

Cancer of the Prostate, Benign Prostatic Hypertrophy, Diet and Exercise Intervention

Professor R. James Barnard

Department of Physiological Science
University of California, 621 Charles E. Young Dr. So.
Los Angeles, CA 90095, USA
(310) 825-3794 / (310) 206-9184 (FAX)
jbarnard@physci.ucla.edu

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Kirk Hamilton: *Can you please share with us your educational background and current position?*

R. J. Barnard: I received my Ph.D. from the University of Iowa in 1968 and have been a professor of Physiological Science at UCLA since that date.

KH: *What got you interested in studying the role of diet on the growth of prostate epithelial cells?*

RJB: I have studied the roles of diet and exercise for the prevention and treatment of chronic diseases for most of my academic career. More recently we have focused on prostate cancer and decided to examine benign prostatic hyperplasia (BPH) another urinary problem seen in most older U.S. men.

KH: *How relevant are these cell's growth in response to diet change and the development of actual prostate cancer?*

RJB: The cells we used for this particular study were primary (normal) prostate epithelial cells taken from men and grown in culture. Although BPH is not a risk factor for prostate cancer many men with BPH have the same characteristics as do men with prostate cancer. We have published several papers on prostate cancer and have shown that the Pritikin Program of diet and exercise can reduce the growth and induce apoptosis (cell death) in androgen-dependent prostate cancer cell lines.

KH: *Is hyperinsulinemia a risk factor for prostate cancer? If so by what mechanism?*

RJB: Yes. Insulin itself can stimulate prostate cancer cells to grow but more importantly it induces the liver to produce insulin-like growth factor-I (IGF-I) known to stimulate growth and prevent apoptosis in many cancers.

KH: *Why did you choose the Pritikin program as a means to test this hypothesis?*

RJB: When the Pritikin Program was located in Santa Monica, California I started to study its impact on various diseases including heart disease, hypertension, diabetes and more recently cancer.

KH: *What are the specifics of the Pritikin diet that make it unique?*

RJB: The Pritikin Program includes both diet and exercise intervention. The diet is low in fat with a good ratio of omega-6 to omega-3 fatty acids and is high in fiber consisting of natural foods, whole grains, fruits and vegetables. The daily exercise includes 60 minute of aerobic activities as well as stretching and flexibility. Resistance training is also included 3 days per week.

KH: *Is it an effective diet to lower insulin levels?*

RJB: In several papers we have reported a 30-40% reduction in insulin in 3 weeks.

KH: *How were samples of prostate epithelial cells obtained?*

RJB: We purchased them from a chemical supply company.

KH: *Can you tell us about your study and the basic results?*

RJB: The results showed that when the epithelial cells were incubated with serum after the Pritikin Program the cells grew more slowly with no change in apoptosis. The men also had significant reductions in serum insulin as well as serum lipids such as cholesterol and triglycerides. These results indicate that the Pritikin Program should be effective for the prevention and treatment of BPH.

KH: *How hard was it for the participants to stay on this diet and lifestyle regimen?*

RJB: The program is easy to follow once you make a commitment to good health.

KH: *How was the patient compliance?*

RJB: It was very good as this is a residential program where the food is prepared following the Pritikin guidelines and the exercise is supervised.

KH: *Were there any side effects with this diet?*

RJB: Not really.

KH: *Who is a candidate for this type of diet and lifestyle regimen?*

RJB: Anyone who wants to be healthy is a candidate for the Pritikin Program.

KH: *How would you implement your findings into clinical reality?*

RJB: Start walking 60 minutes per day and go to **www.pritikin.com** to get the dietary guidelines and basically eat a diet of whole grains, fruits and vegetables and limit meat consumption to 3.5 oz. per day primarily as cold-water fish and chicken.

KH: *Are there other studies showing similar unrefined, high fiber plant-based diets having benefit in either preventing or enhancing the treatment of prostate cancer?*

RJB: Dr. Ornish published a clinical trial showing that a plant-based diet and daily exercise could delay the need for aggressive treatment for prostate cancer.

KH: *Do you have any further comment you would like to make on this very interesting subject?*

RJB: Not really.