

Losing weight lowered levels of proteins associated with tumor growth

July 14 2016

Overweight or obese women who lost weight through diet or a combination of diet and exercise also significantly lowered levels of proteins in the blood that help certain tumors grow, according to a Fred Hutchinson Cancer Research Center study published July 14 in *Cancer Research*, a journal of the American Association for Cancer Research.

Two study leaders - Dr. Catherine Duggan, principal staff scientist in the Public Health Sciences Division, and Dr. Anne McTiernan, cancer prevention researcher in the Public Health Sciences Division and the article's senior author - are available to provide details on the study and its implications.

The study:

- Measured three proteins that are known to enhance tumor-related angiogenesis - the formation of blood vessels that feed tumors and enable them to grow.
- Was intended to see how cancer-promoting proteins changed when overweight, sedentary, postmenopausal women lost weight through diet or diet and exercise over the course of a year.
- Enrolled 439 healthy women (they did not have cancer), placing each participant in one of four study arms:
 - Calorie- and fat-restricted diet.
 - Aerobic exercise five days a week.
 - Combined diet and exercise.
 - Control (no intervention).

- Found that women in the diet arm and the [diet](#) and exercise arm lost more weight and had significantly lower levels of angiogenesis-related proteins, compared with [women](#) in the exercise-only arm and the control arm.

The authors said that it is known that being overweight and having a sedentary lifestyle are associated with increased risk for developing certain cancers, but the reasons for this relationship are not clear.

This study shows that weight loss may be a safe and effective way to improve the "angiogenic profile" of healthy individuals, meaning they would have lower blood levels of [cancer](#)-promoting proteins. Although the researchers cannot say for certain that this would impact the growth of tumors, they believe there could be an association between reduced [protein](#) levels and a less favorable environment for tumor growth.

Provided by Fred Hutchinson Cancer Research Center

Citation: Losing weight lowered levels of proteins associated with tumor growth (2016, July 14) retrieved 19 April 2024 from <https://medicalxpress.com/news/2016-07-weight-lowered-proteins-tumor-growth.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.