NHS
Bassetlaw
Clinical Commissioning Group

REACT TO MALNUTRITION AND DEHYDRATION

Preventing and Managing Malnutrition and Dehydration

A guide for your care home

Introduction

Nutrition and hydration (Food and fluids) are everyone's responsibility, staff, family and residents themselves. The consequences of not providing sufficient food or fluid are serious, including fragile skin, increased risk of infections such as pneumonia and acute kidney injury due to dehydration.

These resources are designed to assist in the identification and on going management of malnutrition and ensuring good hydration in all residents.

Nutrition

In this first section we will learn how to identify and reduce the risk of malnutrition. We will do this by:

Step	Action	Reference
Food Refusal	**Understand the reasons why a resident may refuse food and what you can do to help**	See the chart on page 3
MUST Screening for Malnutrition	**Use the MUST Screening Tool to identify if there is a risk of malnutrition**	See pages 4-8
MUST Score Sheet and Monthly Record	**Record MUST Score monthly and identify the care plan you should follow**	See page 9
Nutrition Care Plans	**Follow the appropriate care plan identified from the MUST Score Sheet**	The nutritional care plans in these resources have been developed and trialled by the Rotherham Doncaster and South Humber Dietetic Service - page 10
Food and Fluid Charts	**Use your care home food and fluid charts to record MUST snacks and drinks consumed**	See page 11
Menus, Recipes, Snacks and Drinks	**Print off and display the supplied menus and recipes to help follow the Care Plans**	Pages 12-14 provide: • Fortified diet menu • MUST snacks and recipes • MUST drinks/shots recipes

Copyright © 2019 Bassetlaw Clinical Commissioning Group

Food Refusal

Sometimes residents may refuse food or fluid for various reasons. Here are some common reasons and the things you can do to help.

Possible reason for food refusal	What you can do
• Dislike of food being offered • Unfamiliar foods being offered	• Record residents likes/dislikes • Know cultural /religious requirements • Use visual cues and pictures of food
• Sore mouth • Dentures • Problems swallowing • Physical problem	• Promote good oral hygiene –treat infections/ dental checks • Refer to SALT if swallowing problems • Provide appropriate adaptive cutlery or give assistance at meal times
• Unaware of meal times • May simply not wish to eat	• Explain when meal times are, prepare individual for mealtimes and set regular daily patterns. Have regular helpers to assist with feeding if needed • Give finger foods, small regular meals given throughout day not just at set meal times* • Physical contact - hold hands, eye contact - may take food from relatives
• Depression causing anorexia • Paranoia (fear of poisoning)	• Treatment with medication/psychiatric assessment • Sealed food containers opened in front of individual
• Inability to feed themselves or open packaging	• Ensure help is provided when needed

MUST Screening for Malnutrition

MUST (Malnutrition Universal Screening Tool) is a validated tool to help you to identify individuals who may be at risk of malnutrition, and who may benefit from appropriate nutritional intervention.

The full tool comprises of 5 steps and is on page 4-8 of this resource. A detailed explaination of how to use the MUST screening tool can be found by watching the nutrition film on the ‘React To Malnutrition and Dehydration, web page.

Copyright © 2019 Bassetlaw Clinical Commissioning Group

BAPEN
www.bapen.org.uk

Step 1 + Step 2 + Step 3

Step 1 — BMI score

BMI kg/m²	Score
>20 (>30 Obese)	= 0
18.5-20	= 1
<18.5	= 2

Step 2 — Weight loss score

Unplanned weight loss in past 3-6 months

%	Score
<5	= 0
5-10	= 1
>10	= 2

Step 3 — Acute disease effect score

If patient is acutely ill **and** there has been or is likely to be no nutritional intake for >5 days

Score 2

If unable to obtain height and weight, see reverse for alternative measurements and use of subjective criteria

Acute disease effect is unlikely to apply outside hospital. See 'MUST' Explanatory Booklet for further information

