



Advancing Clinical Nutrition

'Malnutrition Universal Screening Tool'



Malnutrition Advisory Group
A Steering Committee of BAPEN

BAPEN is registered charity number 1023027 www.bapen.org.uk

'MUST'

'MUST' is a five-step screening tool to identify **adults**, who are malnourished, at risk of malnutrition (undernutrition), or obese. It also includes management guidelines which can be used to develop a care plan.

It is for use in hospitals, community and other care settings and can be used by all care workers.

This guide contains:

- A flow chart showing the 5 steps to use for screening and management
- BMI chart
- Weight loss tables
- Alternative measurements when BMI cannot be obtained by measuring weight and height.

The 5 'MUST' Steps

Step 1

Measure height and weight to get a BMI score using chart provided. *If unable to obtain height and weight, use the alternative procedures shown in this guide.*

Step 2

Note percentage unplanned weight loss and score using tables provided.

Step 3

Establish acute disease effect and score.

Step 4

Add scores from steps 1, 2 and 3 together to obtain overall risk of malnutrition.

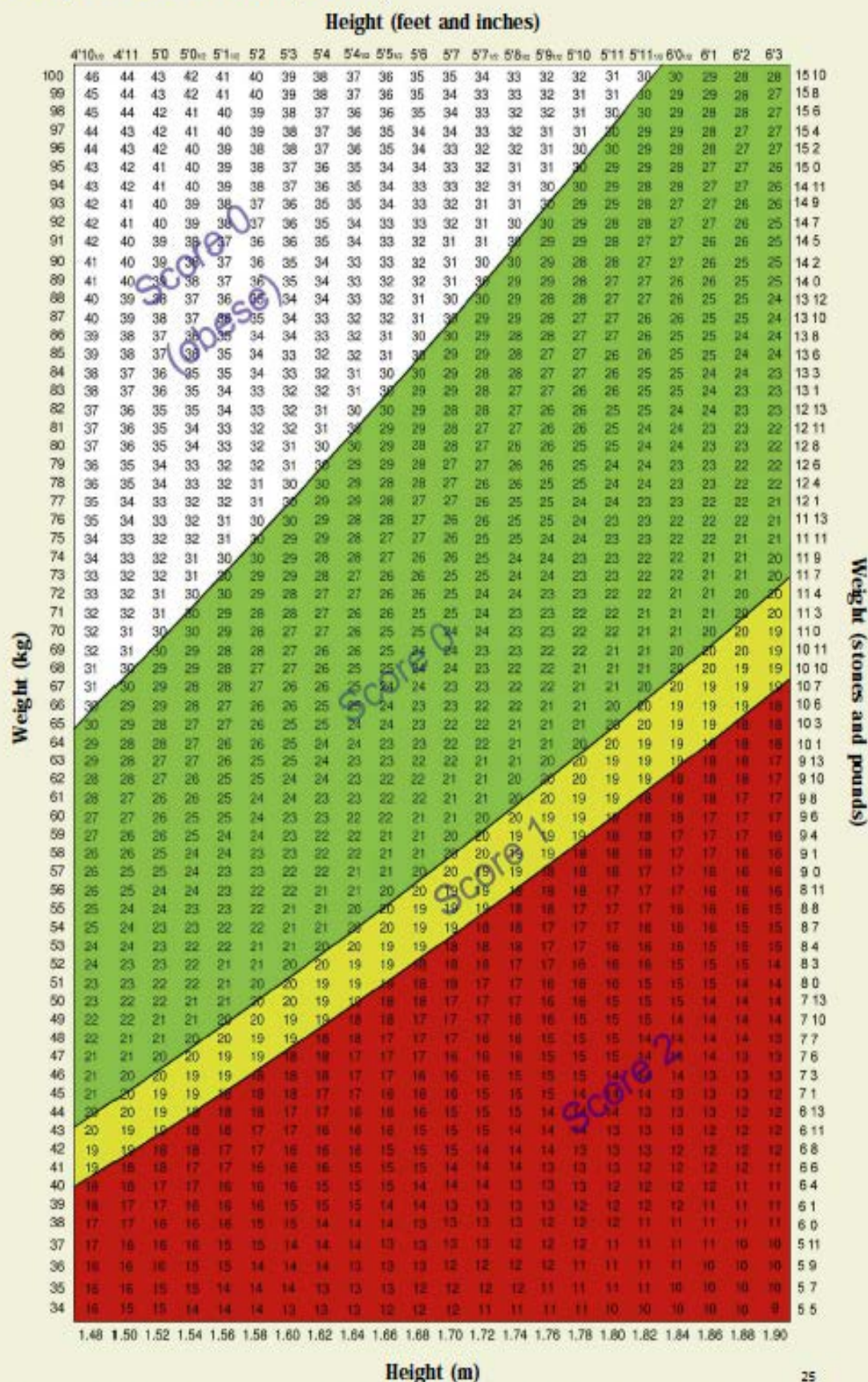
Step 5

Use management guidelines and/or local policy to develop care plan.

Please refer to *The 'MUST' Explanatory Booklet* for more information when weight and height cannot be measured, and when screening patient groups in which extra care in interpretation is needed (e.g. those with fluid disturbances, plaster casts, amputations, critical illness and pregnant or lactating women). The booklet can also be used for training. See *The 'MUST' Report* for supporting evidence. Please note that 'MUST' has not been designed to detect deficiencies or excessive intakes of vitamins and minerals and is of **use only in adults**.

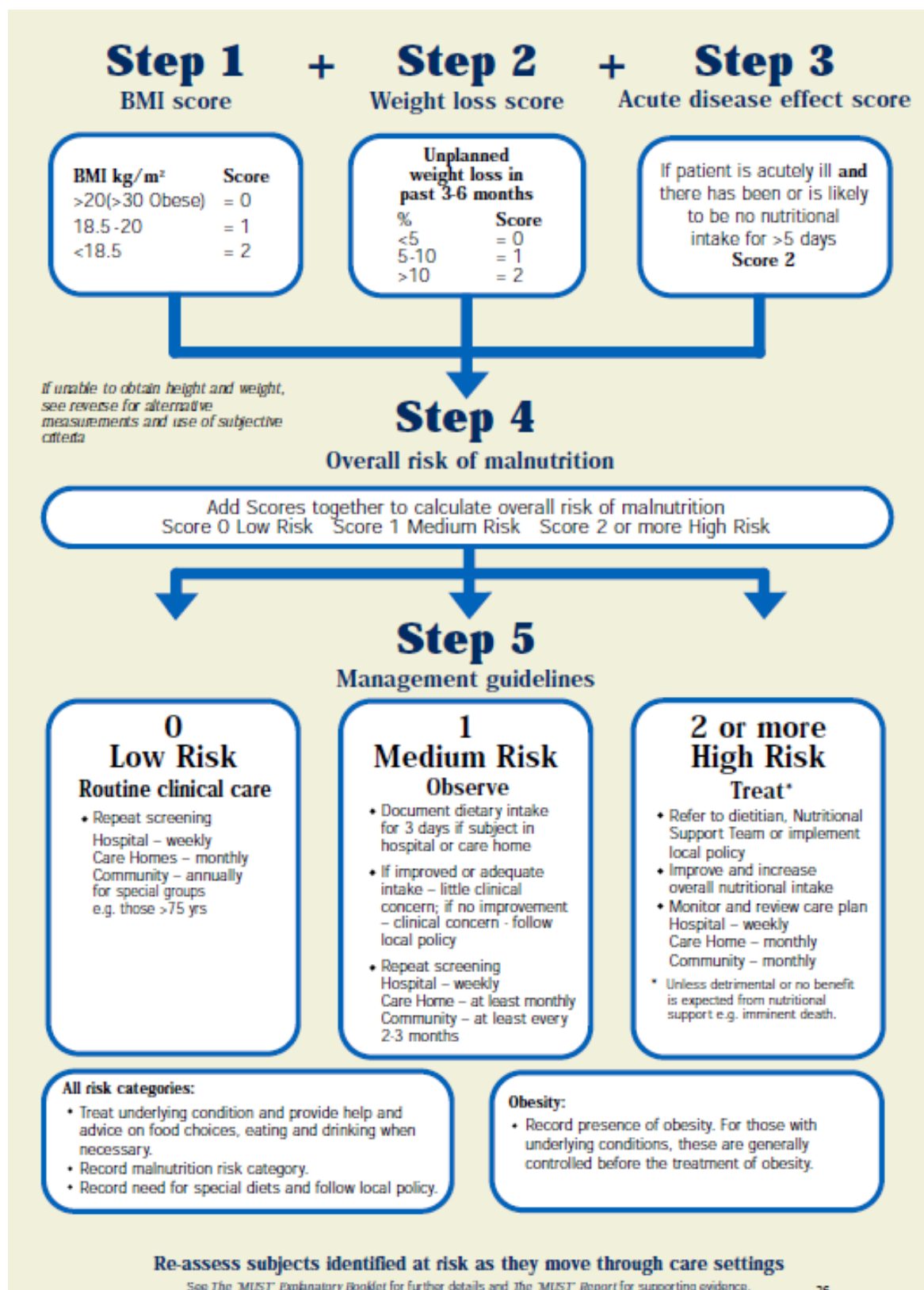
REFERENCE: HSE, Dept. of Health and Children (2008) 'Strategy to Prevent Falls and Fractures in Ireland's Ageing Population'. National Council on Aging and Older People, Report of the National Steering Group on the Prevention of Falls in Older People and the Prevention and Management of Osteoporosis throughout life. Available from www.hse.ie.

