

TESTING TREATMENTS

Chapter 3

3 More is not necessarily better

A popular misconception is that if a treatment is good then more of it must be better. This is simply not true – indeed more can be worse. Finding the ‘right’ dose – where benefits are high and adverse effects (side-effects) are low – is a challenge common to all treatments. As the dose is increased, beneficial effects reach a plateau, but adverse effects usually increase. So ‘more’ may decrease the actual benefit, or even cause overall harm.

Diuretics (water tablets) are a good example: in low doses they lower blood pressure and have few adverse effects. A higher dose does not lower blood pressure any further but does lead to unwanted effects, such as excess urination, impotence and increased blood sugar. Similarly, aspirin in low doses – between a quarter and a half of a standard tablet per day – helps to prevent strokes, and with very few adverse effects. However, while several aspirin tablets per day might relieve a headache, they will not prevent any more strokes and will increase the risk of stomach ulcers.

This principle of the ‘right dose’ extends beyond drug therapy to many other treatments, including surgery.

INTENSIVE TREATMENTS FOR BREAST CANCER

The therapies advocated for breast cancer – so often in the news – provide some especially valuable lessons about the dangers of assuming that more intensive treatments are necessarily beneficial.