Step 4

Overall risk of malnutrition

Add Scores together to calculate overall risk of malnutrition
Score 0 Low Risk   Score 1 Medium Risk   Score 2 or more High Risk

Step 5

Management guidelines

0 Low Risk

Routine clinical care

- Repeat screening
  Hospital – weekly
  Care Homes – monthly
  Community – annually
  for special groups
  e.g. those >75 yrs

1 Medium Risk

Observe

- Document dietary intake for 3 days
- If adequate – little concern and repeat screening
  - Hospital – weekly
  - Care Home – at least monthly
  - Community – at least every 2-3 months
- If inadequate – clinical concern – follow local policy, set goals, improve and increase overall nutritional intake, monitor and review care plan regularly

2 or more High Risk

Treat*

- Refer to dietitian, Nutritional Support Team or implement local policy
- Set goals, improve and increase overall nutritional intake
- Monitor and review care plan
  Hospital – weekly
  Care Home – monthly Community – monthly

* Unless detrimental or no benefit is expected from nutritional support e.g. imminent death.

All risk categories:

- Treat underlying condition and provide help and advice on food choices, eating and drinking when necessary.
- Record malnutrition risk category.
- Record need for special diets and follow local policy.

Obesity:

- Record presence of obesity. For those with underlying conditions, these are generally controlled before the treatment of obesity.

Re-assess subjects identified at risk as they move through care settings

© BAPEN

BAPEN
www.bapen.org.uk

Step 1 – BMI score (& BMI)

Height (feet and inches)