Step 1 – BMI score (& BMI)



Note : The black lines denote the exact cut off points (30,20 and 18.5 kg/m²), figures on the chart have been rounded to the nearest whole number.

Ireland's Ageing Population'. National Council on Aging and Older People, Report of the National Steering Group on the Prevention of Falls in Older People and the Prevention and Management of Osteoporosis throughout life. Available from www.hse.ie.



REFERENCE: HSE, Dept. of Health and Children (2008) 'Strategy to Prevent Falls and Fractures in Ireland's Ageing Population'. National Council on Aging and Older People, Report of the National Steering Group on the Prevention of Falls in Older People and the Prevention and Management of Osteoporosis throughout life. Available from www.hse.ie.

Step 2 – Weight loss score

	SCORE 0 Wt Loss < 5%	SCORE 1 Wt Loss 5-10%	SCORE 2 Wt Loss > 10%
34 kg	<1.70	1.70 – 3.40	>3.40
36 kg	<1.80	1.80 – 3.60	>3.60
38 kg	<1.90	1.90 – 3.80	>3.80
40 kg	<2.00	2.00 – 4.00	>4.00
42 kg	<2.10	2.10 – 4.20	>4.20
44 kg	<2.20	2.20 – 4.40	>4.40
46 kg	<2.30	2.30 – 4.60	>4.60
48 kg	<2.40	2.40 – 4.80	>4.80
50 kg	<2.50	2.50 – 5.00	>5.00
52 kg	<2.60	2.60 – 5.20	>5.20
54 kg	<2.70	2.70 – 5.40	>5.40
56 kg	<2.80	2.80 – 5.60	>5.60
58 kg	<2.90	2.90 – 5.80	>5.80
60 kg	<3.00	3.00 – 6.00	>6.00
62 kg	<3.10	3.10 – 6.20	>6.20
64 kg	<3.20	3.20 – 6.40	>6.40
66 kg	<3.30	3.30 – 6.60	>6.60
68 kg	<3.40	3.40 – 6.80	>6.80
70 kg	<3.50	3.50 – 7.00	>7.00
72 kg	<3.60	3.60 – 7.20	>7.20
74 kg	<3.70	3.70 – 7.40	>7.40
76 kg	<3.80	3.80 – 7.60	>7.60
78 kg	<3.90	3.90 – 7.80	>7.80
80 kg	<4.00	4.00 – 8.00	>8.00
82 kg	<4.10	4.10 – 8.20	>8.20
84 kg	<4.20	4.20 – 8.40	>8.40
86 kg	<4.30	4.30 – 8.60	>8.60
88 kg	<4.40	4.40 – 8.80	>8.80
90 kg	<4.50	4.50 – 9.00	>9.00
92 kg	<4.60	4.60 – 9.20	>9.20
94 kg	<4.70	4.70 – 9.40	>9.40
96 kg	<4.80	4.80 – 9.60	>9.60
98 kg	<4.90	4.90 – 9.80	>9.80
100 kg	<5.00	5.00 – 10.00	>10.00
102 kg	<5.10	5.10 – 10.20	>10.20
104 kg	<5.20	5.20 – 10.40	>10.40
106 kg	<5.30	5.30 – 10.60	>10.60
108 kg	<5.40	5.40 – 10.80	>10.80
110 kg	<5.50	5.50 – 11.00	>11.00
112 kg	<5.60	5.60 – 11.20	>11.20
114 kg	<5.70	5.70 – 11.40	>11.40
116 kg	<5.80	5.80 – 11.60	>11.60
118 kg	<5.90	5.90 – 11.80	>11.80
120 kg	<6.00	6.00 – 12.00	>12.00
122 kg	<6.10	6.10 – 12.20	>12.20
124 kg	<6.20	6.20 – 12.40	>12.40
126 kg	<6.30	6.30 – 12.60	>12.60

