

What foods can help fight the risk of chronic inflammation?

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Credit: University of Liverpool

A new study by the University of Liverpool's Institute of Ageing and Chronic Disease has identified food stuffs that can help prevent chronic inflammation that contributes to many leading causes of death.

Inflammation occurs naturally in the body but when it goes wrong or goes on too long, it can trigger disease processes. Uncontrolled inflammation plays a role in many major diseases, including cancer, heart disease, diabetes and Alzheimer's disease.

Diets rich in fruits and vegetables, which contain [polyphenols](#), protect against age-related inflammation and [chronic diseases](#).

Cell-to-cell communication

Polyphenols are abundant micronutrients in our diet, and evidence for their role in the prevention of degenerative diseases such as cancer and cardiovascular diseases is already emerging. The health effects of polyphenols depend on the amount consumed and on their bioavailability.

T-cells, or T-lymphocytes, are a type of white blood cell that circulate around our bodies, scanning for cellular abnormalities and infections. They contribute to cell signalling molecules (cytokines) that aid cell-to-cell communication in immune responses and stimulate the movement of cells towards sites of inflammation, infection and trauma. Cytokines are modulated by fruit and vegetable intake.

Little is known about the relative potency of different (poly)phenols in modulating cytokine release by lymphocytes.

Pro-inflammatory mediators

The study, conducted by Sian Richardson and Dr Chris Ford from the University's Institute of Ageing and Chronic Disease, examined the different potencies of the polyphenols.

Sian Richardson, said: "The results of our study suggest that (poly)phenols derived from onions, turmeric, red grapes, green tea and açai berries may help reduce the release of pro-inflammatory mediators in people at risk of chronic [inflammation](#).

"Older people are more susceptible to [chronic inflammation](#) and as such they may benefit from supplementing their diets with isorhamnetin, resveratrol, curcumin and vanillic acid or with food sources that yield these bioactive molecules."

The study, titled 'Identification of (poly)phenol treatments that modulates the release of pro-inflammatory cytokines by human lymphocytes', has been published in the *British Journal of Nutrition*.

More information: Christopher T. Ford et al. Identification of (poly)phenol treatments that modulate the release of pro-inflammatory cytokines by human lymphocytes, *British Journal of Nutrition* (2016). [DOI: 10.1017/S0007114516000805](https://doi.org/10.1017/S0007114516000805)

Provided by University of Liverpool

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