**Motorcyclists warned to wear protective clothing in hot weather**

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Motorcyclists who ride in shorts and t-shirts during warm weather instead of proper protective clothing are risking serious injuries if they come off, a consultant plastic surgeon at Morriston Hospital has warned.



Pillion passengers accepting lifts while dressed in light clothing are also at high risk of injury. While it is illegal to ride without a helmet, there is no law about the clothing a motorcyclist or pillion passenger wears.

Hywel Dafydd, who works at the Welsh Centre for Burns and Plastic Surgery at the Swansea hospital is so concerned that he took part in the BBC’s *Crimewatch Roadshow* to get out the warning ahead of the hot weekend ahead when many motorcyclists will be on the road.

Using a piece of pork which he ground into roadside gravel, Hywel then carried out a studio demonstration - using a scrubbing brush and theatre instruments – to show the techniques used to clean damaged flesh ingrained with dirt and grit.

“I offered images of real injuries, but they were too graphic,” said Hywel. “So instead I used a piece of pork to help get the message across.

“In reality, the damage to human flesh can be much worse than the studio demonstration showed.

“It's simple physics - the soft and wobbly human body versus the hard gravelly road surface. Essentially what you get is an ‘abrasion’ - so, a scrape - a bit like the graze you might get on your knee if you fell over running.

“But going over 30mph the degree of tissue damage and contamination is many, many times worse - sometimes bone-deep. It can cause lifelong scarring, and it damages everything between - your muscles, tendons and nerves.

“At higher speeds, things gets even worse - soft tissues aren’t just scraped away, but are also avulsed (so, literally ripped off in chunks). Or even degloved, where the skin and muscles, although still there, have been torn away from their underlying blood supply so will die.

“As a general rule of thumb, if your skin hits the road at speed, you'll lose around a millimetre of flesh for every mile per hour above 30 you’re travelling. So at 70mph you lose around 4cms of flesh. Where your soft tissue is particularly thin - so on your ankles, elbows, wrists and face, even abrasions can end up going into bone or joint, and can mean amputation of body parts.”

Hywel said the vast majority of motorcyclists are responsible and understand the importance of wearing full protective clothing, so most hospitals – including Morriston – see only a few cases each year.

“But, the sad thing is the people who tend to get injured in this way are the occasional riders, inexperienced pillion passengers and worst of all, children.

“They might be offered a short lift home so won’t be wearing full protective clothing. The trouble is that even coming off at 20 or 30mph if you're wearing shorts, t-shirt and flip-flops can cause really nasty injuries which pose a big challenge for reconstructive surgeons and can leave the patient permanently scarred and needing multiple operations.”

He added:

“Coming off a motorbike without protective gear can mean a life-threatening injury such as punctured lungs or internal bleeding, so that has to be sorted out first.

“After that we can look at the more external wounds. In the short term, we want to minimise the risk of infection, so the priority is cleaning the wound.

“If you fell over cycling or running you could do this at home by rinsing it under running water. But as the speeds involved go up, so too does the energy with which bits of road dirt and gravel are driven into the skin and soft tissues, so rinsing alone isn’t enough.”

So, under anaesthetic, surgeons will scrub, scrape and cut the dirt and gravel out, otherwise  the debris could cause at best a ‘dirt tattoo’ or at worst a deep infection.

But wearing the correct gear will safeguard riders from most of these flesh injuries.

A protective jacket, trousers and gloves will not protect a rider from all serious injuries, but rarely will they end up with large areas of soft tissue loss, he explained. So if the rider is unlucky and takes a tumble, the protection offered by dressing safely will make it easier for broken bones to heal and the patient’s recovery will be faster.

**Ends**

You can view Hywel’s demonstration on BBC iplayer until tomorrow (29th June)

<https://www.bbc.co.uk/programmes/b0b8lc3j> 23 minutes and 45 seconds in.

Source: [Abertawe Bro Morgannwg University Health Board](http://www.abm.wales.nhs.uk/)