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| **What is NOT good...** in fact rubbish  When you write up your report bear this in mind - -it is based on Elite athletes and choosing LBM as your variable but the principles still apply when you compare your samples | **What it SHOULD be..**. (assuming that you have specified what LBM means) |
| "The male data is more spread out"  "The males have far larger variation of LBM measurements"  "The spread of the males athletes is more than the females"  "The results for the males are a lot more varied"  "male 50% is more spread out than female 50%" | Data? What data?  "In the sample the distribution of male athlete LBM tends to be more spread out than the female athletes LBM. This is confirmed by the difference in the standard deviations, with the male athlete Std.dev of 9.9kg compared with the female athlete Std.dev of 6.9kg. This shows that the male athlete LBM has greater variation than the female athletes LBM. This isn't what I expected because..."  "The middle 50% of male athletes in the sample have a LBM of between 68kg and 80kg which is an IQR of 12kg. This compares with the middle 50% of the female athletes which have a LBM of between 52kg and 59kg with an IQR of only 7kg. This also shows that the male athlete LBM has greater variation than the females athlete LBM..." |
| "The male range is more than the females range"  "The spread of the male LBM is from roughly 50kg to 110kg" | Do not make a comparison of Range - it is meaningless. (range is Max value - Min value)  If you want to discuss 'spread' use the IQR or Std.dev |
| "male 50% is above female 50%"  "The male box is more than the female box"  "The females are further down the table" | "The middle 50% of male athletes in the sample have a LBM of between 68kg and 80kg. This compares with the middle 50% of the female athletes which have a LBM of between 52kg and 59kg. There is no overlap in these groups, rather a 9kg gap. This allows me to be confident in making a call that the male athletes LBM is greater than the females LBM" |
| "The male centres are higher"  "The male averages are higher" | "The median LBM of the sampled male athletes (74.5kg) is greater than the median female athlete LBM (54.9kg) in the sample. This is a difference of almost 20kg, which reinforces what I suspected the male athletes to be heavier, although I did not expect the difference to be that great" |
| "There are some outliers in the male data"  "The males have a bigger range than the females" | "There are two outliers in the sample of male athletes, with LBM of 102kg and 106kg (as these values are greater than 1.5 box widths above the upper quartile) These could be weightlifters" |