

Note: All text underlined in blue are hyperlinks to external resources

**PART 3:** This is the final part of a set of 3 maths documents – this time looking at statistics in medicine. You may have covered some of these topics in maths at GCSE and A-level as well as other subjects like biology or psychology. In first year, you will come across these topics mainly in interpreting results or research papers but you will rarely have to carry out the calculations yourself. Therefore, for several of these topics, we haven't included practice questions as we have done before and the best way you can prepare now is simply to be familiar with the key concepts.



### Key topics::

- Basic parameters (mean, mode, median and range)
  - Measures of spread
  - Normal distribution
  - Statistical significance
  - Measures of association (correlations)
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### Basic parameters:

- Here is a short 7m [video](#) summary defining the parameters - mean, mode, median and range -useful for anyone who's feeling rusty!
- This [site](#) goes through some basic worked examples with some practice questions to play with a widget at the end

### Measures of spread:

#### → Tutorials:

- This [video](#) reviews the measure of centre and compares to measures of spread
- This is a great Khan academy 12m [video](#) – runs through standard deviation and variance which is useful for interpreting data. *You may not have covered this before if you haven't done A-level maths*

#### → Practice:

- Here are some [practice questions](#) on sampling and population standard deviation which also have hints and links to explanations.
- A simple bitesize quiz on measures of spread - try it [here!](#)

### Normal distribution:

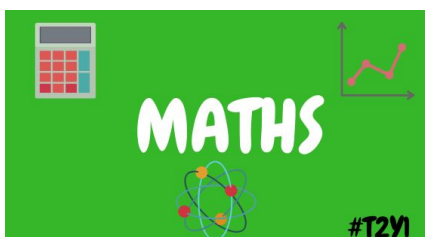
- Watch this great [video](#) which explains normal distribution (but ignore 2<sup>nd</sup> half about 68-95-99.75 rule)
- Here is another [explanation](#) which puts it into context

### Statistical significance:

- This [video](#) explains statistical significance (use of p values) and the probability of the null hypothesis – explanation of p values
- Khan Academy videos on: [hypothesis testing](#) and summary of [p values/ significance](#)

### Measures of association:

- This [video](#) will talk through correlation
  - This [site](#) introduces measures of risk. This topic is very advanced but is used in research papers which you start to use in SSCs (student selected components - ie. projects) in the second half of your first year!
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Hope these resources have been useful, particularly for those of you who did not do Maths A level! Feel free to come back to these anytime!

