

Study shows high phenolic acid intake—associated with a healthy diet—is associated with reduced breast cancer risk

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New research presented at this year's European Congress on Obesity (ECO) in Glasgow, Scotland (28 April—1 May) shows that a high intake of phenolic acids—associated with a healthy diet—is associated with a decreased risk of postmenopausal breast cancer. The study is by Andrea Romanos Nanclares, University of Navarra, Pamplona, Spain, and colleagues.

A high intake of phenolic acids, including hydroxybenzoic and hydroxycinnamic acids is linked to a [healthy diet](#), with the latter being found in fruits, vegetables, cereal grains and coffee. Biological and epidemiological evidence also supports an inverse relationship between phenolic [acid](#) intake and obesity-related chronic disease. Despite this, there have been no previous studies into the relationship between phenolic acid consumption and the risk of developing postmenopausal breast [cancer](#), one of the most important and most common cancers that is linked with obesity.

The team based their research on studying Mediterranean women selected from the SUN (Seguimiento Universidad de Navarra) cohort (all university graduates). They chose a sample of 11,028 women who had completed a validated 136-item food frequency questionnaire at the beginning of the study, and during an average 11.8 years of follow-up, there were 101 cases of breast cancer among the selected group. The types and quantities of phenolic acids consumed were calculated using the reported food intake data as well as a database on the phenolic acid content of each food item.

The authors found that an inverse association existed between hydroxycinnamic acids intake and breast cancer risk, so a higher consumption of these phenolic acids was associated with lower

rates of cancer. The sample group was broken down into three groups (tertiles) according to their intake of specific types of phenolic acids, which revealed that the tertile of women with the highest consumption of hydroxycinnamic acids had a breast cancer risk 62% lower than the tertile with the lowest intake.

Chlorogenic acids; a type of hydroxycinnamic acid found in coffee, fruits, and vegetables were discovered to have the strongest inverse association with breast cancer risk. Women in the highest consumption tertile were 65% less likely to develop postmenopausal breast cancer compared to those in the lowest tertile.

The researchers conclude: "A higher intake of hydroxycinnamic acids, especially from chlorogenic acids—present in coffee, fruits and vegetables—was associated with decreased postmenopausal BC risk, possibly through reductions in adipose tissue inflammation, oxidative stress or insulin resistance."

They add: "These findings support current World Cancer Research Fund/American Institute for Cancer Research guidelines to adhere to a diet high in fruits and vegetables for cancer prevention."

Provided by European Association for the Study of Obesity

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