

# CRITICAL APPRAISAL OF CLINICAL TRIALS AND SYSTEMATIC REVIEW: A ONE-DAY COURSE FOR SURGEONS

## Why Randomize a Clinical Trial?

J.N.S. Matthews

University of Newcastle upon Tyne  
Freeman Hospital, 20 September 2002

Some references relevant to this talk are as follows.

Useful information is available from the CONSORT website, at [www.consort-statement.org](http://www.consort-statement.org)

1. Altman DG, Bland JM. Treatment allocation in controlled trials: why randomise? *BMJ* 1999, 318: 1209.
2. Altman DG, Bland JM. How to randomise. *BMJ* 1999, 319: 703-704.  
*References 1 & 2 are short articles describing the rationale and methods of randomizing in a controlled trial.*
3. Altman DG, Doré C. Randomisation and baseline comparisons in clinical trials. *Lancet* 1990, 335: 149-153.  
*References 3 and 7 are reviews of the conduct of randomized trials in various parts of the medical literature, with particular attention paid to the methods of allocation.*
4. Altman DG, Schulz KF. Concealing treatment allocation in randomised trials. *BMJ*, 2001, 323: 446-447.
5. Keirse MJNC. Amniotomy or oxytocin for induction of labor: reanalysis of a randomized controlled trial. *Acta Obstet Gynecol Scand* 1988, 67: 731-735.  
*This reference re-analyses a trial in obstetrics which allocated according to odd or even date of birth of the woman and shows that the conclusions are undermined by selection bias.*
6. Schulz KF. Subverting randomization in controlled trials. *JAMA* 1995, 274: 1456-1458.  
*References 4 & 6 explain how to conceal allocation (4) and how others have tried to reveal it (6)*
7. Schulz KF, Chalmers I, Grimes DA, Altman, DG. Assessing the quality of randomization from reports of controlled trials published in obstetrics and gynecology journals. *JAMA* 1994, 272: 125-128.
8. Schulz KF, Grimes DA. Generation of allocation sequences in randomised trials: chance, not choice. *Lancet* 2002, 359: 515-519.
9. Schulz KF, Grimes DA. Unequal group sizes in randomised trials: guarding against guessing. *Lancet* 2002, 359: 966-970.  
*References 8 & 9 are recent contributions to the debate on how to randomize and how to prevent selection bias.*
10. Treasure T, MacRae KD. Minimisation: the platinum standard for trials? *BMJ* 1998, 317: 362-363.  
*This reference extols the virtues of minimisation.*