



If Your Sweat Could Talk...

Athletes of all levels need to rapidly replenish fluids and electrolytes to help prevent heat illness and for optimal performance on the playing field.

Test your "Sweat IQ" and see what your sweat is telling you.

How does age affect sweating?

Even new-born babies sweat when they get hot, but the capacity for sweating increases considerably after puberty. From that time on, our ability to sweat depends mostly on our fitness and acclimation to the heat. Because fitness often declines with age, so does maximal sweat rate.

Why do we sweat when we're physically active?

The evaporation of sweat from the skin enables us to maintain a safe body temperature.

Who are better sweaters, men or women?

There is no meaningful difference in sweat response between genders. Both males and females exhibit a wide range of sweat rates.

When does our body trigger sweating?

We sweat whenever our body temperature reaches the sweat threshold, the internal temperature at which our sweat glands are triggered to secrete sweat onto the skin.

Where does sweat come from?

Sweat comes from fluid in the bloodstream, from the fluid inside our cells, and from the fluid that bathes our cells. The human body is about 65% water and we lose some of that fluid any time we sweat.

How does sweating make us thirsty?

Sweat loss reduces blood volume and increases the saltiness of the blood. Both of these changes stimulate the brain to trigger thirst.

What else is in sweat in addition to water?

Sweat contains minerals (electrolytes such as sodium, potassium, and chloride) as well as a number of other electrolytes and other compounds, but all in very small quantities.

How much sweat loss does it take to impair body function?

It takes only 1% dehydration – just 1.5 lbs of sweat loss for a 150-lb person – to begin to impair body function and exercise performance.

Where is the least concentrated area and the most concentrated area of sweat glands?

Least concentrated: the back
Most concentrated: the feet

Why is dehydration bad?

Dehydration (loss of body fluid) puts a strain on the cardiovascular system and makes it difficult for the body to maintain a safe internal temperature. Also, dehydration impairs performance.

How much sweat can an athlete lose?

Sweat loss can vary from as little as about 16 oz (about 500 ml) to over 4 quarts (liters) during each hour of exercise. That means dehydration can develop very quickly.

How does fitness affect sweating?

As we become more fit, we sweat sooner, we sweat over a larger surface area of our bodies, and we sweat more. That means we have to drink more during exercise to prevent dehydration.

Approximately how many sweat glands do our bodies have?

Our bodies have approximately 2-to-4 million sweat glands, weighing a total of approximately 100 grams (3 oz). As we become more fit, our sweat glands actually become larger in size.

What determines how much sweat is lost?

You will sweat more the harder you work, the more clothes you wear, and the hotter and more humid the environment. You also sweat more as you get into better shape. In addition, some people are genetically predisposed to higher or lower sweat rates.