Weight before weight loss (kg)

	SCORE 0 Wt Loss < 5%	SCORE 1 Wt Loss 5-10%	SCORE 2 Wt Loss > 10%
5st 4lb	<4lb	4lb – 7lb	>7lb
5st 7lb	<4lb	4lb – 8lb	>8lb
5st 11lb	<4lb	4lb – 8lb	>8lb
6st	<4lb	4lb – 8lb	>8lb
6st 4lb	<4lb	4lb – 9lb	>9lb
6st 7lb	<5lb	5lb – 9lb	>9lb
6st 11lb	<5lb	5lb – 10lb	>10lb
7st	<5lb	5lb – 10lb	>10lb
7st 4lb	<5lb	5lb – 10lb	>10lb
7st 7lb	<5lb	5lb – 11lb	>11lb
7st 11lb	<5lb	5lb – 11lb	>11lb
8st	<6lb	6lb – 11lb	>11lb
8st 4lb	<6lb	6lb – 12lb	>12lb
8st 7lb	<6lb	6lb – 12lb	>12lb
8st 11lb	<6lb	6lb – 12lb	>12lb
9st	<6lb	6lb – 13lb	>13lb
9st 4lb	<7lb	7lb – 13lb	>13lb
9st 7lb	<7lb	7lb – 13lb	>13lb
9st 11lb	<7lb	7lb – 1st 0lb	>1st 0lb
10st	<7lb	7lb – 1st 0lb	>1st 0lb
10st 4lb	<7lb	7lb – 1st 0lb	>1st 0lb
10st 7lb	<7lb	7lb – 1st 1lb	>1st 1lb
10st 11lb	<8lb	8lb – 1st 1lb	>1st 1lb
11st	<8lb	8lb – 1st 1lb	>1st 1lb
11st 4lb	<8lb	8lb – 1st 2lb	>1st 2lb
11st 7lb	<8lb	8lb – 1st 2lb	>1st 2lb
11st 11lb	<8lb	8lb – 1st 3lb	>1st 3lb
12st	<8lb	8lb – 1st 3lb	>1st 3lb
12st 4lb	<9lb	9lb – 1st 3lb	>1st 3lb
12st 7lb	<9lb	9lb – 1st 4lb	>1st 4lb
12st 11lb	<9lb	9lb – 1st 4lb	>1st 4lb
13st	<9lb	9lb – 1st 4lb	>1st 4lb
13st 4lb	<9lb	9lb – 1st 5lb	>1st 5lb
13st 7lb	<9lb	9lb – 1st 5lb	>1st 5lb
13st 11lb	<10lb	10lb – 1st 5lb	>1st 5lb
14st	<10lb	10lb – 1st 6lb	>1st 6lb
14st 4lb	<10lb	10lb – 1st 6lb	>1st 6lb
14st 7lb	<10lb	10lb – 1st 6lb	>1st 6lb
14st 11lb	<10lb	10lb – 1st 7lb	>1st 7lb
15st	<11lb	11lb – 1st 7lb	>1st 7lb
15st 4lb	<11lb	11lb – 1st 7lb	>1st 7lb
15st 7lb	<11lb	11lb – 1st 8lb	>1st 8lb
15st 11lb	<11lb	11lb – 1st 8lb	>1st 8lb
16st	<11lb	11lb – 1st 8lb	>1st 8lb
16st 4lb	<11lb	11lb – 1st 9lb	>1st 9lb
16st 7lb	<12lb	12lb – 1st 9lb	>1st 9lb

