

Numbers needed to treat derived from meta-analysis: a word of caution

In the editorial by Drs. Marx and Bucher in the March/April 2003 issue of *ACP Journal Club* (1), an example illustrating the application of estimates of RRRs to individual risk is misleading. Marx and Bucher state that the NNT would increase in patients with a baseline risk 11 times that of the low-risk group, which is counterintuitive. If a high-risk patient is judged to have a risk greater than that of a low-risk patient, the NNT would be expected to decrease, not increase. I believe they meant to say that the NNT divided by the factor f will yield the adjusted risk of outcome in an individual patient.

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Authors' response:

Dr. Peterson's observation is correct and implicitly concurs with our example, but we failed to correctly state when to divide by factor f and when to multiply. In paragraph 6 we wrote, "... the baseline risk of included trials ranged from 2% to 22%, ... the corresponding NNT for an average follow-up of 18 months is 263 (CI 185 to 500) for a baseline risk of 2% and 24 (CI 17 to 45) for a baseline risk of 22%."

In paragraph 7 we wrote, "If the baseline risk of an individual patient is a factor f compared with the baseline risk of a typical study patient and the relative risk is constant, the ARR for the patient is scaled according to the same factor f ." Thus, and as Dr. Peterson states, if the baseline risk increases by factor f , the NNT needs to be divided by f . For example, for baseline risk $2\% \times 11 = 22\%$, the NNT becomes $263 \div 11 = 24$.

We appreciate the opportunity to clarify this point and apologize for any confusion this may have caused.

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Reference

1. Marx A, Bucher HC. Numbers needed to treat derived from meta-analysis: a word of caution [Editorial]. *ACP J Club*. 2003 Mar-Apr;138:A11.