Weight (kg)	4'9½	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	6'3½	6'4½	Weight (stones and pounds)
100	47	46	44	43	42	41	40	39	38	37	36	35	35	34	33	32	32	31	30	30	29	28	28	27	27	15 10
99	46	45	44	43	42	41	40	39	38	37	36	35	34	33	33	32	31	31	30	29	29	28	27	27	26	15 8
98	46	45	44	42	41	40	39	38	37	36	36	35	34	33	32	32	31	30	30	29	28	28	27	27	26	15 6
97	46	44	43	42	41	40	39	38	37	36	35	34	34	33	32	31	31	30	29	29	28	27	27	26	26	15 4
96	45	44	43	42	40	39	38	38	37	36	35	34	33	32	32	31	30	30	29	28	28	27	27	26	26	15 2
95	45	43	42	41	40	39	38	37	36	35	34	34	33	32	31	31	30	29	29	28	27	27	26	26	25	14 13
94	44	43	42	41	40	39	38	37	36	35	34	33	33	32	31	30	30	29	28	28	27	27	26	25	25	14 11
93	44	42	41	40	39	38	37	36	35	35	34	33	32	31	31	30	29	29	28	27	27	26	26	25	25	14 9
92	43	42	41	40	39	38	37	36	35	34	33	33	32	31	30	30	29	28	28	27	27	26	25	25	24	14 7
91	43	42	40	39	38	37	36	36	35	34	33	32	31	31	30	29	29	28	27	27	26	26	25	25	24	14 5
90	42	41	40	39	38	37	36	35	34	33	33	32	31	30	30	29	28	28	27	27	26	25	25	24	24	14 2
89	42	41	40	39	38	37	36	35	34	33	32	32	31	30	29	29	28	27	27	26	26	25	25	24	24	14 0
88	41	40	39	38	37	36	35	34	34	33	32	31	30	30	29	28	28	27	27	26	25	25	24	24	23	13 12
87	41	40	39	38	37	36	35	34	33	32	32	31	30	29	29	28	27	27	26	26	25	25	24	24	23	13 10
86	40	39	38	37	36	35	34	34	33	32	31	30	30	29	28	28	27	27	26	25	25	24	24	23	23	13 8
85	40	39	38	37	36	35	34	33	32	32	31	30	29	29	28	27	27	26	26	25	25	24	24	23	23	13 5
84	39	38	37	36	35	35	34	33	32	31	30	30	29	28	28	27	27	26	25	25	24	24	23	23	22	13 3
83	39	38	37	36	35	34	33	32	32	31	30	29	29	28	27	27	26	26	25	25	24	23	23	23	22	13 1
82	38	37	36	35	35	34	33	32	31	30	30	29	28	28	27	27	26	26	25	25	24	24	23	22	22	12 13
81	38	37	36	35	34	33	32	32	31	30	29	29	28	27	27	26	26	25	25	24	24	23	23	22	22	12 11
80	38	37	36	35	34	33	32	31	30	30	29	28	28	27	26	26	25	25	24	24	23	23	22	22	21	12 8
79	37	36	35	34	33	32	32	31	30	29	29	28	27	27	26	26	25	24	24	23	23	22	22	21	21	12 6
78	37	36	35	34	33	32	31	30	30	29	28	28	27	26	26	25	25	24	24	23	23	22	22	21	21	12 4
77	36	35	34	33	32	32	31	30	29	29	28	27	27	26	25	25	24	24	23	23	22	22	21	21	20	12 2
76	36	35	34	33	32	31	30	30	29	28	28	27	26	26	25	25	24	23	23	22	22	22	21	21	20	12 0
75	35	34	33	32	32	31	30	29	29	28	27	27	26	25	25	24	24	23	23	22	22	21	21	20	20	11 11
74	35	34	33	32	31	30	30	29	28	28	27	26	26	25	24	24	23	23	22	22	21	21	20	20	20	11 9
73	34	33	32	32	31	30	29	29	28	27	26	26	25	25	24	24	23	23	22	22	21	21	20	20	19	11 7
72	34	33	32	31	30	30	29	28	27	27	26	26	25	24	24	23	23	22	22	21	21	20	20	20	19	11 5
71	33	32	32	31	30	29	28	28	27	26	26	25	25	24	23	23	22	22	21	21	21	20	20	19	19	11 3
70	33	32	31	30	30	29	28	27	27	26	25	25	24	24	23	23	22	22	21	21	20	20	19	19	19	11 0
69	32	32	31	30	29	28	28	27	26	26	25	24	24	23	23	22	22	21	21	20	20	20	19	19	18	10 12
68	32	31	30	29	29	28	27	27	26	25	25	24	24	23	22	22	21	21	21	20	20	19	19	18	18	10 10
67	31	31	30	29	28	28	27	26	26	25	24	24	23	23	22	22	21	21	20	20	19	19	19	18	18	10 8
66	31	30	29	29	28	27	26	26	25	25	24	23	23	22	22	21	21	20	20	19	19	19	18	18	18	10 6