Weight before weight loss (st lb)

REFERENCE: HSE, Dept. of Health and Children (2008) 'Strategy to Prevent Falls and Fractures in Ireland's Ageing Population'. National Council on Aging and Older People, Report of the National Steering Group on the Prevention of Falls in Older People and the Prevention and Management of Osteoporosis throughout life. Available from www.hse.ie.

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Alternative measurements and considerations

Step 1: BMI (body mass index)

If height cannot be measured

- Use recently documented or self-reported height (if reliable and realistic).
- If the subject does not know or is unable to report their height, use one of the alternative measurements to estimate height (ulna, knee height or demispan).

If height & weight cannot be obtained

- Use mid upper arm circumference (MUAC) measurement to estimate BMI category.

Step 2: Recent unplanned weight loss

If recent weight loss cannot be calculated, use self-reported weight loss (if reliable and realistic).

Subjective criteria

If height, weight or BMI cannot be obtained, the following criteria which relate to them can assist your professional judgement of the subject's nutritional risk category. Please note, use of these criteria is not designed to assign a score.

1. BMI

- Clinical impression – thin, acceptable weight, overweight. Obvious wasting (very thin) and obesity (very overweight) can also be noted.

2. Unplanned weight loss

- Clothes and/or jewellery have become loose fitting (weight loss).
- History of decreased food intake, reduced appetite or swallowing problems over 3-6 months and underlying disease or psycho-social/physical disabilities likely to cause weight loss.

3. Acute disease effect

- No nutritional intake or likelihood of no intake for more than 5 days.

Further details on taking alternative measurements, special circumstances and subjective criteria can be found in *The 'MUST' Explanatory Booklet*. A copy can be downloaded at www.bapen.org.uk or purchased from the BAPEN office. The full evidence-base for 'MUST' is contained in *The 'MUST' Report* and is also available for purchase from the BAPEN office.

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REFERENCE: HSE, Dept. of Health and Children (2008) 'Strategy to Prevent Falls and Fractures in Ireland's Ageing Population'. National Council on Aging and Older People, Report of the National Steering Group on the Prevention of Falls in Older People and the Prevention and Management of Osteoporosis throughout life. Available from www.hse.ie.

Alternative measurements: instructions and tables

If height cannot be obtained, use length of forearm (ulna) to calculate height using tables below.
(See The 'MUST' Explanatory Booklet for details of other alternative measurements (knee height and demispan) that can also be used to estimate height).

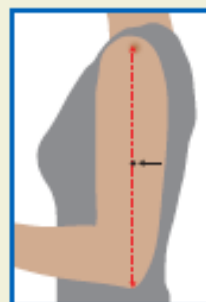
Estimating height from ulna length



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).

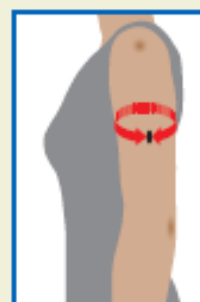
HEIGHT (m)	Men (<65 years)	1.94	1.93	1.91	1.89	1.87	1.85	1.84	1.82	1.80	1.78	1.76	1.75	1.73	1.71
	Men (>65 years)	1.87	1.86	1.84	1.82	1.81	1.79	1.78	1.76	1.75	1.73	1.71	1.70	1.68	1.67
	Ulna length (cm)	32.0	31.5	31.0	30.5	30.0	29.5	29.0	28.5	28.0	27.5	27.0	26.5	26.0	25.5
HEIGHT (m)	Women (<65 years)	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
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

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 *The 'MUST' Explanatory Booklet*.

