better. By reducing fatigue from the wind, they keep you more alert. By protecting your eyes from the wind, they allow you to see better. A full-face helmet can keep you from being distracted when a large insect hits your face. And if you bright a bright-colored visible one, you will be more conspicuous in traffic, making it easier for other motorists to see and avoid you.

To aid in your quest for the best helmet for you, we have compiled the following guide, organized into ten steps, starting with the most important steps first and moving on to lesser considerations.

If you are looking for a modular or flip-face helmet, see the [comparison of seven of them](#) in the [Accessories and Gear](#) section of [MotorcycleCruiser.com](http://MotorcycleCruiser.com).

## 1. DOT Certification



*Helmets are tested in facilities such as the Head Protection Research Laboratory shown here. Drop tests with an instrumented head form measure a helmet's ability to absorb energy in a crash. Photo by Art Friedman.*

A helmet is of no use if it doesn't provide protection, and that D.O.T. (U.S. Department of Transportation) sticker on the back is your assurance that when the day comes, the helmet will perform. The D.O.T. standard (officially designated Federal Motor Vehicle Safety Standard no. 218) requires, among other things, that a helmet soak up a significant amount of impact energy, prevent most penetration, and have a fastening system that will withstand significant force.

The D.O.T. standard works like this. If the manufacturer certifies that its helmet passes the D.O.T standard, it can make and sell that helmet with a D.O.T. sticker. The division of the Department responsible for such things periodically buys helmets and send them to independent labs for testing to confirm that they actually do meet the standard. The D.O.T. posts the results on its website in a pass/fail form. A helmet that fails can fail for performance (it allowed too much energy through in the impact testing or the chin strap failed), which the buyer should be concerned with or for labeling (which isn't likely to matter to the buyer). The results may be found at the [NHTSA site](#).



*Though this Harley helmet looks like a novelty helmet, it is actually built to DOT standards and will provide significant protection in the area that it covers. With any shorty helmet, it is essential that you perform the roll-off test discussed here.*

You can make a case that it's worth getting a helmet that meets some of the other standards, notably those of the Snell Foundation. For one thing, when a manufacturer has gone the distance to meet both D.O.T. and Snell, it has usually made the effort to provide other features and benefits. However, the difference between the protection offered by a "novelty" helmet that does not meet any standards and a basic D.O.T. helmet is huge--the difference between life and death or the difference between animal and vegetable--while the difference between a D.O.T. helmet and a Snell helmet (which also meets D.O.T. requirements) is comparatively minor.

However, an increasing number of helmet experts say that you are best off with a helmet that meets D.O.T. only, that is, a helmet that doesn't meet any other standards. For a complete discussion of this issue, see [this Motorcyclist Online article discussing head protection and standards](#) by our sister magazine.

The Snell Memorial Foundation has useful information for helmet buyers on [its website](#).

There are many differences between phony helmets and real D.O.T.-blessed types, but one of the most important is the use of an expanded polystyrene (EPS) foam liner (which resembles Styrofoam) inside a real helmet. It is the EPS that actually absorbs the energy of an impact. In doing so, it gets crushed, and unlike the foam-rubber comfort liner, it is non-resilient. Once crushed, it has lost its energy-absorbing capability, which is why a helmet should be replaced once you taken a hit in it. Look for the EPS liner if you have any doubts about the helmet being a genuine D.O.T.-compliant model.

## 2. Retention



*An essential test before buying or using a helmet, is the roll-off test. With the strap securely fastened, grab the rear lip of the helmet and try to roll it forward off your head. Don't stop just because it hurts a bit. If it comes off, you need a different helmet.* Photo by Art Friedman

A helmet is also no good if it doesn't stay on when you get off unexpectedly. You should check if the helmet you are trying on will

stay on your head using a simple test. Fasten the strap snugly (you should feel some force on your chin). Then grab the rear of the helmet and try to lift it up and roll it forward off your head. Even when it hurts, you should not be able to get the helmet off. This is more likely to be an issue on half helmets or open-face helmets, but we have seen some full-coverage chinbar-style helmets that failed this roll-off test on some riders. Motorcycle Cruiser's own Andy Cherney has a head shape that many helmets can roll off of, so he needs to be certain that the helmet will stay on his head by using this test whenever he gets new one. On most helmets, the strap will fasten by passing through two D-rings. Though there have been a number of quick-fasten buckles and other ideas introduced over the years, we think this remains the most effective, convenient and comfortable fastening system.