65	30	30	29	28	27	27	26	25	25	24	24	23	22	22	21	21	21	20	20	19	19	18	18	18	17	10 3
64	30	29	28	28	27	26	26	25	24	24	23	23	22	22	21	21	20	20	19	19	18	18	18	17	17	10 1
63	30	29	28	27	27	26	25	25	24	23	23	22	22	21	21	20	20	19	19	19	18	18	17	17	17	9 13
62	29	28	28	27	26	25	25	24	24	23	22	22	21	21	20	20	20	19	19	18	18	18	17	17	16	9 11
61	29	28	27	26	26	25	24	24	23	23	22	22	21	21	20	20	19	19	18	18	18	17	17	17	16	9 8
60	28	27	27	26	25	25	24	23	23	22	22	21	21	20	20	19	19	19	18	18	17	17	17	16	16	9 6
59	28	27	26	26	25	24	24	23	22	22	21	21	20	20	19	19	19	18	18	17	17	17	16	16	16	9 4
58	27	26	26	25	24	24	23	23	22	22	21	21	20	20	19	19	18	18	18	17	17	16	16	16	15	9 2
57	27	26	25	25	24	23	23	22	22	21	21	20	20	19	19	18	18	18	17	17	16	16	16	15	15	9 0
56	26	26	25	24	24	23	22	22	21	21	20	20	19	19	18	18	18	17	17	17	16	16	16	15	15	8 11
55	26	25	24	24	23	23	22	21	21	20	20	19	19	19	18	18	17	17	17	16	16	16	15	15	15	8 9
54	25	25	24	23	23	22	22	21	21	20	20	19	19	18	18	17	17	17	16	16	16	15	15	15	14	8 7
53	25	24	24	23	22	22	21	21	20	20	19	19	18	18	18	17	17	16	16	16	15	15	15	14	14	8 5
52	24	24	23	23	22	21	21	20	20	19	19	18	18	18	17	17	16	16	16	15	15	15	14	14	14	8 3
51	24	23	23	22	22	21	20	20	19	19	19	18	18	17	17	16	16	16	15	15	15	14	14	14	14	8 0
50	23	23	22	22	21	21	20	20	19	19	18	18	17	17	17	16	16	15	15	15	14	14	14	14	13	7 12
49	23	22	22	21	21	20	20	19	19	18	18	17	17	17	16	16	15	15	15	14	14	14	14	13	13	7 10
48	23	22	21	21	20	20	19	19	18	18	17	17	17	16	16	15	15	15	14	14	14	14	13	13	13	7 8
47	22	21	21	20	20	19	19	18	18	17	17	17	16	16	16	15	15	15	14	14	14	13	13	13	12	7 6
46	22	21	20	20	19	19	18	18	18	17	17	16	16	16	15	15	15	14	14	14	13	13	13	12	12	7 3
45	21	21	20	19	19	18	18	18	17	17	16	16	16	15	15	15	14	14	14	13	13	13	12	12	12	7 1
44	21	20	20	19	19	18	18	17	17	16	16	16	15	15	15	14	14	14	13	13	13	12	12	12	12	6 13
43	20	20	19	19	18	18	17	17	16	16	16	15	15	15	14	14	14	13	13	13	12	12	12	12	11	6 11
42	20	19	19	18	18	17	17	16	16	16	15	15	15	14	14	14	13	13	13	12	12	12	12	11	11	6 9
41	19	19	18	18	17	17	16	16	16	15	15	15	14	14	14	13	13	13	12	12	12	12	11	11	11	6 6
40	19	18	18	17	17	16	16	16	15	15	15	14	14	14	13	13	13	12	12	12	12	11	11	11	11	6 4
39	18	18	17	17	16	16	16	15	15	15	14	14	13	13	13	13	12	12	12	12	11	11	11	11	10	6 2
38	18	17	17	16	16	16	15	15	14	14	14	13	13	13	13	12	12	12	11	11	11	11	11	10	10	6 0
37	17	17	16	16	16	15	15	14	14	14	13	13	13	13	12	12	12	11	11	11	11	10	10	10	10	5 12
36	17	16	16	16	15	15	14	14	14	13	13	13	12	12	12	12	11	11	11	11	10	10	10	10	10	5 9
35	16	16	16	15	15	14	14	14	13	13	13	12	12	12	12	11	11	11	10	10	10	10	10	9	9	5 7
34	16	16	15	15	14	14	14	13	13	13	12	12	12	11	11	11	11	10	10	10	10	10	9	9	9	5 5
33	15	15	15	14	14	14	13	13	13	12	12	12	11	11	11	11	10	10	10	10	10	9	9	9	9	5 3
32	15	15	14	14	13	13	13	13	12	12	12	11	11	11	11	10	10	10	10	9	9	9	9	9	9	5 1
31	15	14	14	13	13	13	12	12	12	12	11	11	11	10	10	10	10	10	9	9	9	9	9	8	8	4 12
30	14	14	13	13	13	12	12	12	11	11	11	11	10	10	10	10	9	9	9	9	9	8	8	8	8	4 10
Height (m)	1.46	1.48	1.50	1.52	1.54	1.56	1.58	1.60	1.62	1.64	1.66	1.68	1.70	1.72	1.74	1.76	1.78	1.80	1.82	1.84	1.86	1.88	1.90	1.92	1.94	