REFERENCE: HSE, Dept. of Health and Children (2008) 'Strategy to Prevent Falls and Fractures in Ireland's Ageing Population'. National Council on Aging and Older People, Report of the National Steering Group on the Prevention of Falls in Older People and the Prevention and Management of Osteoporosis throughout life. Available from www.hse.ie.

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Malnutrition Universal Screening Tool 'MUST'

How do I identify a poorly nourished patient, or a patient who is at risk of malnutrition?

Identifying a patient who is malnourished, or is at risk of malnutrition as early as possible is vital. Some of the signs and symptoms of disease related malnutrition may include:

- Unintentional weight loss
- Obvious thin/ wasted appearance
- Poor appetite/ disinterest in food reported
- History of decreased intake/poor appetite, portion sizes changed
- Altered taste/ smell
- Change in food preferences avoiding food e.g. meat
- Poor skin integrity, pressure sores

However, the most reliable method of identifying disease related malnutrition is to use a nutrition screening tool. A nutrition screening tool is only effective if the results are linked to a pathway of actions or interventions appropriate for the patients care.

There are so many nutrition screening tools available. How do I know which is best?

The main things to consider when choosing a nutrition screening tool are that it is evidence based, validated, reliable and practical. It should link to specified protocols for action e.g. referral of those identified as 'at risk', to a Dietitian for more detailed assessment or rescreen for those at low risk at regular intervals.

What screening tool is appropriate for community based adults?

Malnutrition Universal Screening Tool or MUST was developed for use in both hospital and community settings. It uses factors such as Body Mass Index (BMI), rate of weight loss and presence of acute disease factors to detect disease related malnutrition.

Irish Nutrition and Dietetic Institute, Ashgrove House, Kill Avenue, Dun Laoghaire, Co. Dublin. Email: info@indi.ie

REFERENCE: HSE, Dept. of Health and Children (2008) 'Strategy to Prevent Falls and Fractures in Ireland's Ageing Population'. National Council on Aging and Older People, Report of the National Steering Group on the Prevention of Falls in Older People and the Prevention and Management of Osteoporosis throughout life. Available from www.hse.ie.



How to screen using 'MUST'

There are five steps to follow:

Step 1: Body mass index (BMI) (kg/m^2)

- Take the subject's height and weight to calculate BMI and use the BMI chart to establish the subject's BMI score. (Appendix 2)
- If weight and height are not available, self reported height and weight, if realistic and reliable, may be appropriate.
- Height may be estimated using ulna length, knee height or demi span (www.bapen.org.uk) if the reported height is unreliable.

$$\text{Body mass Index (BMI)} = \frac{\text{weight (kg)}}{\text{Height (m)} \times \text{Height (m)}}$$

e.g.

$$\text{Weight} = 62\text{kgs} \text{ Height} = 1.72\text{m} \text{ BMI} = 62 / (1.72)^2 = 20.95\text{kgs}/\text{m}^2$$

Step 2: Unplanned weight loss

- Unplanned weight loss over 3 to 6 months is a more acute risk factor for malnutrition than BMI
 - < 5% weight loss = within normal variation (score 0)
 - 5-10% weight loss = early indicator of increased risk (score 1)
 - >10% weight loss = clinically significant (Score 2)
- To establish the subject's weight loss score, ask if there has been any weight loss in the last 3 to 6 months, and if so how much (or look in their records).
- Deduct current weight from previous weight to calculate amount of weight lost. Use weight loss tables (Appendix 3) to establish weight loss score.
- If the subject has not lost weight (or has gained weight) in the past 3 to 6 months, score = 0.

$$\text{Percentage weight loss} = \frac{\text{usual weight} - \text{current weight}}{\text{usual weight}} \times 100$$

e.g.

$$\text{Usual Weight} = 70\text{kgs}, \text{ Current wt} = 64\text{kgs} \Rightarrow (70-64)/70 \times 100 = 8.57\% \text{ Wt loss}$$



Step 3: Acute disease can affect risk of malnutrition

If the patient is currently affected by an acute patho-physiological or psychological condition, and there has been no nutritional intake for 5 or more days, they are at nutritional risk. Such patients include those who are critically ill, have swallowing difficulties (e.g. after stroke), post head injuries or are undergoing gastrointestinal surgery. Add a score of 2 for these patients.

