Safety of Herpes Zoster Vaccine in the Shingles Prevention Study: A Randomized Trial
Simberkoff M.S., et.al.

Abstract:
Background: The herpes zoster vaccine is effective in preventing herpes zoster and postherpetic neuralgia in immunocompetent older adults. However, its safety has not been described in depth.
Objective: To describe local adverse effects and short- and long-term safety profiles of herpes zoster vaccine in immunocompetent older adults.
Design: Randomized, placebo-controlled trial with enrollment from November 1998 to September 2001 and follow-up through April 2004 (mean, 3.4 years). A Veterans Affairs Coordinating Center generated the permuted block randomization scheme, which was stratified by site and age. Participants and follow-up study personnel were blinded to treatment assignments. (ClinicalTrials.gov registration number: NCT00007501)
Setting: 22 U.S. academic centers.
Participants: 38 546 immunocompetent adults 60 years or older, including 6616 who participated in an adverse events substudy.
Intervention: Single dose of herpes zoster vaccine or placebo.
Measurements: Serious adverse events and rashes in all participants and inoculation-site events in substudy participants during the first 42 days after inoculation. Thereafter, vaccination-related serious adverse events and deaths were monitored in all participants, and hospitalizations were monitored in substudy participants.
Results: After inoculation, 255 (1.4%) vaccine recipients and 254 (1.4%) placebo recipients reported serious adverse events. Local inoculation-site side effects were reported by 1604 (48%) vaccine recipients and 539 (16%) placebo recipients in the substudy. A total of 977 (56.6%) of the vaccine recipients reporting local side effects were aged 60 to 69 years, and 627 (39.2%) were older than 70 years. After inoculation, herpes zoster occurred in 7 vaccine recipients versus 24 placebo recipients. Long-term follow-up (mean, 3.39 years) showed that rates of hospitalization or death did not differ between vaccine and placebo recipients.
Limitations: Participants in the substudy were not randomly selected. Confirmation of reported serious adverse events with medical record data was not always obtained.
Conclusion: Herpes zoster vaccine is well tolerated in older, immunocompetent adults.

Nut Consumption and Blood Lipid Levels: A Pooled Analysis of 25 Intervention Trials
Joan Sabaté, et.al.

Background: Epidemiological studies have consistently associated nut consumption with reduced risk for coronary heart disease. Subsequently, many dietary intervention trials investigated the effects of nut consumption on blood lipid levels. The objectives of this study were to estimate the effects of nut consumption on blood lipid levels and to examine whether different factors modify the effects.
Methods: We pooled individual primary data from 25 nut consumption trials conducted in 7 countries among 583 men and women with normolipidemia and hypercholesterolemia who were not taking lipid-lowering medications. In a pooled analysis, we used mixed linear models to assess the effects of nut consumption and the potential interactions.
Results: With a mean daily consumption of 67 g of nuts, the following estimated mean reductions were achieved: total cholesterol concentration (10.9 mg/dL [5.1% change]), low-density lipoprotein cholesterol concentration (LDL-C) (10.2 mg/dL [7.4% change]), ratio of LDL-C to high-density lipoprotein cholesterol concentration (HDL-C) (0.22 [8.3% change]), and ratio of total cholesterol concentration to HDL-C (0.24 [5.6% change]) (P < .001 for all) (to convert all cholesterol concentrations to millimoles per liter, multiply by 0.0259). Triglyceride levels were reduced by 20.6 mg/dL (10.2%) in subjects with blood triglyceride levels of at least 150 mg/dL (P < .05) but not in those with lower levels (to convert triglyceride level to millimoles per liter, multiply by 0.0113). The effects of nut consumption were dose related, and different types of nuts had similar effects on blood lipid levels. The effects of nut consumption were significantly modified by LDL-C, body mass index, and diet type: the lipid-lowering effects of nut consumption were greatest among subjects with high baseline LDL-C and with low body mass index and among those consuming Western diets.
Conclusion: Nut consumption improves blood lipid levels in a dose-related manner, particularly among subjects with higher LDL-C or with lower BMI.
High-Dose vs Non-High-Dose Proton Pump Inhibitors After Endoscopic Treatment in Patients With Bleeding Peptic Ulcer: A Systematic Review and Meta-analysis of Randomized Controlled Trials

Wang C., et al.

Background: High-dose proton pump inhibitors (PPIs) (80 mg bolus, followed by 8 mg/h continuous infusion for 72 hours) have been widely studied and used. However, to date no concrete evidence has shown that high-dose PPIs are more effective than non-high-dose PPIs.

Methods: We performed a literature search for randomized controlled trials that compared the use of high-dose PPIs to non-high-dose PPIs in patients with bleeding peptic ulcer and determined their effects on rebleeding, surgical intervention, and mortality. Outcomes data were combined in a meta-analysis and were reported as odds ratios (ORs) with 95% confidence intervals (CIs).