Score 0 (obese)

Score 0

Score 1

Score 2

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.

Height (m)

© BAPEN

Step 2 – Weight loss score

BAPEN
www.bapen.org.uk

Current weight

Weight loss in last 3 to 6 months

kg	Score 0 Wt loss < 5% Less than (kg)	Score 1 Wt loss 5 - 10% Between (kg)	Score 2 Wt loss > 10% More than (kg)
30	1.6	1.6 - 3.3	3.3
31	1.6	1.6 - 3.4	3.4
32	1.7	1.7 - 3.6	3.6
33	1.7	1.7 - 3.7	3.7
34	1.8	1.8 - 3.8	3.8
35	1.8	1.8 - 3.9	3.9
36	1.9	1.9 - 4.0	4.0
37	1.9	1.9 - 4.1	4.1
38	2.0	2.0 - 4.2	4.2
39	2.1	2.1 - 4.3	4.3
40	2.1	2.1 - 4.4	4.4
41	2.2	2.2 - 4.6	4.6
42	2.2	2.2 - 4.7	4.7
43	2.3	2.3 - 4.8	4.8
44	2.3	2.3 - 4.9	4.9
45	2.4	2.4 - 5.0	5.0
46	2.4	2.4 - 5.1	5.1
47	2.5	2.5 - 5.2	5.2
48	2.5	2.5 - 5.3	5.3
49	2.6	2.6 - 5.4	5.4
50	2.6	2.6 - 5.6	5.6
51	2.7	2.7 - 5.7	5.7
52	2.7	2.7 - 5.8	5.8
53	2.8	2.8 - 5.9	5.9
54	2.8	2.8 - 6.0	6.0
55	2.9	2.9 - 6.1	6.1
56	2.9	2.9 - 6.2	6.2
57	3.0	3.0 - 6.3	6.3
58	3.1	3.1 - 6.4	6.4
59	3.1	3.1 - 6.6	6.6
60	3.2	3.2 - 6.7	6.7
61	3.2	3.2 - 6.8	6.8
62	3.3	3.3 - 6.9	6.9
63	3.3	3.3 - 7.0	7.0
64	3.4	3.4 - 7.1	7.1

Weight loss in last 3 to 6 months

kg	Score 0 Wt loss < 5% Less than (kg)	Score 1 Wt loss 5 - 10% Between (kg)	Score 2 Wt loss > 10% More than (kg)
65	3.4	3.4 - 7.2	7.2
66	3.5	3.5 - 7.3	7.3
67	3.5	3.5 - 7.4	7.4
68	3.6	3.6 - 7.6	7.6
69	3.6	3.6 - 7.7	7.7
70	3.7	3.7 - 7.8	7.8
71	3.7	3.7 - 7.9	7.9
72	3.8	3.8 - 8.0	8.0
73	3.8	3.8 - 8.1	8.1
74	3.9	3.9 - 8.2	8.2
75	3.9	3.9 - 8.3	8.3
76	4.0	4.0 - 8.4	8.4
77	4.1	4.1 - 8.6	8.6
78	4.1	4.1 - 8.6	8.7
79	4.2	4.2 - 8.7	8.8
80	4.2	4.2 - 8.9	8.9
81	4.3	4.3 - 9.0	9.0
82	4.3	4.3 - 9.1	9.1
83	4.4	4.4 - 9.2	9.2
84	4.4	4.4 - 9.3	9.3
85	4.5	4.5 - 9.4	9.4
86	4.5	4.5 - 9.6	9.6
87	4.6	4.6 - 9.7	9.7
88	4.6	4.6 - 9.8	9.8
89	4.7	4.7 - 9.9	9.9
90	4.7	4.7 - 10.0	10.0
91	4.8	4.8 - 10.1	10.1
92	4.8	4.8 - 10.2	10.2
93	4.9	4.9 - 10.3	10.3
94	4.9	4.9 - 10.4	10.4
95	5.0	5.0 - 10.6	10.6
96	5.1	5.1 - 10.7	10.7
97	5.1	5.1 - 10.8	10.8
98	5.2	5.2 - 10.9	10.9
99	5.2	5.2 - 11.0	11.0

© BAPEN

Alternative measurements and considerations

BAPEN
www.bapen.org.uk

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).

