

Natural or alternative therapies might offer ways to modify breast cancer risk, treat breast cancer or the side effects from cancer and cancer therapies. It is a broad area of research that includes the study of lifestyle factors, such as exercise, dietary components like anti-oxidants, and traditional medicine.

Since 1997, Susan G. Komen for the Cure has funded 72 grants, totaling more than \$22 million, focused on natural or alternative regimens. Komen for the Cure has been an avid supporter of research on dietary components and natural products for potential in chemoprevention, therapeutic, and quality of life improvements and has several active grants focusing on a variety of natural products including resveratrol, Omega-3 fatty acid, and Vitamin D.

## Nutrition and Dietary Supplements

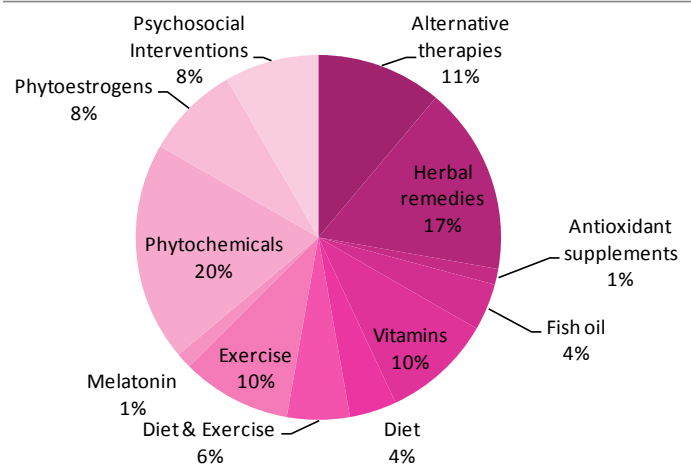
A 2010 report from the Institute of Medicine (IOM) reiterated that vitamin D is important to bone health but it remains unclear whether it has other health benefits. This is an active area of research, and a growing number of studies are looking at whether vitamin D might lower the risk of breast cancer. Three being funded by Komen are studying different aspects of the vitamin: its role in estrogen production, its affect on changes in breast tissue, and as chemoprevention when combined with celecoxib (a non-steroidal anti-inflammatory).

A Komen Promise Grant, totaling \$5 million, is studying SDG (secoisolariciniresinol diglycoside), a lignan (chemical compound) found in flax seed that may prevent or slow the growth of pre-cancerous cells. Dr. Carol Fabian, from University of Kansas at Medical Center, and Dr. Stephen Hursting, from University of Texas at Austin, are collaborating along with their colleagues on the research project which will involve a clinical trial for women at an increased risk of breast cancer. By taking SDG or a placebo (sugar pill), women participating in the trial will help researchers determine whether SDG can prevent abnormal cell growth. The researchers will also conduct

laboratory tests using different breast cancer models to see if the lignans in flax seed have comparable effects on both estrogen receptor (ER) positive and ER negative breast cancer.

Several Komen-funded projects examined particular diets, specifically of certain ethnic groups, to shed light on some of the disparities in incidence and outcomes that occur between different ethnicities. For example, Asian women have a lower incidence of breast cancer than Caucasians, and their diets often have a very high level of soy and plant based foods, which is different from the standard U.S. diet.

**Total Number of Grants by Topic**



## Body Weight and Exercise

Another area of active research is obesity and its role in cancer risk. Although many studies have linked body weight to breast cancer risk, weight affects risk for pre- and postmenopausal women differently. Before menopause, being overweight appears to decrease a woman's risk of breast cancer. After menopause, however, being overweight increases the risk by 30 to 60 percent.

The importance of exercise and maintaining a normal weight are linked to prevention of breast cancer and recurrence, as well as improved quality of life. Komen has supported 11 studies in this field from yoga and weight lifting to how body weight can influence breast cancer risk.

**Natural & Alternative Therapies – Active Grants by Topic**  
(as of February 2011)

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**Alternative Therapies**

**Michael Friedlander**

Prince of Wales Hospital Foundation  
*OVER(Olive oil Vaginal Exercise and Replens)come - an intervention study to improve sexual function*  
2006—Treatment Approaches Population Specific Research Program

**Aditya Bardia**, Fellow

**Vered Stearns**, Mentor  
Johns Hopkins University  
*A Randomized Controlled Trial Assessing the Effect of Acupuncture in Reducing Aromatase Inhibitor Associated Musculoskeletal Symptoms*  
2008—Post Doctoral Fellowship - Translational Research

**Diet and Exercise**

**John Pierce**

University of California at San Diego  
*Mechanisms For Higher Recurrence Risk In Breast Cancer Survivors*  
2010—Investigator Initiated Research

**Chi-Chen Hong**

Roswell Park Cancer Institute  
*Determinants Of Weight Gain In Women With Early Stage Breast Cancer*  
2006—Basic, Clinical and Translational Research Grant

**Fang Fang Zhang**

University of North Texas at Health Science Center  
*Energy Balance and Breast Cancer Risk in Breast Cancer Family Registry*  
2008—Career Catalyst Research

**Fish Oil or Omega-3 FA**

**Michael Grossmann**

University of Minnesota at Twin Cities  
*Calorie Restriction and Eicosapentaenoic Acid for the Inhibition of Breast Cancer*  
2008—Career Catalyst Research

**Herbals**

**Hiroshi Okuda**, Fellow

**Kounosuke Watabe**, Mentor  
Southern Illinois University School of Medicine  
*Preventive and therapeutic effects of *Cacalia delphiniifolia* on breast cancer*  
2008—Post Doctoral Fellowship - Basic Research

**Phytochemicals**

**Donato Romagnolo**

University of Arizona at Tucson  
*Epigenetic Silencing of BRCA-1 and Protective Effects of Dietary Components*  
2007—Basic, Clinical and Translational Research Grant

**Carol Fabian**

University of Kansas at Medical Center

**Stephen Hursting**

University of Texas at Austin  
*The Lignan SDG As A Prevention Strategy For Pre-Menopausal Women At High Risk For Development Of Breast Cancer*  
2010—Promise Grants

**Carl Ruby**

Rush University Medical Center  
*Enhancing Breast Cancer Immunity At Middle Age Through The Induction Of A Caloric Restriction Response*  
2010—Career Catalyst Research

**Li Tang**, Fellow

**Christine Ambrosone**, Mentor  
Roswell Park Cancer Institute  
*Interactive Effects Of Cruciferous Vegetable Intake And NAD(P)H:quinone Oxidoreductase 1 (NQO1) Functional Polymorphisms On Breast Cancer Prognosis*  
2010—Post Doctoral Fellowship - Basic Research

**Psychosocial Interventions**

**Derek Hopko**

University of Tennessee at Knoxville  
*Behavior Activation For Depressed Cancer Patients: Randomized Trial*  
2007—Basic, Clinical and Translational Research Grant

**Vitamin D**

**Glendon Zinser**

University of Cincinnati  
*Breast Adipose Bioactivates Vitamin D And Contributes To Cancer Prevention*  
2009—Career Catalyst Research

**Edward Sauter**

University of North Dakota at School of Medicine  
*Prostaglandin Inhibition to Prevent Breast Cancer*  
2008—Investigator Initiated Research

**David Feldman**

Stanford University  
*Vitamin D Actions for the Prevention and Treatment of Breast Cancer*  
2008—Investigator Initiated Research

