

Prolonged TV viewing linked to increased risk of type 2 diabetes, cardiovascular disease

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Watching television is the most common daily activity apart from work and sleep in many parts of the world, but it is time for people to change their viewing habits. According to a new study from Harvard School of Public Health (HSPH) researchers, prolonged TV viewing was associated with increased risk of type 2 diabetes, cardiovascular disease, and premature death.

The study appears in the June 15, 2011, edition of the [Journal of the American Medical Association](#).

"The message is simple. Cutting back on TV watching can significantly reduce risk of [type 2 diabetes](#), [heart disease](#), and premature mortality," said senior author Frank Hu, professor of nutrition and epidemiology at HSPH. "We should not only promote increasing [physical activity levels](#) but also reduce sedentary behaviors, especially prolonged TV watching," said Hu.

Many people around the world divide their days largely between working, sleeping, and [watching television](#), according to the researchers. Europeans spend an average of 40 percent of their daily free time in front of the television set; Australians, 50 percent. This corresponds to three to four hours of daily viewing — still less than a reported average of five hours in the U.S. The negative health effects of TV viewing have been documented in prior studies, including associations with reduced physical activity levels and unhealthy diets.

Hu and first author Anders Grøntved, a doctoral student and visiting researcher in the HSPH Department of Nutrition, conducted a meta-analysis, a systematic assessment of all published studies from 1970 to 2011 that linked TV viewing with increased risk of type 2 diabetes, cardiovascular disease, and [premature death](#). Eight large prospective cohort studies from the United States, Europe, and Australia met the researchers' criteria and were included in the meta-analysis.

The results showed that more than two hours of TV viewing per day increased risk of type 2 diabetes and cardiovascular disease, and more than three hours of daily viewing increased risk of premature death. For each additional two hours of TV viewing per day, the risk of type 2 diabetes, cardiovascular disease, and [premature mortality](#) increased by 20, 15, and 13 percent respectively. Based on disease incidence in the United States, Hu and Grøntved estimated that among 100,000 individuals per year, each 2-hour increment in TV viewing per day was associated with 176 new cases of type 2 diabetes, 38 new cases of fatal cardiovascular disease, and 104 new cases of all-cause mortality.

Hu and Grøntved found that the effect of prolonged television viewing on type 2 diabetes, which usually occurs in adults, was to some extent explained by the unfavorable influence of TV viewing on obesity. Obesity is related to unhealthy eating habits and low activity levels, major risk factors for both type 2 diabetes and cardiovascular disease.

Limitations to the meta-analysis included the relatively small number of studies and that the assessment of [TV viewing](#) was self-reported by participants. In addition, the majority of the studies did not assess the role of diet and physical activity in explaining the adverse effects of TV watching on chronic disease risk.

"Sedentary lifestyle, especially prolonged TV watching, is clearly an important and modifiable risk factor for type 2 diabetes and

[cardiovascular disease](#)," said Grøntved. "Future research should also look into the effects of extensive use of new media devices on energy balance and chronic disease risk."

More information: "Television Viewing and Risk of Type 2 Diabetes, Cardiovascular Disease, and All-Cause Mortality: A Meta-Analysis," Anders Grøntved, Frank B. Hu, Journal of the American Medical Association, June 15, 2011.

Provided by Harvard School of Public Health

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