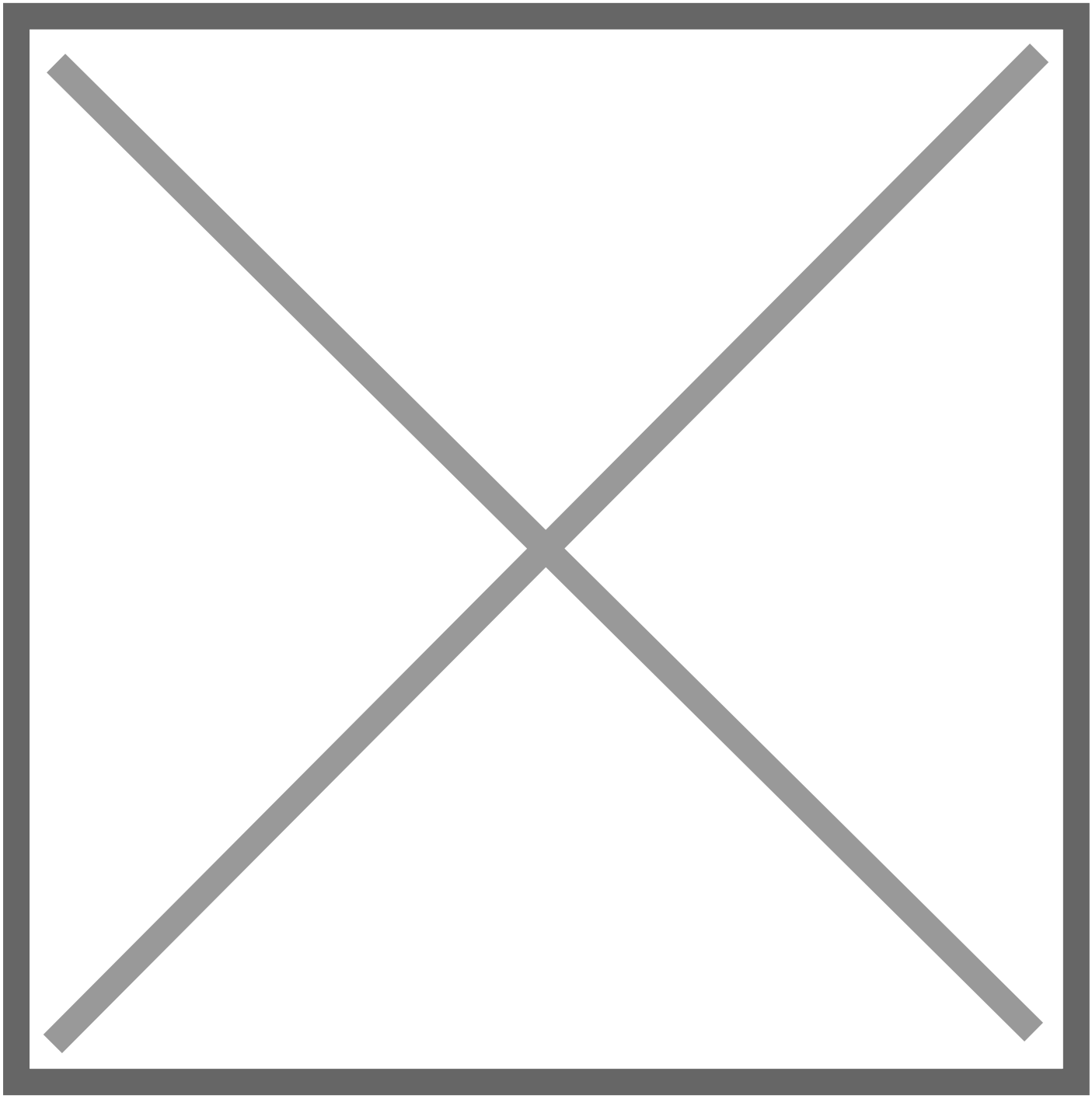
Pfizer Logo

Bodily Functions Explained: Goosebumps

Tuesday, May 2, 2017



A holdover from our prehistoric days, goosebumps are the end result of an adrenaline rush meant to ward off a big chill — or predators.

It’s a common occurrence. A sudden freezing gust of wind or spike in air conditioning causes our hair to stand on end and our skin to prickle.

If the chill is strong enough to dip your body temperature below 98.6 degrees, your skin sounds an alarm. Body muscles contract in quick bursts to generate heat and your hypothalamus triggers a rush of adrenaline. As the tiny muscles attached to each of your hairs tighten, the hairs shoot straight into the air, pulling the skin at their base upward. Goosebumps are born.

A holdover from our hominid history, goosebumps once took advantage of the generous amounts of hair our ancient ancestors had. In cold conditions, swathes of hair standing on end acted as insulation by trapping a layer of air next to skin. Each hair standing at attention also had the benefit of making our ancestors seem bigger to would-be enemies, which is why you also get goosebumps when you’re afraid. (And sometimes even when you’re experiencing other strong emotions.)

More than a million years ago, our ancestors began shedding their thick coat of hair, and goosebumps’ utility plummeted. Today, we humans have about 5 million body hairs, roughly the same as a chimp. But ours are much finer, rendering goosebumps a useless relic.

—*Johnna Rizzo*

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