

Endurance training triggers wide variety of changes in gene activity

The physiological impact of regular endurance training can be visualized over time and is often used to prevent cardiovascular disease, diabetes, obesity and other such conditions. However, how these changes occur at the molecular level and their impact on a genomic scale lack complete resolution.

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The Swedish researchers [at the Karolinska Institutet] were able to analyze RNA in muscle tissue before and after endurance training. They found approximately 3400 RNA variants, associated with 2600 genes, that changed in response to training. One implication...is that exercise can induce the same gene to increase the production of one RNA variant and reduce that of another...[T]his can mean that genes can change function as a result of exercise and...start to promote the production of certain protein variants over others.

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"It has not been previously shown that training changes the expression of genes in this particular way," explained...Maléne Lindholm [from] Karolinska Institutet..."The study also provides new basic information about how the body adapts to regular endurance training and what role many of our genes play in the adaptation."

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: [Endurance Training Causes Widespread Genetic Changes](#)