The Feds are looking at revising the standards to include standards for roll-off prevention, but the only standard that matters will continue to be whether you can pull a fastened helmet off your own head.

### 3. Fit



*A full-face or open-face helmet should grip the cheeks slightly as well as the rest of the head. This one looks a little large.* Photo by Art Friedman.

Part of retention is fit. Most helmets come with advice for fit and sizing. Most dealer accessory-sales personnel also have some training in fitting a helmet. Basically, the helmet should fit snugly so that it is stable when you shake your head side-to-side, front-to-back or up and down. A full-face helmet should grip your cheeks and jaw as well as the top and sides of your head. A helmet that is too loose may come off in a crash, and one that is too tight will be uncomfortable (see the next section for more detail). If it only contacts the top of your head, that will soon become uncomfortable. Proper fit means that it is snug enough that your skin moves with it when you try to move the helmet on your head.

The fact that you wear a Medium in one brand and model does not mean that another model will fit you best in the same size. Though my preferred helmet is size L, I need an XL in another model from the same maker and occasionally find a Medium that fits comfortably too.

#### 4. Comfort



*Arai's Renegade is a favorite of some of Motorcycle Cruiser's staff members for its comfort.*

A helmet ranks with a motorcycle's saddle among the factors that can make a long ride enjoyable or turn it into agony. If you take the time and effort to find the most comfortable helmet for your head, it will be paid back manifold by making long rides more enjoyable and comfortable (even more comfortable than riding with no helmet at all). Comfort can be tricky to determine, but might make the difference between loving and hating your helmet, so we will spend some space to discuss it. The buyer should take time to assure that his new helmet is comfortable.

Some people claim that there is no such thing as a comfortable helmet. We once experimented with such a rider and were able to make a believer out of him by providing a large (40 models) selection of helmets that he could choose from and letting him try as many as he liked. Although the ones he was initially drawn to confirmed his belief, soon he found some that were comfortable. He begrudgingly admitted that a top-shelf chinbar-type helmet, which not surprisingly was an Arai, was quite comfortable. We sent him out to ride for a couple of weeks with it, and though he initially thought it felt claustrophobic, he soon became a believer. He purchased one (with a color scheme that suited his tastes) soon after and has ridden with the same brand and style since.



*This Lazer Century modular helmet displays some of the items involved in making a helmet comfortable. The soft-foam comfort liner and the way in colds your head and ears is vital. Venting plays a part, and features like the chin dam, intended to reduce wind noise, can also help. Photo by Jim Brown.*

This rider's experiences confirmed several things. First, it shows again that virtually anybody can find a truly comfortable helmet if he or she takes the time to try more than one or two on, but that it often won't be a cheap one. It confirmed that full-face helmets are usually the most comfortable, although some riders may find better comfort in open-face helmets. (We don't know of anybody who has approached the situation with a completely open mind and the opportunity to try a lot of helmets and then said that a shorty (or half helmet is more comfortable on a long ride.) It reinforced that many riders, even experienced ones, simply have never had a chance to try enough helmets to discover one that fits. It may take trips to several dealers to find the size, make and model that works for your head. It also confirmed that the well-known brands are ones most likely to be the most comfortable.