Step 4: Overall risk of malnutrition

Establish overall risk of malnutrition after considering all relevant factors. Add scores together from Steps 1, 2 and 3 to calculate overall risk of malnutrition.

0 = Low risk

1 = Medium risk

2 or more = High risk

If neither BMI nor weight loss can be established, assess overall risk subjectively using the "Other criteria" in the box below.

Step 5: Management guidelines – setting an appropriate care plan

- Record subject's overall risk score, agree and document a care plan and any advice given.
- Subjects in high or medium risk categories typically require nutrition intervention. This intervention may include high protein high calorie dietary advice, and referral to a dietitian for a more detailed dietary assessment.

For further advice:

See The 'MUST' Explanatory Booklet for more details and The 'MUST' Report for supporting evidence. www.bapen.org.uk

For a more detailed look at high calorie dietary advice see www.indi.ie for the following fact sheets on;

- Advice for people with poor appetite / weight loss – Food Fortification
- Nutrition in Residential Care Settings Feb 2009
- A guide to the use of Oral Nutritional Supplements



MUST Malnutrition Universal Screening Tool

Step 1 BMI kg/m ²		Score
> 20	0	_____
> 30 (obese)	0	
18.5 – 20	1	
< 18.5	2	
Step 2 Unplanned weight loss in past 3-6 months %		
< 5%	0	_____
5-10%	1	
>10%	2	
Step 3 Acute disease effect score		
If patient is acutely ill and there has been or is unlikely to be no nutritional intake for > 5 days	2	_____
Step 4		
Add steps 1, 2 + 3		_____

Score 0
Low Risk

Routine clinical care

Score 1
Medium Risk

Observe

Score 2 or more
High Risk

Develop treatment
pathway

Refer to National Institute for Health and Clinical Excellence (NICE) and European Society of Parenteral and Enteral Nutrition (ESPEN) Guidelines

REFERENCE: HSE, Dept. of Health and Children (2008) 'Strategy to Prevent Falls and Fractures in Ireland's Ageing Population'. National Council on Aging and Older People, Report of the National Steering Group on the Prevention of Falls in Older People and the Prevention and Management of Osteoporosis throughout life. Available from www.hse.ie.



Advice for People with Poor Appetite / Weight Loss

What changes should I make to the way I eat if I have a poor appetite and/or have lost weight?

It is important to make every mouthful count when you have a small appetite, have lost weight or are unable to eat enough food. You need to have a nourishing eating plan with extra energy and protein. This sheet contains ideas on how to make your food and drinks more nourishing and higher in energy and protein.

Advice to help prevent weight loss, maintain weight or gain weight

- Don't wait till you feel hungry to eat – try to establish a regular pattern
- Have three small meals and three snacks a day (little and often)
- Try to include a source of carbohydrate (e.g. breads, cereals, potatoes and rice)
- Try to include rich source of protein (meat, fish, chicken, eggs, beans) at least twice a day
- Try to have milky drinks after your meals, or with a snack between meals
- Avoid drinking immediately before or during meals – have drinks a half an hour beforehand or earlier, or at the end of a meal
- Do not use low fat or diet products. Usual healthy eating advice is generally inappropriate in these instances
- Limit intake of drinks with little nutritional value e.g. minerals, cup of soups
- If you are feeling too tired or unwell to prepare meals – use frozen or pre-prepared meals
- Try the following tips of food fortification

How can I make the food I eat higher in energy and protein to prevent further weight loss?

Food Fortification is the key ingredient. By adding certain nutrients to your food, in this case energy and protein, you can make your meals extra nourishing. Remember to focus on the foods you usually like. Here are some ideas for ways you can fortify food.

Making food more nourishing

Fortified milk: Add 4tbsp milk powder e.g. 'Marvel' or 'Milk Made' added to one pint/approx 500mls of milk. This can then be used as usual in drinks, on cereals, in sauces and puddings.