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, these criteria should be used collectively not separately as alternatives to steps 1 and 2 of 'MUST' and are not designed to assign a score. Mid upper arm circumference (MUAC) may be used to estimate BMI category in order to support your overall impression of the subject's nutritional risk.

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

- Acutely ill and 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.

BAPEN Office, Secure Hold Business Centre, Studley Road, Redditch, Worcs, B98 7LG. Tel: 01527 457 850. Fax: 01527 458 718. bapen@sovereignconference.co.uk BAPEN is registered charity number 1023927. www.bapen.org.uk

© BAPEN 2003 ISBN 1 899467 90 4 Price £2.00
All rights reserved. This document may be photocopied for dissemination and training purposes as long as the source is credited and recognised.

Copy may be reproduced for the purposes of publicity and promotion. Written permission must be sought from BAPEN if reproduction or adaptation is required. If used for commercial gain a licence fee may be required.

© BAPEN. First published May 2003 by MAG the Malnutrition Advisory Group, a Standing Committee of BAPEN.
Reviewed and reprinted with minor changes March 2008, September 2010 and August 2011.
'MUST' is supported by the British Dietetic Association, the Royal College of Nursing and the Registered Nursing Home Association.

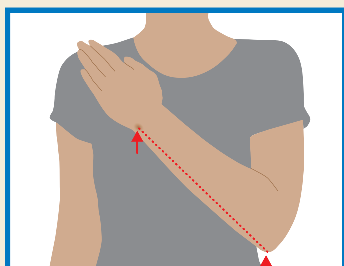
© BAPEN

BAPEN
www.bapen.org.uk

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

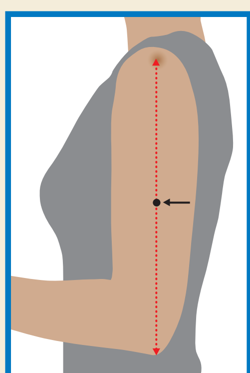


Measure between the point of the elbow (olecranon process) and the midpoint of the prominent bone of the wrist (styloid process) (left side if possible).

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

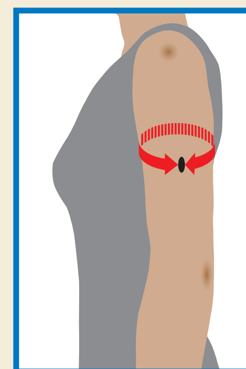
Height (m)	men (<65 years)	1.69	1.67	1.66	1.64	1.62	1.60	1.58	1.57	1.55	1.53	1.51	1.49	1.48	1.46
	men (≥65 years)	1.65	1.63	1.62	1.60	1.59	1.57	1.56	1.54	1.52	1.51	1.49	1.48	1.46	1.45
	Ulna length (cm)	25.0	24.5	24.0	23.5	23.0	22.5	22.0	21.5	21.0	20.5	20.0	19.5	19.0	18.5
Height (m)	Women (<65 years)	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/m^2.
If MUAC is >32.0 cm, BMI is likely to be >30 kg/m^2.

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.*

© BAPEN

MUST Score Sheet and Monthly Record

Name of Resident		DOB	

Height	Initial Assessment	After 1 Month	After 2 Months	After 3 Months	After 4 Months
Date					
Weight					
Step 1 BMI Score					
Step 2 Weight Loss Score	+	+	+	+	+
Step 3 Acute Disease Effect Score	+	+	+	+	+
Step 4 MUST Score	=	=	=	=	=

With a score of 2 or more - a care plan must be followed for ONE month and evidence of this needs to be provided if referral is made to a dietitian

Step 5 Care Plan to be followed

Score = 0	Score = 1	Score = 2 or More
Low Risk of Malnutrition Care Plan	Medium Risk of Malnutrition Care Plan	High Risk of Malnutrition Care Plan

