

What causes marathon-runners and other extreme sport enthusiasts to catch colds?

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Participants in this year's Snowdon Marathon (28 October), described as one of Europe's toughest, have been invited to help with research at Bangor University's School of Sport Health & Exercise Sciences.

Exercise physiologists at the School want to identify why some runners appear to be more susceptible to falling ill or feeling poorly after running a marathon or taking part in other [endurance](#) activities, while others remain well.

This phenomenon is well known to those participating in [endurance sports](#), and it has been explained by differences in pre-event training.

Bangor University's experts are looking in a totally different direction, and think that our psychological makeup may affect how our bodies respond to extreme endurance events- or in other words, to [stress](#).

Early tests have led the group to believe that our psychological characteristics and how we approach a race or task, can affect our [body's](#) automatic response.

Prof Neil Walsh, who leads the group working in this novel research area explains:

"While general exercise boosts the immune system, endurance events cause a brief dip in our immunity levels, post-event.

Our hunch is that the way in which our body's immune defence works during stress, like a marathon, is to some extent predictable. It could be that hard-wired psychological characteristics can predict how our bodies respond."

PhD student Sophie Harrison is leading this particular research project and explains:

"Recent research here suggest that we are on the right track. It may be that physical and psychological stresses use the same pathways and so our bodies react similarly to physical stresses as they do to emotional stresses.

We're looking at people's psychological types, and at measures of inflammation and immunity that we can trace in saliva. These will show how people's bodies are responding to the stress of the marathon. We want to see whether it would be possible to predict which individuals are more likely to feel poorly, above and beyond the stresses on their bodies after the race."

Those who have signed up to take part in the research have been completing questionnaires- and will complete more after the event. They will also be providing a saliva swab before and after the race- nothing will impair their race performance. People taking part can also take advantage of tips and early entry to next year's marathon as a thank-you.

Event organiser Jayne Lloyd said:

"As keen marathon and extreme fitness enthusiasts we are really interested in how all our competitors can improve their performance and better look after their own health while training and after taking part in endurance events such as long-distance and [marathon](#) running. So we were delighted to be able to assist with this exciting piece of research."

A better understanding of the systems involved could have wider implications for wider healthcare.

Provided by Bangor University

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