- Make coffee, hot chocolate, soups and jelly with fortified milk instead of water
- Add extra full fat spread to bread, potatoes, vegetables and sauces
- Add sugar to hot drinks, cereals, milk puddings and desserts
- Use fortified milk to make porridge, milk puddings, desserts and creamed potatoes
- Use jam, marmalade, honey, peanut butter or chocolate spread on bread, scones, biscuits, cakes, puddings, yogurts and desserts
- Grate cheese onto toast, scrambled egg, potato, vegetables, soups and dinners
- Fry foods in butter, oil to increase calories (e.g. fried potatoes, meats, eggs)



Choose the following as snacks

- Full fat yogurts/ dessert yogurts/ mousse
- Yogurt/milk based drinks
- Rice pudding / semolina
- Scone with butter and jam
- Breakfast cereal with full fat milk
- Mashed banana with cream and sugar
- Individual ready made puddings
- Crackers and cheese / cream cheese
- Full fat custard
- Chocolate
- Biscuits
- Cakes
- Nuts

Quick and Easy Meal Ideas

Sandwiches, fresh or toasted, made with wholemeal or white bread can be nutritious and quick to make.

Fillings could include:

- Egg mayonnaise
- Peanut butter and jam
- Toasted cheese and ham
- Tinned fish e.g. salmon, tuna

You could try sardines on toast or beans on toast as another easy alternative

Eggs

Omelettes, scrambled, poached, boiled or fried. Make sure the eggs are thoroughly cooked, i.e. both yolk and white are hard.

Ready made meals

Make use of ready prepared foods, convenience foods such as microwavable meals, frozen and tinned foods. They are easy to store and quick to prepare and can provide a nutritious alternative to cooking. Pies, tinned meats, quiches, pizzas, frozen fish and other dishes can be stored for future use and, served with frozen and or tinned peas, beans or sweetcorn,



Soups

Homemade, tinned or packets are quick and easy to prepare, served with bread and full fat spread. Add extra cheese/milk.

Desserts

* Make with fortified milk and serve with instant toppings such as tinned custard, evaporated or condensed milk.

- Yoghurt with fresh, stewed or dried fruit, muesli cereal, honey
- Ice cream with fruit, nuts, chocolate, sauces, syrup
- Fresh/tinned fruit or trifle, with custard or other instant topping
- Fruit tart or sponge pudding with custard, cream or syrup
- Instant desserts, e.g. angel delight, crème caramel, instant whip
- Tinned milk puddings, e.g. creamed rice or tapioca served with cream, evaporated or condensed milk, jam, honey or sugar

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Sample Meal Plan

Breakfast	Porridge made on whole milk or Cereal with whole milk \pm sugar And/or Bread/ Toast with full fat spread and jam/marmalade And/or boiled egg with bread and full fat spread And/or cooked breakfast – i.e. fried egg/ rasher/ sausage/ pudding Milk/Tea/ Coffee
Mid-morning	Milky drink 2-3 Biscuits/ full fat yoghurt/ cheese & crackers
Main meal	Fish/chicken/meat with sauce/gravy Potato with full fat spread Vegetables with full fat spread Dessert: milk pudding/ trifle/ full fat yoghurt/ ice cream/ custard
Mid afternoon	Milky drink Cake/ 2-3 biscuits/bread with full fat spread and jam/ cheese & crackers
Light meal	Toast/bread with full fat spread and scrambled egg and cheese Or Or tinned fish (e.g. sardines, salmon, tuna) Or with soup (fortified) Or Sandwich with egg mayonnaise, tuna mayonnaise, ham, chicken and / or cheese, Dessert: milk pudding/ trifle/ full fat yoghurt/ ice cream/ custard
Bedtime snack	Milky drink/ cocoa/ ovaltine / hot chocolate Cake/ 2-3 biscuits/ bread with full fat spread and jam/ cheese & crackers/ breakfast cereal with whole milk

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REFERENCE: HSE, Dept. of Health and Children (2008) 'Strategy to Prevent Falls and Fractures in Ireland's Ageing Population'. National Council on Aging and Older People, Report of the National Steering Group on the Prevention of Falls in Older People and the Prevention and Management of Osteoporosis throughout life. Available from www.hse.ie.