

# Resveratrol, Powerful Protection Against Prostate Cancer -

"Resveratrol works through more than a dozen different anticancer mechanisms and selectively targets cancer cells. This single supplement modulates hormones, has several mechanisms that stop cancer cells from multiplying, and even has the ability to destroy cancer cells"

Researchers at the University of North Carolina Medical School Confirm Antioxidant Compound Found in Red Wine Fights Cancer. Researchers believe they have unlocked the mystery of how an antioxidant found in grapes and red wine fights cancer. A study published in the July edition of the journal *Cancer Research* concludes that the compound resveratrol, which acts like an antibiotic to protect grapes from fungus, may turn off a protein that guards cancer cells from cancer-fighting therapies such as chemotherapy.

The research may one day allow the compound itself to be used in cancer prevention and treatment, said Minnie Holmes-McNary, a nutritional biologist at the University of North Carolina's medical school in Chapel Hill.

"The benefit is that it certainly provides an open door for potential therapies," said Holmes-McNary, the study's lead author. That may include taking a pill similar to a vitamin supplement. The benefits of drinking a glass of red wine have been touted over the past decade after the discovery of the "French paradox" - that the French had low rates of heart disease despite high-cholesterol diets.

Studies have shown the key may be the glass or two of red table wine at dinner. A few years ago, researchers found that resveratrol kept cells from turning cancerous and stopped the spread of malignancies. Resveratrol also blocked cell inflammation, which is linked to arthritis and other diseases.

Researchers at the University of Illinois at Chicago studied the effect of a methanol soluble pinot noir red wine extract, a concentrated extract, and resveratrol from red wine on two strains of cultured cells infected with *Chlamydia pneumoniae*, a bacterium responsible for up to 30 percent of acute respiratory tract infections that has also been found to be associated with atherosclerotic plaque development and coronary heart disease. Both the concentrated pinot noir extract and the resveratrol proved to be active against the two *Chlamydia* strains.

Holmes-McNary and co-author Albert Baldwin Jr. at the medical school's Lineberger Comprehensive Cancer Center wanted to know how resveratrol kills cancer cells. The researchers used previous research by Baldwin and others that determined the protein called NF-kappa B enabled tumor cells to survive even chemotherapy. When NF-kappa B is blocked in mice - as observed last year in a study - the cancer cells were eradicated by the chemotherapy. Holmes-McNary and Baldwin tested how cultured human and animal tumor cells reacted to the resveratrol, learning that it effectively turned off the NF-kappa B cancer gene. Untreated tumors continued to thrive, Holmes-McNary said.

Discovering the mechanisms of resveratrol is important to developing the compound as a cancer-preventive agent for humans, said John Pezzuto, a University of Illinois at Chicago researcher who first reported resveratrol's link to red wine and fighting cancer in 1997.

"It's a good contribution," Pezzuto said of the study. "It seems like there are multiple mechanisms. In the end, there may be a common thread to all of them. It's like we're laying down pieces of the puzzle. This is one of those pieces."

The study, funded by the National Institutes of Health and the North Carolina chapter of the American Heart Association, also found muscadine wines contain up to seven times more resveratrol than regular wines.

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