Calculating Anthro Data

- By Dr Neelam Patel

MPT (Australia)

Grad cert Ergo & OHS (Australia)

Steps in designing

Decide who you are designing for i.e. your user population

- Kids,
- Adults,
- Male,
- Female,
- Nationality,

Details of some data may be available in anthro tables, for some you may have to research or use data of similar population

Steps in designing

Identify relevant body measurements, needed for the desgning
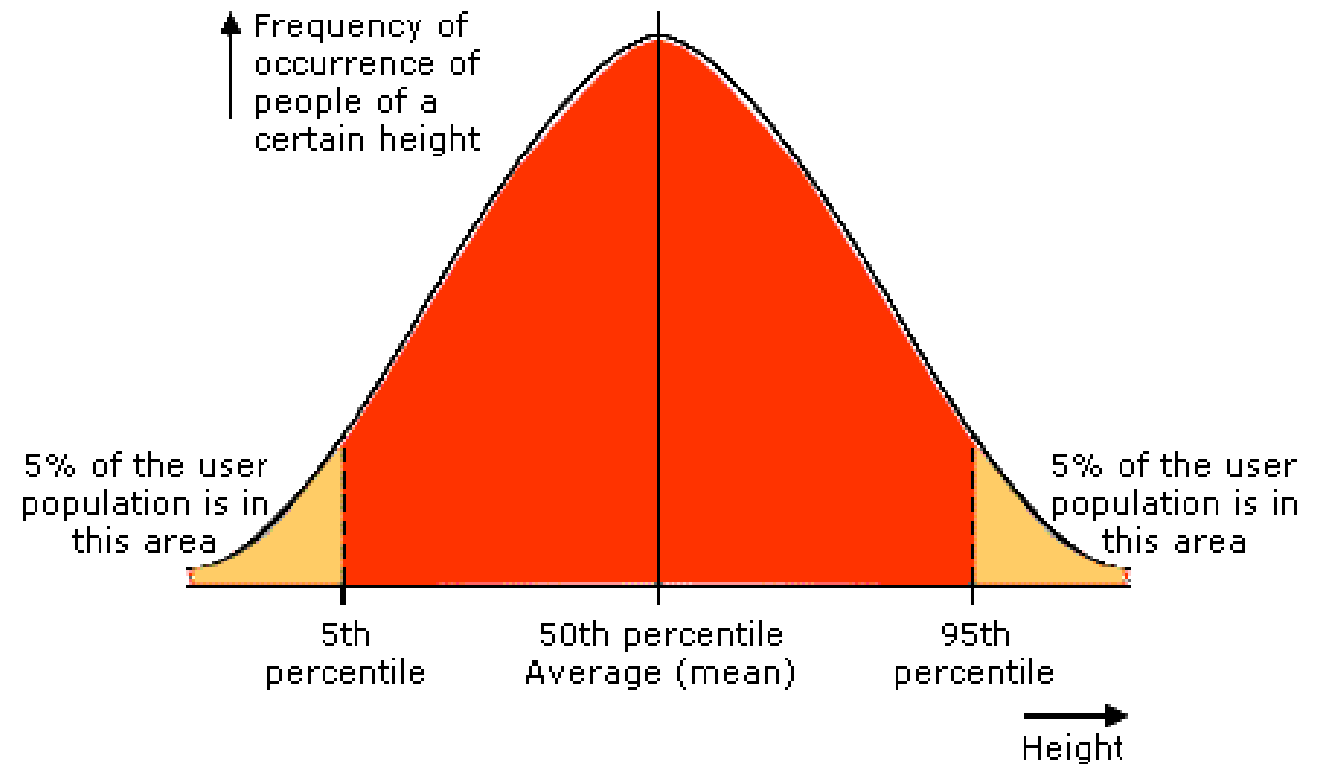
- Hand size
- Seat width
- Standing elbow height

Steps in designing

Decide on percentile

- Are you designing for average person, tall or short person – remember average heighted person may have a larger hand or arm or sometimes foot. So compare oranges to oranges only.

- Percentile are usually shown in anthro tables and they show whether the readings are average, short (small) or tall (large)

How to read Percentile

▶The Centre line is the average or mean

▶The graph shows symmetry, so 50 % of people are average height or taller, and 50% are average height or smaller.

▶The tailing end to the left indicates 5% (i.e.1 in 20) is shorter than this average

▶On the right this is indicated by 95%, i.e. 1 in 20 people is taller than this average height

Frequency of occurrence of people of a certain height

5% of the user population is in this area

5% of the user population is in this area

5th percentile

50th percentile Average (mean)

95th percentile

Height

Steps in designing

So it is important to decide whether you will be using the 50th, 5th or 95th percentile value for your designing

This will depend on what you are designing

Never compromise on safety

Use your judgment

Some extreme cases you may have to use 1% or 99%, for safety

Steps in designing

Allow for human factors

- Shoes – flat or heels
- head gear
- Bulky gloves
- What weather it will be used – does it need extra grip

Thank You !

Please email or message me on teams, if you need any further clarifications.

If urgent, call me on 7359268996

Wishing you all good luck for your exams !!!