

Review study explores causes of physical inactivity

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A new review of more than 500 studies examines the environmental and physiological causes of physical inactivity and the role it plays in the development of chronic disease. The article is published in *Physiological Reviews*.

"Physical inactivity is an actual cause of over 35 [chronic diseases](#) [and] conditions, with evidence from studies that physically inactive groups have increased prevalence," wrote the research team that conducted the literature review. The researchers were from the University of Missouri, University of Kansas Medical Center and VA Greater Los Angeles Healthcare System. The World Health Organization reports that the combination of sedentary behavior and poor diet is the second leading cause of death in the U.S. Additionally, 86 percent of people in the U.S. fail to meet recommended guidelines for daily exercise—a phenomenon that has been on an upward curve since the advent of "power-driven machines and motorized transportation," the researchers noted.

People who are not active may be up to 50 percent more likely to develop conditions that are considered major causes of death, such as heart disease, type 2 diabetes and Alzheimer's disease. In addition, prolonged inactivity affects numerous bodily functions, such as:

- cardiovascular fitness;
- bone density;
- nervous system function;
- muscle strength; and

- cognition.

Among other findings, the reviewed studies showed that [inactivity](#) and activity operate on different molecular pathways. Understanding these differences, the researchers explained, may help pave the way for better, more personalized prevention tools and treatment options—including individualized exercise prescriptions, medications and targeted gene therapy.

"It is important that the public understand that [physical inactivity](#) itself is underappreciated in the toll it takes on the health, quality of life and [health care costs](#) of U.S. citizens and individuals around the world," the research team wrote. "By increasing [physical activity levels](#) in children and adults, we can ameliorate the physical, emotional and economic burden that occurs among inactive people in our society."

More information: Frank W. Booth et al. Role of Inactivity in Chronic Diseases: Evolutionary Insight and Pathophysiological Mechanisms, *Physiological Reviews* (2017). [DOI: 10.1152/physrev.00019.2016](#)

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