

# **Peginterferon alpha-2a is associated with higher sustained virological response than peginterferon alfa-2b in chronic hepatitis C: systematic review of randomized trials.**

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## **Abstract**

A combination of weekly pegylated interferon (peginterferon) alpha and daily ribavirin represents the standard of care for the treatment of chronic hepatitis C according to current guidelines. It is not established which of the two licensed products (peginterferon alpha-2a or peginterferon alfa-2b) is most effective. We performed a systematic review of head-to-head randomized trials to assess the benefits and harms of the two treatments. We searched the Cochrane Central Register of Controlled Trials, MEDLINE, EMBASE, and LILACS through July 2009. Using standardized forms, two reviewers independently extracted data from each eligible trial report. We statistically combined data using a random effects meta-analysis according to the intention-to-treat principle. We identified 12 randomized clinical trials, including 5,008 patients, that compared peginterferon alpha-2a plus ribavirin versus peginterferon alfa-2b plus ribavirin. Overall, peginterferon alpha-2a significantly increased the number of patients who achieved a sustained virological response (SVR) versus peginterferon alfa-2b (47% versus 41%; risk ratio 1.11, 95% confidence interval 1.04-1.19;  $P = 0.004$  [eight trials]). Subgroup analyses of risk of bias, viral genotype, and treatment history yielded similar results. The meta-analysis of adverse events leading to treatment discontinuation included 11 trials and revealed no significant differences between the two peginterferons. Conclusion: Current evidence suggests that peginterferon alpha-2a is associated with higher SVR than peginterferon alfa-2b. However, the paucity of evidence on adverse events curbs the decision to definitively recommend one peginterferon over the other, because any potential benefit must outweigh the risk of harm.