

Cold Weather Riding tips

The cold weather motorcycle riding season is just around the corner. Here are some thoughts that might make your riding more comfortable and above all safer.

note: This is not meant to be a technical article, as aspects related to thermoregulation are way beyond the scope of this writing. But it is meant to generate thinking on managing cold-weather riding.

Why we get cold:

The main reason we get cold when riding a motorcycle, even if well dressed, is that we typically generate very little heat while sitting still on a bike. Physical exertion or movement generates heat. Sitting still on a bike does not. As an example, cross-country skiers typically wear very little clothing even in the coldest weather and still feel warm.

When we start off on a cold weather ride, we feel warm and comfortable. As the ride goes on we feel progressively colder.

We can think of our body's temperature in terms of an account in which we make deposits or withdrawals. This is very similar to a bike's electrical system (ie charge vs discharge).

Let's take the example of a bike that runs off a fully charged battery but has no external-charging source (ie no alternator).

You start on your trip with a fully charged battery. The length of time that your battery charge will last depends on the size of the against the charge and how long these draws go on for. The higher the draw the shorter the amount of time that the battery charge will last. Fewer or smaller draws will allow the charge to last longer. So far, so good.

Exactly the same thing happens when we ride in cold weather. We start off feeling comfortable or maybe slightly overheating. As we ride, we will be subject to heat loss (from wind chill). Generally speaking, how long we last before we feel cold depends on how cold the temperature is, how fast we are riding (wind chill), and how long we are riding for.

Since we have no external heat source (ie like a bike with no charging system) our body's temperature-account is continuously being drawn upon. Just like the battery voltage continuously decreasing, our body will get progressively cooler.

So what if you dress very warmly?

Dressing warmly will slow down the heat loss (cooling effect). But you will still be drawing on the account. The only difference is that it will take a little longer for you to feel cold. But if the ride is long enough, you will feel cold.

Why?

Every inch of exposed skin is a heat radiator that works on the same principle as your bike's radiator. Your neck, ears, your face (chin, cheeks, nose, eyes) even

the lower edge of your forehead (where the helmet stops) all act as heat radiators. In addition, with each exhaled breath you are losing close to 100% humidity as well as body heat. With each cold breath you take, you are cooling your system. In fact, if you do nothing else but breathe, you will eventually feel cold due to the draw on your system. Keep in mind that you are not moving around to counteract this heat loss as you would be in cross-country skiing or running. You are sitting perfectly still while exposed to a constant, heat-leaching, cold windblast.

In addition, there often is cold leakage through your clothing. Cold wind (ie 60mph and more) can penetrate some fabrics and zippers. Fabric that is essentially windproof at lower airspeeds can become permeable under pressure of wind. Providing a **wind-proof barrier** is essential.

There is also evaporative cooling that occurs as your body loses humidity. For example, your hands produce humidity inside your gloves. This humidity travels outwards to the glove surface. As evaporative cooling takes place, your gloves are cooled. This in turn cools your hands. So there are many draws on your body temperature-account, but no deposits. Soon your account is depleted and you are in danger of becoming hypothermic.

If you ride long enough with no outside source of heat, you will get cold. It's only a question of time.

This is not only a comfort issue. It's a safety issue. A cold and tense rider is not a safe rider. Situational awareness is decreased; thinking slows down, as do reflexes. Not a good thing. In addition, a tense rider expends more energy, further contributing to the downward spiral.

Going back to our example of a bike's electrical system (ie charge vs no charge), what we need is an external power source to replace the charge lost in the battery. We need the equivalent of an alternator.

For our purposes, that means the use of [heated clothing](#) to replace lost body heat.

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