Food processing and cancer risk in Europe: results from the prospective EPIC cohort study

Lyon, France, 7 March 2023 – A new article by scientists from the International Agency for Research on Cancer (IARC) and partners suggests that the replacement of processed and ultra-processed foods and drinks with an equal amount of minimally processed foods and drinks may reduce the risk of various cancer types. The study, published today in *The Lancet Planetary Health*,¹ was funded by Cancer Research UK and the World Cancer Research Fund International. It is based on the European Prospective Investigation into Cancer and Nutrition (EPIC) cohort study.

The scientists found that the substitution of 10% of processed foods with an equal amount of minimally processed foods was associated with reduced risks of overall cancer and specifically head and neck cancers, oesophageal squamous cell carcinoma, colon cancer, rectal cancer, hepatocellular carcinoma, and postmenopausal breast cancer. The substitution of 10% of ultra-processed foods with 10% of minimally processed foods was associated with reduced risks of head and neck cancers, colon cancer, and hepatocellular carcinoma.

“These results lend further support to the notion that the consumption of processed and ultra-processed foods may be associated with higher cancer risk, as found in previous studies,” says IARC scientist Dr Nathalie Kliemann, the lead author of the article. “More importantly, this study provides further evidence indicating that the replacement of processed and ultra-processed foods with an equal amount of minimally processed foods could be an important target of cancer prevention strategies in public health, although further research is needed to better understand the best way to achieve this kind of dietary transition.”

Over the past decades, dietary patterns have shifted from diets high in fresh and minimally processed foods towards the consumption of ultra-processed foods, which are characterized by higher energy density, the presence of food additives and processing contaminants (e.g. trans fat), and lower nutritional quality. These accelerated dietary changes have been linked to the global emergence of diet-related noncommunicable diseases.

“Food processing has long been suspected to play a role in cancer development; however, data from large-scale epidemiological studies are scarce,” says Dr Inge Huybrechts, a scientist in the Nutrition and Metabolism Branch at IARC. “These results provide important new evidence on the potential role of food processing in cancer development and can help to put in place public health nutrition policies.”

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The International Agency for Research on Cancer (IARC) is part of the World Health Organization. Its mission is to coordinate and conduct research on the causes of human cancer, the mechanisms of carcinogenesis, and to develop scientific strategies for cancer control. The Agency is involved in both epidemiological and laboratory research and disseminates scientific information through publications, meetings, courses, and fellowships. If you wish your name to be removed from our press release emailing list, please write to com@iarc.fr.