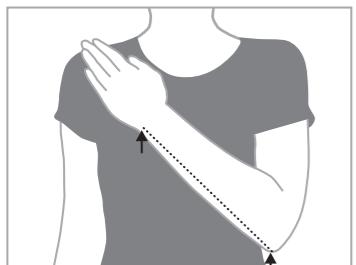


Estimating height from ulna length

If height cannot be obtained, use length of forearm (ulna) to calculate height using tables below.



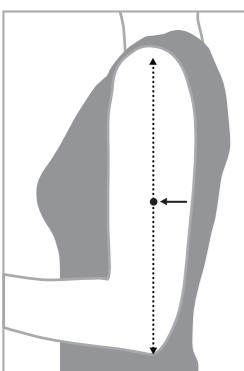
Measure between the point of the elbow (olecranon process) and the midpoint of the prominent bone of the wrist (styloid process) (left side if possible).

Height, metres	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
	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
	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, metres	Men (<65years)	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 (>65years)	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

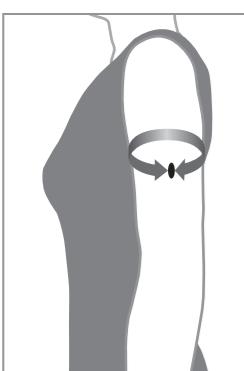
Height, metres	Women (<65 years)	1.65	1.63	1.62	1.61	1.59	1.58	1.56	1.55	1.54	1.52	1.51	1.50	1.48	1.47
	Women (>65 years)	1.61	1.60	1.58	1.56	1.55	1.53	1.52	1.50	1.48	1.47	1.45	1.44	1.42	1.40

Estimating BMI category from Mid Upper Arm Circumference (MUAC)



The subject's left arm should be bent at the elbow at a 90 degree 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.



Ask the subject to let arm hang loose and measure around the upper arm at the mid-point, making sure that the tape measure is snug but not tight.

**If MUAC is < 23.5 cm,
BMI is likely to be <20 kg/m²**

**If MUAC is > 32.0 cm,
BMI is likely to be >30 kg/m²**

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 NHSGGC 'Guidance and considerations for using the 'Malnutrition Universal Screening Tool' ('MUST').'

Food, Fluid & Nutritional Care

Charts and Alternative Measurements for using the 'Malnutrition Universal Screening Tool' ('MUST')

Includes:

BMI Chart (including 'MUST' BMI scores)

Weight Loss Score Charts

Alternative measurements for calculating height and BMI category

Infection Control:

Scales and tape measures should be decontaminated as per NHSGGC Standard Operating Procedure (SOP)

- Cleaning of near Patient Healthcare Equipment.

Frequency: Weekly and between Patients

Method of cleaning: Detergent Wipes



BMI Chart for 'MUST'

If you are unable to calculate BMI from the chart it can be calculated by:

$$\frac{\text{Weight (kg)}}{\text{Height}^2 \text{ (m)}} \text{ eg } \frac{63}{1.72 \times 1.72} = 21.2 \text{ kg/m}^2$$

Height (feet and inches)

