Standard Deviation [SD]

The standard deviation is a measure of the amount of variation within a data set. If all values in a data set are very close together, the standard deviation will be close to zero. In such cases, the data points will all lie close to the mean (average). A high standard deviation indicates that the values are much more spread out.

The standard deviation is normally included when clinical trial results are reported because it provides a (rough) guide to statistical significance. Take, for example, a clinical trial in which the observed symptom reduction is greater than one would expect if the medicine had no effect. The difference (between the observed result and what one would expect if the medicine had no effect) would generally have to be greater than two times the standard deviation to be regarded as statistically significant.