From my experience conducting helmet comparisons at sister magazine [Motorcyclist](#), the full-face helmet brand that best suits the most people is Arai. The company makes several models with different shapes that fit different heads. It also offers interchangeable cheek pads in many models to accommodate different cheek shapes. Almost as popular is Shoei (which tends to fit me personally better than Arai or other brands). Other brands that fit most comfortably for some of our riders are AGV, Nolan, FM, HJC, and Bieffe. However, the helmet market is not stagnant. Models are constantly being revised and upgraded. A new version of a helmet that didn't fit comfortably before may change to work perfectly it is updated form. It may also go the other way. For example, I liked the Shoei RF-200 quite well, but the RF-700 was a slight step back in comfort. The next generation, the RF-900, fits better than either of the others. Other makers, some that were once regarded as just budget helmet makers, have made strides and are building very good helmets at the tops of their lines now. The market shifts and the brands that were most comfortable last time you

shopped might not be the best any more, while the brands that were not worthy of consideration five years ago have sometimes made great strides.



*There are an increasing number of unique and thoughtful details being included in helmets recently. This Schubert Concept, for example, includes a small compartment with first-aid and helmet-removal instructions (which could be important on a modular helmet with its hinged and latched face section). Photo by Jim Brown.*

General factors that seem to make a comfortable helmet are plenty of comfort padding (the soft foam-rubber padding that touches your head), a good seal around the ear (but not on the ear itself), a neck roll that nestles against the back of your head and neck and an absence of protruding components (most often caused by shield mechanisms or strap attachments) inside.

A helmet that fits well might be tight as you pull it on because the foam components that seal out the wind noise should be smaller than the inside of the helmet. If a helmet pulls on too easily without resistance of such padding, it will probably be noisy and may not fit snugly enough to stay put. Slightly snug is better than too loose, since the interior will tend to settle and compress a bit, molding to your head. If it moves around when you nod your head vigorously, it's probably too loose.

When trying on a helmet, don't just pull it on and take it right back off. Pull it on and position it properly (which normally means so that you can use the top of the face or eye opening as a small sun visor). The helmet should stay in position even without the strap secured. Fasten the strap and leave the helmet on your head for a while. Fifteen or 20 minutes is a good test. Let it settle in. There should be no pressure points. These usually seem to occur around the crown or in the forehead. The helmet should provide even pressure all the way around with no hard points. Your ears shouldn't be pressed, but if your ears are sealed in a bit and sounds around you diminish, that is fine. This

will help block wind noise, which will protect your hearing and actually help you to pick out other more important noises.

One of the advantages of developing a relationship with a motorcycle dealer is that he may let you ride with a helmet that you are considering buying. If you have this opportunity, take it. Alternately ask if you can bring the helmet back, say within 30 minutes or an hour for a refund. (Better do it on a day when you skipped the cologne.) A test ride can reveal many things about wind noise, pressure at speeds, how engine noise comes into the helmet, etc. Some helmets may be noisier behind your windshield or have some other issue that only arises when they are on you while you are on your bike. The Arai Renegade, one of the most popular helmets among *Motorcycle Cruiser* staffers, fit me very well when I tried it on, and looked like it had a shot at becoming my favorite helmet. But when I rode with it, there was some air movement and wind noise that bothered me slightly. Other staffers don't have this issue, so it is just my particular head, but the ride would have provided a critical bit of information if I'd been planning to buy.



*That DOT sticker is pretty solid assurance that the helmet will provide good protection when you need it. Snell certification involves an added layer of testing and quality.* Photo by Art Friedman.

Should weight be an issue? A heavy helmet does not seem to have any safety drawbacks (and it may have an advantage if the weight is in extra energy-absorbing EPS padding). Perhaps because I have been wearing helmets since they all were heavy, I have never noticed weight. Even the porky Simpson helmets we tried a few years ago didn't seem weighty to me (but perhaps it was all the other distractions they created). I have noticed that heavy helmets tend to be steadier on bikes where the windshield causes buffeting. For those who want a light helmet, there are some surprisingly light helmets out there, even with full coverage, but I think weight is probably less important than other factors and can actually be an asset.

You may hear someone say that heavy helmets (or even all helmets) are likely to cause neck injuries. This is not true. In fact, just the opposite is true. Helmeted riders suffer fewer neck injuries.

Before settling on one helmet, try on a lot of different brands and models. If one brand seems to be comfortable, try other models from that range for similar shapes with slightly different interiors.

