Doctor

PEARLS

Practical Evidence About Real Life Situations

Limited evidence for effectiveness of influenza vaccine in healthy adults

Clinical question

How effective are vaccines in preventing influenza in healthy adults (aged between 16 and 65 years)?

Bottom line

Inactivated influenza vaccines decreased the risk of symptoms of influenza and time off work, but their effects were minimal. In the relatively uncommon circumstance of the vaccine matching the viral circulating strain and high circulation, the NNT* to avoid influenza symptoms was 33. In average conditions (partially matching vaccine) the NNT was 100. There was no evidence vaccines affected hospital admissions, complication rates or transmission. Inactivated vaccines caused local harm (local erythema, tenderness and soreness), and an estimated 1.6 additional cases of Guillain-Barré syndrome per million vaccinations.

** NNT= number needed to treat to benefit 1 individual*

Caveat

These results may be an optimistic estimate because company-sponsored influenza vaccine trials tend to produce results favourable to their products, and some of the evidence came from trials carried out in ideal viral circulation and matching conditions; also because the harms evidence base was limited. Fifteen of the 36 trials in the review were funded by vaccine companies and 4 had no funding declaration.

Context

Over 200 viruses cause influenza and influenza-like illness (which produces the same symptoms). At best, vaccines might be effective against only influenza A and B, which represent about 10% of all circulating viruses. Healthy adults are presently targeted for influenza vaccination mainly in North America.

Cochrane Systematic Review

Jefferson T et al. Vaccines for preventing influenza in healthy adults. Cochrane Reviews, 2010, Issue 7. Article No. CD001269. DOI: 10.1002/14651858.CD001269.pub4.

This review contains 50 studies involving over 80,000 participants.

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PEARLS are succinct summaries of Cochrane Systematic Reviews for primary care practitioners – developed by the Cochrane Primary Care Field, New Zealand Branch of the Australasian Cochrane Centre at the Department of General Practice and Primary Health Care, University of Auckland and funded by the New Zealand Guidelines Group. New Zealanders can access the Cochrane Library free via www.nzgg.org.nz

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