

Activity Sheet for determining height from ulna length



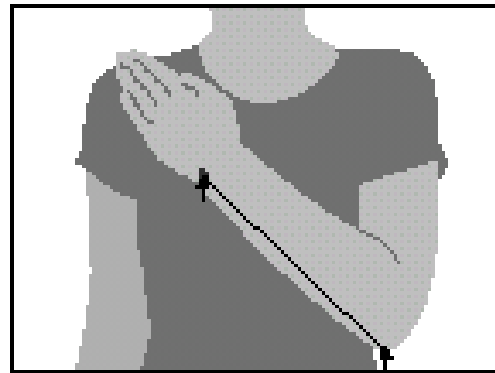
The aim of this activity is to estimate the height two people using their ulna length.

	Male/ Female	Age	Ulna length (cm)	Height (m)
Person 1				
Person 2				

Using the length of forearm (ulna) to determine height

Technique:

1. Ask the subject to bend an arm (left side if possible), palm across chest, fingers pointing at the opposite shoulder.
2. Using a tape measure, measure the length in centimetres (cm) to the nearest 0.5cm between the point on the elbow (olecranon) and the mid-point of the prominent bone of the wrist (styloid process).
3. Use the measurement to convert ulna length (cm) into the resident's height (m)



Estimating height from ulna

HEIGHT (m)	Men (<65 years)	1.94	1.93	1.91	1.89	1.87	1.85	1.84	1.82	1.80	1.78	1.76	1.75	1.73	1.71
	Men (>65 years)	1.87	1.86	1.84	1.82	1.81	1.79	1.78	1.76	1.75	1.73	1.71	1.70	1.68	1.67
Ulna length (cm)		32.0	31.5	31.0	30.5	30.0	29.5	29.0	28.5	28.0	27.5	27.0	26.5	26.0	25.5
HEIGHT (m)	Women (<65 years)	1.84	1.83	1.81	1.80	1.79	1.77	1.76	1.75	1.73	1.72	1.70	1.69	1.68	1.66
	Women (>65 years)	1.84	1.83	1.81	1.79	1.78	1.76	1.75	1.73	1.71	1.70	1.68	1.66	1.65	1.63
Ulna length (cm)		25.0	24.5	24.0	23.5	23.0	22.5	22.0	21.5	21.0	20.5	20.0	19.5	19.0	18.5
HEIGHT (m)	Men (<65 years)	1.69	1.67	1.66	1.64	1.62	1.60	1.58	1.57	1.55	1.53	1.51	1.49	1.48	1.46
	Men (>65 years)	1.65	1.63	1.62	1.60	1.59	1.57	1.56	1.54	1.52	1.51	1.49	1.48	1.46	1.45
Ulna length (cm)		25.0	24.5	24.0	23.5	23.0	22.5	22.0	21.5	21.0	20.5	20.0	19.5	19.0	18.5
HEIGHT (m)	Women (<65 years)	1.65	1.63	1.62	1.61	1.59	1.58	1.56	1.55	1.54	1.52	1.51	1.50	1.48	1.47
	Women (>65 years)	1.61	1.60	1.58	1.56	1.55	1.53	1.52	1.50	1.48	1.47	1.45	1.44	1.42	1.40

The conversion chart is developed by the British Association for Parenteral and Enteral Nutrition (BAPEN). www.bapen.org.uk

To purchase the 'MUST' alternative measurement tape to assist with measuring ulna and MUAC, visit www.focusonundernutrition.co.uk

Ulna Height Conversion Table developed by BAPEN															Single use only														
HEIGHT(m)	Men(<65years)	1.94	1.93	1.91	1.89	1.87	1.85	1.84	1.82	1.80	1.78	1.76	1.75	1.73	1.71	1.69	1.67	1.66	1.64	1.62	1.60	1.58	1.57	1.55	1.53	1.51	1.49	1.48	1.46
HEIGHT(m)	Men(>65years)	1.87	1.86	1.84	1.82	1.81	1.79	1.78	1.76	1.75	1.73	1.71	1.70	1.68	1.67	1.65	1.63	1.62	1.60	1.59	1.57	1.56	1.54	1.52	1.51	1.49	1.48	1.46	1.45
Ulna length(cm)		32.0	31.5	31.0	30.5	30.0	29.5	29.0	28.5	28.0	27.5	27.0	26.5	26.0	25.5	25.0	24.5	24.0	23.5	23.0	22.5	22.0	21.5	21.0	20.5	20.0	19.5	19.0	18.5
HEIGHT(m)	Women(<65years)	1.84	1.83	1.81	1.80	1.79	1.77	1.76	1.75	1.73	1.72	1.70	1.69	1.68	1.66	1.65	1.63	1.62	1.61	1.59	1.58	1.56	1.55	1.54	1.52	1.51	1.50	1.48	1.47
HEIGHT(m)	Women(>65years)	1.84	1.83	1.81	1.79	1.78	1.76	1.75	1.73	1.71	1.70	1.68	1.66	1.65	1.63	1.61	1.60	1.58	1.56	1.55	1.53	1.52	1.50	1.48	1.47	1.45	1.44	1.42	1.40

The alternative measurement from the Mid-Upper Arm Circumference (MUAC) MUST be used in conjunction with this table to provide a more accurate estimate of height. The MUST is a registered trademark of Focus on Undernutrition UK. For further details on ordering or information visit www.focusonundernutrition.co.uk.

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Estimating Body Mass Index (BMI) Category from Mid Upper Arm Circumference (MUAC)

The subject's left arm should be bent at the elbow at a 90° angle, with the upper arm held parallel to the side of the body. Measure the distance between the bony protrusion on the shoulder (acromion) and the point of the elbow (olecranon process). Mark the mid-point.

Please note the use of MUAC provides a general indication of BMI and is not designed to generate an actual score for use with MUST. For further information on use of MUAC please refer to The MUST Explanatory Booklet.

- MUAC < 23.0 cm then BMI is likely to be underweight or <20 kg/m²
- MUAC 23.0-27.9 cm then BMI is likely to be normal or 20-24.9 kg/m²
- MUAC > 28.0 cm then BMI is likely to be obese or >25 kg/m²

MUST logo developed by Focus on Undernutrition UK

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