



Cooperative Extension Service

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Exercise won't boost endurance?

Are you surprised by the statement in the title? I certainly was when I came across it in a recent *USA Today* article touting the latest scientific findings. But don't hang up those running shoes just yet; this attention-grabbing headline is just as silly as it sounds.

According to *USA Today*, about one in five people can train all they want but are not likely to see much improvement in their endurance levels because of their genetic makeup. The author is citing research that was able to identify specific genetic predictors of aerobic capacity, or $VO_2\max$.

So what's the problem?

To start with, this is not exactly a ground-breaking concept. We have known for many years that an individual's aerobic capacity was greatly dependent on genetics. Just add this to the laundry list of traits that we get to thank (or blame) mom and dad for. While the identification of the genetic markers in this research is certainly exciting, a little bit was lost in the translation.

$VO_2\max$ is, by definition, the marker of our aerobic capacity. However, as confusing as this may sound, $VO_2\max$ isn't a real great predictor of endurance performance. Though all elite endurance athletes have quite impressive $VO_2\max$ scores, research shows that the differences between them have little to do with actual performance.

While aerobic capacity certainly plays an important role, things like muscular efficiency and efficiency of movement are also major contributors to endurance performance. And though genetics will play in here as well, these factors have been shown to be highly trainable—meaning (gasp!) that exercise *will* boost endurance.

Further, we have not yet considered the enormous role of motivation and other psychological factors on performance. Any elite athlete will attest to the importance of mental toughness—as the great Yogi Berra once said, “90% of the game is half mental”. Though his math skills were questionable, Yogi knew that athletic success demanded far more than physical genetics.

And for the rest of you that are more interested in general health than performance: don't worry, scientists haven't changed their minds here either. While you may not be genetically predisposed to compete in the next Tour de France there are still an abundance of health benefits associated with regular exercise or better yet, a physically active lifestyle. For adults, the recommendation is 2 ½ hours/week, which can be reached by being active just 25 minutes/day!

As with the saying “If it sounds too good to be true...” also remember “if it sounds too *bad* to be true...”. Don't let media hype confuse you about the real benefits of living an active lifestyle. *Kentz Willis, M.S., is the University Extension Educator in Nutrition and Food Safety for Northeast Wyoming. He can be reached via email at kwillis3@uwyo.edu.*