A design that allows for evaluating the effects of multiple interventions and their interactions within a clinical trial.

Note: Most trials consider only one experimental intervention, comparing it with one or more options or a placebo. In a trial using a 2x2 factorial design, participants are allocated to one of four possible combinations. For example, in a randomised controlled trial of a nicotine replacement therapy and counselling, participants would be allocated to: nicotine replacement therapy alone, counselling alone, both, or neither. In this way it is possible to test the independent effect of each intervention on smoking cessation and the combined effect of (interaction between) the two interventions.