	4'10½	4'11	5'0	5'0½	5'1½	5'2	5'3	5'4	5'4½	5'5½	5'6	5'7	5'7½	5'8½	5'9½	5'10	5'11	5'11½	6'0½	6'1	6'2	6'3
100	46	44	43	42	41	40	39	38	37	36	35	35	34	33	32	32	31	30	29	28	28	15 10
99	45	44	43	42	41	40	39	38	37	36	35	34	33	32	32	31	31	30	29	28	27	15 8
98	45	44	42	41	40	39	38	37	36	35	34	33	32	32	31	31	30	29	28	27	27	15 6
97	44	43	42	40	39	38	37	36	35	34	33	32	32	31	31	30	29	28	28	27	27	15 4
96	44	43	42	40	39	38	37	36	35	34	33	32	32	31	31	30	29	29	28	27	27	15 2
95	43	42	41	40	39	38	37	36	35	34	33	32	32	31	31	30	29	29	28	27	26	15 0
94	43	42	41	40	39	38	37	36	35	34	33	32	32	31	31	30	30	29	28	27	27	14 9
93	42	41	40	39	38	37	36	35	34	33	32	32	31	31	30	29	29	28	27	27	26	14 7
92	42	41	40	39	38	37	36	35	34	33	32	32	31	31	30	29	29	28	27	27	26	14 5
91	42	40	39	38	37	36	35	34	33	32	32	31	31	30	30	29	28	28	27	26	25	14 2
90	41	40	39	38	37	36	35	34	33	32	32	31	31	30	30	29	29	28	27	26	25	14 0
89	41	40	39	38	37	36	35	34	33	32	32	31	31	30	30	29	29	28	27	26	25	13 12
88	40	39	38	37	36	35	34	33	32	32	31	31	30	30	29	29	28	27	26	25	24	13 10
87	40	39	38	37	36	35	34	33	32	32	31	31	30	30	29	29	28	27	26	25	24	13 8
86	39	38	37	36	35	34	33	32	32	31	31	30	29	29	28	27	27	26	25	25	24	13 6
85	39	38	37	36	35	34	33	32	32	31	31	30	30	29	29	28	27	26	25	25	24	13 3
84	38	37	36	35	34	33	32	32	31	31	30	30	29	29	28	27	27	26	25	25	24	13 1
83	38	37	36	35	34	33	32	32	31	31	30	30	29	29	28	27	26	25	25	24	23	12 13
82	37	36	35	34	33	32	32	31	31	30	30	29	29	28	27	26	26	25	24	23	22	12 11
81	37	36	35	34	33	32	32	31	31	30	30	29	29	28	27	26	26	25	24	23	22	12 8
80	37	36	35	34	33	32	32	31	31	30	30	29	29	28	27	26	25	25	24	23	22	12 6
79	36	35	34	33	32	32	31	30	30	29	29	28	27	26	26	25	25	24	23	23	22	12 4
78	35	34	33	32	32	31	30	30	29	29	28	27	26	26	25	25	24	23	23	22	21	12 1
77	35	34	33	32	32	31	30	30	29	29	28	27	26	26	25	25	24	23	22	22	21	11 13
76	35	34	33	32	32	31	30	30	29	29	28	27	26	26	25	25	24	23	22	22	21	11 11
75	34	33	32	32	31	30	30	29	29	28	27	26	26	25	25	24	23	23	22	22	21	11 9
74	34	33	32	31	30	30	29	29	28	27	26	26	25	25	24	23	23	22	22	21	21	11 7
73	33	32	31	30	30	29	29	28	27	26	26	25	25	24	23	23	22	22	22	21	20	11 4
72	32	31	30	30	29	28	27	26	26	25	25	24	23	23	22	22	21	21	20	19	19	10 11
71	32	31	30	29	28	27	26	25	25	24	24	23	23	22	22	21	21	20	19	19	19	10 7
70	32	31	30	29	28	27	26	25	25	24	24	23	23	22	22	21	21	20	19	19	19	10 6
69	32	31	30	29	28	27	26	25	25	24	24	23	23	22	22	21	21	20	19	19	19	10 5
68	31	30	29	28	27	26	25	25	24	24	23	23	22	22	21	21	20	19	19	19	19	10 3
67	30	29	28	27	26	25	25	24	24	23	23	22	22	21	21	20	19	19	19	19	19	10 1
66	29	28	27	26	25	25	24	24	23	23	22	22	21	21	20	19	19	19	18	18	18	9 13
65	28	27	26	25	25	24	24	23	23	22	22	21	21	20	20	19	19	19	18	18	18	9 10
64	29	28	27	26	25	25	24	24	23	23	22	22	21	21	20	19	19	19	18	18	18	9 8
63	28	27	26	25	25	24	24	23	23	22	22	21	21	20	20	19	19	18	18	17	17	9 6
62	28	27	26	25	25	24	24	23	23	22	22	21	21	20	20	19	19	18	18	17	17	9 4
61	27	26	25	25	24	24	23	23	22	22	21	21	20	20	19	19	18	18	17	17	16	9 2
60	27	26	25	25	24	24	23	23	22	22	21	21	20	20	19	19	18	18	17	17	16	9 0
59	27	26	25	25	24	24	23	23	22	22	21</											