

PubMed

[Abstract](#)[Full text links](#)

[BMJ](#). 2012 Mar 15;344:e1454. doi: 10.1136/bmj.e1454.



White rice consumption and risk of type 2 diabetes: meta-analysis and systematic review.

[Hu EA](#)¹, [Pan A](#), [Malik V](#), [Sun Q](#).

Author information

Abstract

OBJECTIVES: To summarise evidence on the association between **white rice consumption** and **risk of type 2 diabetes** and to quantify the potential dose-response relation.

DESIGN: **Meta-analysis** of prospective cohort studies.

DATA SOURCES: Searches of Medline and Embase databases for articles published up to January 2012 using keywords that included both **rice** intake and diabetes; further searches of references of included original studies.

STUDY SELECTION: Included studies were prospective cohort studies that reported **risk** estimates for **type 2 diabetes** by **rice** intake levels.

DATA SYNTHESIS: Relative risks were pooled using a random effects model; dose-response relations were evaluated using data from all **rice** intake categories in each study.

RESULTS: Four articles were identified that included seven distinct prospective cohort analyses in Asian and Western populations for this study. A total of 13,284 incident cases of **type 2 diabetes** were ascertained among 352,384 participants with follow-up periods ranging from 4 to 22 years. Asian (Chinese and Japanese) populations had much higher **white rice consumption** levels than did Western populations (average intake levels were three to four servings/day versus one to two servings/week). The pooled relative **risk** was 1.55 (95% confidence interval 1.20 to 2.01) comparing the highest with the lowest category of **white rice** intake in Asian populations, whereas the corresponding relative **risk** was 1.12 (0.94 to 1.33) in Western populations (P for interaction=0.038). In the total population, the dose-response **meta-analysis** indicated that for each serving per day increment of **white rice** intake, the relative **risk of type 2 diabetes** was 1.11 (1.08 to 1.14) (P for linear trend<0.001).

CONCLUSION: Higher **consumption** of **white rice** is associated with a significantly increased **risk of type 2 diabetes**, especially in Asian (Chinese and Japanese) populations.

Comment in

[Robust methods are needed to investigate association between **white rice consumption** and **type 2 diabetes**.](#) [BMJ. 2012]

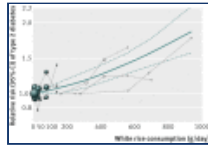
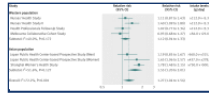
[White rice and **risk of type 2 diabetes**.](#) [BMJ. 2012]

[In defence of **white rice**.](#) [BMJ. 2012]

PMID: 22422870 [PubMed - indexed for MEDLINE] PMCID: PMC3307808 [Free PMC Article](#)

Images from this publication. [See all images](#)

(3) [Free text](#)



Publication Types, MeSH Terms, Grant Support

LinkOut - more resources

PubMed Commons

[PubMed Commons home](#)

0 comments

[How to join PubMed Commons](#)