Results: A total of 1157 patients from 7 high-quality randomized studies were included in this meta-analysis. High-dose PPIs and non-high-dose PPIs did not differ in their effects on the rates of rebleeding (7 studies and 1157 patients; OR, 1.30; 95% CI, 0.88-1.91), surgical intervention (6 studies and 1052 patients; 1.49; 0.66-3.37), or mortality (6 studies and 1052 patients; 0.89; 0.37-2.13). Post hoc subgroup analyses revealed that summary outcomes measures were unaffected by severity of signs of recent hemorrhage at initial endoscopy, route of PPI administration, or PPI dose.

Conclusion: Compared with non-high-dose PPIs, high-dose PPIs do not further reduce the rates of re-bleeding, surgical intervention, or mortality after endoscopic treatment in patients with bleeding peptic ulcer.

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The Effects of Growth Hormone on Body Composition and Physical Performance in Recreational Athletes: A Randomized Trial

Meihardt U., et al.

Abstract

Background: Growth hormone is widely abused by athletes, frequently with androgenic steroids. Its effects on performance are unclear.

Objective: To determine the effect of growth hormone alone or with testosterone on body composition and measures of performance.

Design: Randomized, placebo-controlled, blinded study of 8 weeks of treatment followed by a 6-week washout period. Randomization was computer-generated with concealed allocation. (Australian-New Zealand Clinical Trials Registry registration number: ACTRN01260500508673)

Setting: Clinical research facility in Sydney, Australia.

Participants: 96 recreationally trained athletes (63 men and 33 women) with a mean age of 27.9 years (SD, 5.7).

Intervention: Men were randomly assigned to receive placebo, growth hormone (2 mg/d subcutaneously), testosterone (250 mg/wk intramuscularly), or combined treatments. Women were randomly assigned to receive either placebo or growth hormone (2 mg/d).

Measurements: Body composition variables (fat mass, lean body mass, extracellular water mass, and body cell mass) and physical performance variables (endurance [maximum oxygen consumption], strength [dead lift], power [jump height], and sprint capacity [Wingate value]).

Results: Body cell mass was correlated with all measures of performance at baseline. Growth hormone significantly reduced fat mass, increased lean body mass through an increase in extracellular water, and increased body cell mass in men when coadministered with testosterone. Growth hormone significantly increased sprint capacity, by 0.71 kJ (95% CI, 0.1 to 1.3 kJ; relative increase, 3.9% [CI, 0.0% to 7.7%]) in men and women combined and by 1.7 kJ (CI, 0.5 to 3.0 kJ; relative increase, 8.3% [CI, 3.0% to 13.6%]) when coadministered with testosterone to men; other performance measures did not significantly change. The increase in sprint capacity was not maintained 6 weeks after discontinuation of the drug.

Limitations: Growth hormone dosage may have been lower than optimal.

Effects of fibrates on cardiovascular outcomes: A systematic review and meta-analysis
Min Jun, et al.

Summary:
Background: Several clinical trials have reported inconsistent findings for the effect of fibrates on cardiovascular risk. We undertook a systematic review and meta-analysis to investigate the effects of fibrates on major clinical outcomes.

Methods: We systematically searched Medline, Embase, and the Cochrane Library for trials published between 1950 and March, 2010. We included prospective randomised controlled trials assessing the effects of fibrates on cardiovascular outcomes compared with placebo. Summary estimates of relative risk (RR) reductions were calculated with a random effects model. Outcomes analysed were major cardiovascular events, coronary events, stroke, heart failure, coronary revascularisation, all-cause mortality, cardiovascular death, non-vascular death, sudden death, new onset albuminuria, and drug-related adverse events.

Findings: We identified 18 trials providing data for 45,058 participants, including 2870 major cardiovascular events, 4552 coronary events, and 3880 deaths. Fibrates produced a 10% RR reduction (95% CI 0-18) for major cardiovascular events (p=0.048) and a 13% RR reduction (7-19) for coronary events (p<0.0001), but had no benefit on stroke (3%, -3 to 9; p=0.69). We noted no effect of fibrate therapy on the risk of all-cause mortality (0%, -8 to 7; p=0.92), cardiovascular mortality (3%, -7 to 12; p=0.59), sudden death (11%, -6 to 26; p=0.19), or non-vascular mortality (-10%, -21 to 0; p=0.063). Fibrates reduced the risk of albuminuria progression by 14% (2-25; p=0.028). Serious drug-related adverse events were not significantly increased by fibrates (17,413 participants, 225 events; RR 1.21, 95% CI 0.91-1.61; p=0.19), although increases in serum creatinine concentrations were common (1.99, 1.46-2.70; p<0.0001).

Interpretation: Fibrates can reduce the risk of major cardiovascular events predominantly by prevention of coronary events, and might have a role in individuals at high risk of cardiovascular events and in those with combined dyslipidaemia.

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