



Cochrane
Library

Cochrane Database of Systematic Reviews

Drugs for preventing lung cancer in healthy people (Review)

Cortés-Jofré M, Rueda JR, Asenjo-Lobos C, Madrid E, Bonfill Cosp X

Cortés-Jofré M, Rueda JR, Asenjo-Lobos C, Madrid E, Bonfill Cosp X.
Drugs for preventing lung cancer in healthy people.
Cochrane Database of Systematic Reviews 2020, Issue 3. Art. No.: CD002141.
DOI: [10.1002/14651858.CD002141.pub3](https://doi.org/10.1002/14651858.CD002141.pub3).

www.cochranelibrary.com

[Intervention Review]

Drugs for preventing lung cancer in healthy people

Marcela Cortés-Jofré^{1,2}, José-Ramón Rueda³, Claudia Asenjo-Lobos^{2,4}, Eva Madrid⁵, Xavier Bonfill Cosp⁶

¹Universidad Católica de la Santísima, Concepción, Chile. ²Doctoral Program in Research Methodology and Public Health, Autonomous University of Barcelona, Barcelona, Spain. ³Department of Preventive Medicine and Public Health, University of the Basque Country, Leioa, Spain. ⁴University of Concepción, Concepción, Chile. ⁵Interdisciplinary Centre for Health Studies CIESAL, Cochrane Centre School of Medicine Universidad de Valparaíso, Viña del Mar, Chile. ⁶Iberoamerican Cochrane Centre, Biomedical Research Institute Sant Pau (IIB Sant Pau), CIBER Epidemiología y Salud Pública (CIBERESP), Barcelona, Spain

Contact address: Marcela Cortés-Jofré, Universidad Católica de la Santísima, Concepción, Chile. p.cortes@ucsc.cl, pmarcelacortes@gmail.com.

Editorial group: Cochrane Lung Cancer Group.

Publication status and date: New search for studies and content updated (no change to conclusions), published in Issue 3, 2020.

Citation: Cortés-Jofré M, Rueda JR, Asenjo-Lobos C, Madrid E, Bonfill Cosp X. Drugs for preventing lung cancer in healthy people. *Cochrane Database of Systematic Reviews* 2020, Issue 3. Art. No.: CD002141. DOI: [10.1002/14651858.CD002141.pub3](https://doi.org/10.1002/14651858.CD002141.pub3).

Copyright © 2020 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

ABSTRACT

Background

This is the second update of this Cochrane Review. Some studies have suggested a protective effect of antioxidant nutrients and higher dietary levels of fruits and vegetables on lung cancer.

Objectives

To determine whether vitamins and minerals and other potential agents, alone or in combination, reduce lung cancer incidence and lung cancer mortality in healthy populations.

Search methods

We searched CENTRAL, MEDLINE and Embase from 1974 to May 2019 and screened references included in published studies and reviews.

Selection criteria

We included randomised controlled trials (RCTs) comparing vitamins or mineral supplements with placebo, administered to healthy people with the aim of preventing lung cancer.

Data collection and analysis

Four review authors independently selected the trials to be included in the review, assessed their methodological quality and extracted data. For dichotomous outcomes we calculated risk ratios (RRs) and 95% confidence intervals (CIs) and pooled results using the random-effects model. We assessed the risk of bias using Cochrane's 'Risk of bias' assessment tool and certainty of evidence using the GRADE approach.

Main results

In this update, we identified three new trials for a total of 12 studies. Six analysed vitamin A, three vitamin C, three combined vitamin D3 + calcium, four vitamin E combined with other products, one selenium supplements and nine studied combinations of two or more products. Four studies included only men and five only women.

Vitamin A results in little to no difference in lung cancer incidence (RR 1.09, 95% CI 1.00 to 1.19; 5 RCTs, 212314 participants; high-certainty evidence) and lung cancer mortality (RR 1.06, 95% CI 0.81 to 1.38; 3 RCTs, 190118 participants; high-certainty evidence). But in smokers or asbestos workers vitamin A increases the risk of lung cancer incidence (RR 1.10, 95% CI 1.01 to 1.20; 3 RCTs, 43995 participants; high-

Drugs for preventing lung cancer in healthy people (Review)

Copyright © 2020 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.