

Eating smart: Researcher studies foods, dietary supplements that may reduce risk of prostate cancer

January 23 2012

A Kansas State University professor is turning to nutrition to tackle prostate cancer.

Brian Lindshield, assistant professor of [human nutrition](#), is helping men make more informed diet decisions by studying foods and dietary supplements that may reduce the risk of [prostate cancer](#). Prostate cancer is one of the most common forms of cancer among men in the United States.

"I'm interested in researching ways to prevent prostate cancer rather than how to treat it after a person has been diagnosed with cancer," Lindshield said.

The goal of Lindshield's research is twofold: He is performing basic studies that examine specific drugs as well as dietary supplements. His research has been supported by grants from the Johnson Cancer Research Center and the National Institute of Health Center of Biomedical Research Excellence, or COBRE, for epithelial function in health and disease.

One project focuses specifically on two drugs -- finasteride and dutasteride -- that are used to treat [benign prostatic hyperplasia](#), or BPH, which is an enlargement of the prostate. Both drugs inhibit enzymes that convert the male hormone testosterone to a more potent form, called

dihydrotestosterone, or DHT. Finasteride inhibits one of these enzymes, while dutasteride inhibits both of these enzymes.

Because these drugs inhibit DHT production, they may also prevent the development of prostate cancer. Several clinical trials have shown that both drugs decrease prostate cancer incidence, but at a cost.

"Among the men who took these drugs and still got prostate cancer, more of them had a high-grade or more aggressive prostate cancer," Lindshield said. "It's kind of a double-edged sword. These drugs can lower the risk of developing prostate cancer, but they also might lead to worse outcomes for men who do develop the disease."

That's where Lindshield's research fits in: He is comparing finasteride and dutasteride to see if one is better than the other.

"Our hypothesis is that dutasteride is a better option because it inhibits both enzymes while finasteride only inhibits one," Lindshield said.

For a second project, Lindshield is studying different [dietary supplements](#) that affect prostate cancer risk. He is focusing on extract from saw palmetto, a type of shrub that looks similar to a palm tree. Many men take saw palmetto extract because it is believed to benefit prostatic health and inhibit the same enzymes as [finasteride](#) and [dutasteride](#). But a lack of regulation and research surrounding saw palmetto has not provided clear insight into whether taking the extract is beneficial.

"The supplement market is kind of the wild world of whatever goes," Lindshield said. "It is not regulated in the United States, so many different kinds of saw palmetto extracts exist."

Lindshield wants to determine the composition of different saw palmetto

extracts and determine which ones may be most effective. So far the researchers have collected various saw palmetto extracts -- from small liquids to capsules. They are beginning to measure the active components of each of the extracts and then will look at different extracts to see if they are effective in decreasing prostate cancer.

"We want to look at how they affect growth of prostate cancer cells and inhibit the enzymes that produce DHT," Lindshield said.

While both projects are in the early stages, Lindshield hopes that they can provide insight into ways that men can reduce their risk of prostate cancer.

Provided by Kansas State University

Citation: Eating smart: Researcher studies foods, dietary supplements that may reduce risk of prostate cancer (2012, January 23) retrieved 26 April 2024 from <https://medicalxpress.com/news/2012-01-smart-foods-dietary-supplements-prostate.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.