

Glucosamine may prevent deaths from cancer and other diseases



Glucosamine may form part of a healthy lifestyle, especially for smokers

INTRODUCTION

Glucosamine is dietary supplement that many people use to manage osteoarthritis and joint pain. There is some evidence that it works by reducing inflammation, a process that is involved in the development of many diseases. Some studies have suggested that taking glucosamine might help prevent cancer and cardiovascular disease.

WHAT DID THE AUTHORS HOPE TO FIND?

The authors wanted to see whether taking regular glucosamine as a dietary supplement helps prevent people dying from cancer, cardiovascular disease, or respiratory and digestive diseases. They also wanted to work out whether certain lifestyle factors such as smoking would have an effect.

WHO WAS STUDIED?

The study looked at almost half a million people in the UK. Over an average follow-up of 9 years, 19,882 deaths were recorded. This included 3,802 deaths from cardiovascular disease, 8,090 from cancer, 3,380 from respiratory disease and 1,061 from digestive diseases.

HOW WAS THE STUDY CONDUCTED?

This was a prospective cohort study conducted by the UK Biobank, which is a very large, population-based study designed to improve the prevention, diagnosis and treatment of a wide range of diseases and to promote health throughout society.

The UK Biobank recruited over 500,000 men and women aged 40–70 years between 2006 and 2010. At the start, everyone provided detailed self-reported information using a touch-screen questionnaire and a verbal interview with trained nurses. A wide range of physical measurements were collected.

WHAT WERE THE MAIN FINDINGS OF THE STUDY?

The main finding was that taking regular glucosamine is associated with a lower risk for total mortality (15%), CVD (18%), cancer mortality (6%), respiratory mortality (27%) and digestive mortality (26%). The protective effect of glucosamine use against all-cause mortality seemed to be stronger in current smokers than in people who did not smoke, or had given up.

ARE THESE FINDINGS NEW?

Yes. Although previous studies have looked at glucosamine use, this is the first study to report novel details of the association between glucosamine use and mortality, including specific disease areas and smoking status.

WHAT ARE THE LIMITATIONS OF THE STUDY?

There are some limitations to this study. The study was designed to collect information in a non-clinical setting. This means that UK Biobank did not gather detailed information about the dose, forms or duration of glucosamine use. However, this was to encourage people to be more truthful, rather than saying what they thought doctors might want to hear.

In addition, glucosamine use may be more common in people who generally have a healthier lifestyle. This type of observational study cannot distinguish the effects of a healthy lifestyle from the impact of taking regular dietary supplements. Although the study carefully adjusted for potential confounding lifestyle-related factors in the analysis, it could not exclude the possibility that the results were affected by unmeasured lifestyle factors. In general, this means that it is possible that the results were affected by other factors that were not being measured.

WHAT DO THE AUTHORS PLAN ON DOING WITH THIS INFORMATION?

This study provides a scientific basis for the potential benefit of using glucosamine supplements. More research is needed to see how dose and duration influences the results. The authors plan to explore the association between glucosamine use and the risk of specific diseases.

WHAT DOES THIS MEAN FOR ME?

Taking glucosamine supplements may reduce your chances of dying from some diseases. This is especially true if you are a smoker. There are many steps you can take to improve your overall health, including reviewing your diet and physical activity. If you are looking to make big changes, you should speak to your doctor.

Disclaimer: This is a summary of a scientific article written by a medical professional (“the Original Article”). The Summary is written to assist non medically trained readers to understand general points of the Original Article. It is supplied “as is” without any warranty. You should note that the Original Article (and Summary) may not be fully relevant nor accurate as medical science is constantly changing and errors can occur. It is therefore very important that readers not rely on the content in the Summary and consult their medical professionals for all aspects of their health care and only rely on the Summary if directed to do so by their medical professional. Please view our full Website Terms and Conditions. <http://www.bmj.com/company/legal-information/>

Date prepared: June 2020

Summary based on research article published on: 06 April 2020

From: Li Z-H, *et al.* Associations of regular glucosamine use with all-cause and cause-specific mortality: a large prospective cohort study. *Ann Rheum Dis* 2020;79:829–836. doi:10.1136/annrheumdis-2020-217176

Copyright © 2020 BMJ Publishing Group Ltd & European League Against Rheumatism. Medical professionals may print copies for their and their patients and students non commercial use. Other individuals may print a single copy for their personal, non commercial use. For other uses please contact our [Rights and Licensing Team](#).