## 5. Coverage



*Full-coverage helmets, such as this Arai, offer maximum protection and other advantages, such as integrated eye protection.*

This is definitely a case of more being better. A full-coverage open-face helmet offers better coverage than a shorty (or half helmet) and a full-face helmet (i.e., one with a chinbar) provides more protection than an open-face style.

A recent study (January 2003 issue of "Annals of Emergency Medicine") found that motorcyclists with facial injuries are 3.5 times more likely to have a brain injury and those with facial fractures are 6.5 times more likely to have such injuries than those without facial damage. The study, conducted at the UCLA School of Public Health in Los Angeles, California with Dr. Jess Kraus as lead author looked at 5790 motorcyclists injured in crashes and reported that one in four had facial injuries with 411 sustaining facial fractures. It makes a strong case for getting the most possible coverage from your helmet.

Look for a helmet that provides not only more shell coverage but also more coverage from the EPS liner (the hard Styrofoam-type foam) inside, since it's the EPS that actually absorbs the energy of an impact. Some helmets just cover the minimum mandated area with EPS. Others line the entire shell with it. The EPS should extend to the chinbar if the helmet has one.

Somewhere between the full-coverage helmets and the open-face helmets are those with flip-up facial sections, called "modular," "system" and flip-face helmets, which offer advantages of both kinds. We tested seven modular helmets for the April 2003 issue of *Motorcycle Cruiser*.

Does facial coverage make any difference? Consider going jaw-first into the back of a car, and remember where your jawbone will end up if it gets pushed up into your head.

## 6. Faceshield



*Open-face helmets, such as this KBC, offer good protection but don't cover the face, which leaves the rider less claustrophobic but more exposed. It includes a vent.*

If you are buying a helmet with a faceshield, the shield probably has certification info molded into it, as all quality shields that we have seen do. The relevant standards are VESC-8 and ANSI Z-87. Snell-certified helmets also have meet the Sneff Foundation's faceshield standards. The shield should seal all the way around the edges of the helmet opening and be easy to operate and stay in position when raised. While you are trying the helmet on, close the shield and look for signs of optical distortion (such as straight lines that get curvy). If you note distortion anywhere near your normal line of sight, you should probably select a different helmet. Distortion is rare these days but can be quite annoying and tiring on long rides. Unfortunately, quality faceshields have gotten quite expensive, but the good news is that they resist scratching and are much more durable, so that the cost stretched over several years is about the same or perhaps even lower. In any event, the shield should resist scratching. Most offer UV protection. The best shield mechanism designs have provisions to crack the shield open to prevent fogging and to change without tools. I can quickly change shields on my favored Shoei RF900 without taking the helmet off my head. A simple screw pivot, once the standard, is now pretty outdated and inconvenient and is likely to break or back out.

An extra faceshield (a tinted one to complement the standard clear) is a nice feature. You might want to buy one if it is not included. And ask about availability of shields.

## 7. Convenience features



*Shoei's quick-change faceshield mechanism allows quick, simple changes. The unique Troy Lee-designed paint scheme adds significantly to the cost. Photo by Jim Brown.*

An extra shield and a quick-change faceshield mechanism are the best convenience features. A storage bag is useful and some can even help you carry a spare helmet on your bike, though you can purchase bags for this purpose from other sources too.

Some helmets have features to help you fasten the strap or to secure the strap's end when it is fastened to prevent the strap from flapping, which can be quite uncomfortable. If your state requires a reflective patch on the helmet, that should be included with the helmet. A variety of other features, such as a breath guard, may make your helmet more convenient. And, as is the case for large-nosed wearers who buy helmets with these breath deflectors, the features should be easy to eliminate if they prove inconvenient. Padding that can be removed and washed is a nice feature, particularly if you live in a humid climate.

One not-too-obvious feature we have learned to appreciate is Nolan's scratch-resistant finish. We have seen Nolans dropped from 15 feet onto pavement without a scratch on the shell, and one we lab-tested for [our flip-face comparison](#) had only a tiny scratch after multiple impact-test drops. The other helmets in the comparison (See *Motorcycle Cruiser*, April 2003) showed the results, but not the Nolan. Other helmets with similar polycarbonate shells may be equally scratch-resistant.

