

Hitting the gym may help men avoid diet-induced erectile dysfunction

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Obesity continues to plague the U.S. and now extends to much of the rest of the world. One probable reason for this growing health problem is more people worldwide eating the so-called Western diet, which contains high levels of saturated fat, omega-6 polyunsaturated fatty acids (the type of fat found in vegetable oil), and added sugar. Researchers have long known that this pattern of consumption, as well as the weight gain it often causes, contributes to a wide range of other health problems including erectile dysfunction and heart disease. Other than changing eating patterns, researchers haven't discovered an effective way to avoid these problems.

Searching for a solution, Christopher Wingard and his colleagues at East Carolina University used rats put on a "junk food" diet to test the effects of [aerobic exercise](#). They found that exercise effectively improved both erectile dysfunction and the function of vessels that [supply blood](#) to the heart.

The article is entitled "Exercise Prevents Western-Diet Associated Erectile Dysfunction and Coronary Artery Endothelial Dysfunction: Response to Acute Apocynin and Sepiapterin Treatment." It appears in the online edition of the *American Journal of Physiology: Regulatory, Integrative, and Comparative Physiology*, published by the American Physiological Society. The article is [online](#).

Methodology

For 12 weeks, the researchers fed a group of rats chow that reflected the Western diet, high in sugar and with nearly half its calories from fat. Another group of rats ate a healthy standard rat chow instead. Half of the animals in each group exercised five days a week, running intervals on a treadmill.

At the end of the 12 weeks, anesthetized animals' erectile function was assessed by electrically stimulating the cavernosal nerve, which causes an increase in penile blood flow and produces an erection. The researchers also examined the rats' coronary arteries to see how they too responded to agents that would relax them and maintain blood flow to the heart, an indicator of heart health.

Results

The findings showed that rats who ate the Western diet but stayed sedentary developed erectile dysfunction and poorly relaxing coronary arteries. However, those who ate the diet but exercised were able to stave off these problems.

Animals who ate the healthy chow were largely able to avoid both erectile dysfunction and [coronary artery](#) dysfunction.

Importance of the Findings

These findings may suggest that exercise could be a potent tool for fighting the adverse effects of the Western diet as long as the subjects remained very active over the course of consuming this type of diet, the authors say. Whether exercise would still be effective in reversing any vascular problems after a lifetime of consuming a Western diet is still unknown.

"The finding that exercise prevents Western diet-associated erectile dysfunction and coronary artery disease progression translates to an intensively active lifestyle throughout the duration of the 'junk food' diet," the authors say. "It remains to be seen if a moderately active lifestyle, or an active lifestyle initiated after a prolonged duration of a sedentary lifestyle combined with a 'junk food' diet is effective at reversing functional impairment."

Provided by American Physiological Society

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