## **8. Comfort features**



*Vents come in an array of locations and configurations. Top vents tend to cool your scalp, while chinbar vents clear the faceshield and cool your face.* Photo by Art Friedman.

Venting is the primary issue here. Other riders might put it a bit higher on the list, but I can't feel much difference between vented and unvented helmets. In most cases I can't even tell if the vents are open. The primary advantage I see from vented helmets is that the shields are less likely to fog. However, for those that can tell the difference, this can be an important consideration in hot weather.

Vents may have some drawbacks. For one thing, protruding scoops are particularly susceptible to damage if the helmet is dropped or scraped against something while you are carrying it. Because they intercept the wind flow, they may also create some wind noise. Some helmets with top vent scoops stick up just far enough to engage the turbulent air flowing over the top of a cruiser's windshield. With one helmet with no scoop, I didn't notice this turbulence, but it became an issue when I wore a similar helmet with a scoop.

Other comfort features you might encounter are padded straps and different, interchangeable padding shapes to fit your head shape.

## 9. Appearance



*The author's orange Shoei RF900 is hard to overlook during the day, which he appreciates in traffic.* Henny Ray Abrahms photo.

There is a mind-boggling variety of graphics available on top-shelf helmets these days, but you will pay a premium for them, and the more complex they are, the more they tend to cost. If a dealer shows you a helmet you like with complicated graphics and quotes a horrifying price, ask what it would cost in a single color. The difference is usually significant.

Before you settle on basic black, however, consider a brighter color. The Shoei RF1000 that I currently wear 97.9 percent of the time is painted a solid bright orange. When I first started wearing this color scheme, I was amazed at how aware other drivers suddenly became of my presence. Over the years I had tried spotlights, headlight modulators, and bright suits and jackets. Nothing ever had the effect that my orange orb created. If orange is a little too, er, individual, for you, other solid bright colors would probably have similar effects. Florescent colors would be good, but solid yellow, red or white will also stand out more than black or another dark color during daytime. I am also convinced that a solid color is more visible than any pattern or graphic. While a checkerboard scheme might make a large surface more eye-catching, I think a helmet is too small for these sorts of treatments to increase conspicuity.

If you want to match your bike's paint, you have several options. In some cases the manufacturer of your motorcycle will offer a helmet line color-matched to your model. Browse its website or accessory catalog to see what's available. These are often only available for a year or two after the paint scheme is introduced. Some helmet manufacturers also consciously make colors to match popular models each year. If you plan to have the helmet custom painted, a solid color, preferably basic white, is probably the best choice.

## **10. Cost**

Chances are that the helmet that fits your head the best, has the most useful features, and feels the best on your head costs substantially more than the cheapest models you tried. If the cheapest helmet you saw fits as well as or better than the pricey model and has a D.O.T. sticker, then go ahead and buy it without qualms. The protection will be comparable.

However, if you are shocked by the expense of the helmet that works the best, there are a couple of things that might get the price down. First, heed the note above about the price of graphics. Second, there may be a similar model in the same line with fewer bells and whistles. A model with less elaborate venting may cost substantially less, for example.

Yes, you can order it by mail, but if a dealer spent time and made an effort to fit you and find you a helmet, then you have an unspoken contract to buy it from him if he has or can get what you want. The dealership paid for the cost of stocking the helmet and helping you find

what you wanted. If the cost is simply out of reach, ask if the price has any room for negotiation. Don't think that your dealer doesn't notice if you come in to try on helmets then show up a week later with a new helmet of the same type that you bought elsewhere. This might be the number-one complaint I hear from dealers about customers. I suspect that customers who pull this deal pay for it somewhere else later.

Finding the right helmet may be more time-consuming than buying a bike, but it can be just as rewarding.

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[Motorcycle Helmet Quiz: Check Your Head-Protection IQ](#)  
[Seven Flip-Face Motorcycle Helmets Compared](#)

[DOT Helmet-Testing Results](#)

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