Refer to the 'Care Plans to be followed after MUST screening' sheet on page 10 for details of each plan

Copyright © 2019 Bassetlaw Clinical Commissioning Group

Step 5 Care plans to be followed after MUST screening

Score = 0

Low Risk of Malnutrition Care Plan

- Balanced Diet
- Continue to screen monthly

If your resident scores **0 on MUST screening** this means they are at low risk of malnutrition but will still need regular nutritional screening and a nutritional care plan. Ensuring a balanced diet and plenty of fluids will continue to support your resident's overall health and continue to keep the risk of malnutrition low.

Even if someone is low risk, their nutritional status can change if they become unwell for a prolonged period of time.

Score = 1

Medium Risk of Malnutrition Care Plan

- Fortified foods at each meal
- 2 snacks daily
- 2 MUST drinks/shots daily
- Food and fluid charts daily
- Monitor MUST monthly

Score = 2 or More

High Risk of Malnutrition Care Plan

- Fortified foods at each meal
- 2 snacks daily
- 3 MUST drinks/shots daily
- Food and fluid charts daily
- Monitor MUST monthly

The sooner action is taken, the better the outcome for your resident.

Fortified Foods - At each meal fortified foods should be offered. Examples are included on the following pages. These can be printed off for display in kitchens and dinning rooms.

Snacks - Offering snacks is a valuable way to increase energy intake. Snacks are not alternatives to meals and should be given in between or shortly after a meal so as not to spoil the appetite of your resident.

Monitoring MUST - Continue to monitor your resident's risk of malnutrition on a monthly basis and record.

REMEMBER - With a **score of 2 or more** a care plan must be followed for **ONE month** and evidence of this needs to be provided if referral is made to a dietitian

Copyright © 2019 Bassetlaw Clinical Commissioning Group

Food and Fluid Charts

Recording food and fluid intake will enable you to see if there are any patterns to your patients eating habits. For example, do they eat more in the morning and need to be offered more food when they are happier to eat?

Food and fluid charts also demonstrate the type of foods being offered and that you have followed the action plan. Your care home should have food and fluid charts readily available for you to use - **and remember to record any MUST snacks or drinks consumed.**

By gathering this data over at least one month, you will be equipped with the appropriate information for a referral to a dietitian in the event of a resident having a MUST Score of 2 or more.

You can find a referral form for Doncaster and Bassetlaw Dietetic Team on the React to Malnutrition and Dehydration web page at: **www.reactto.co.uk**

If you are outside this region you will need to contact your own local Dietetic Team to acquire one, as referral forms vary from region to region.

Pallliative Care

If your resident is receiving palliative care the emphasis should always be on the enjoyment of nourishing food and drink, maximising their quality of life. Management of palliative care patients can be divided into three stages:

1 Early Palliative Care

In the early stages of Palliative care, or if the resident is undergoing treatment such as radiotherapy or chemotherapy: Food first - MUST drinks and snacks should be tried in the first instance. If these are unsuccessful you will need a dietitian to clearly document rational for oral nutritional supliments (ONS) with realistic outcome measures.

2 Late Palliative Care

In late palliative care the resident's condition is deteriorating and they may be experiencing pain, nausea and reduced appetite. The nutritional content of a meal is no longer of prime importance and the resident should be encouraged to eat and drink what they enjoy. The main aim is to maximise quality of life including comfort, symptom relief and enjoyment of food. The goal of nutritional intervention is not weight gain or reversal of malnutrition but quality of life. Nutritional screening and initiating ONS at this stage is not recommended.

3 Last Few Days of Life

In the last few days of life the aim is to provide comfort and to offer mouth care, sips of fluids and mouthfuls of food as desired. Nutritional screening and ONS at this stage is not recommended.

Copyright © 2019 Bassetlaw Clinical Commissioning Group

Fortified Diet

Fortified Milk	2-4 heaped tablespoons of skimmed milk powder mixed with one pint of full fat milk. Use this in place of ordinary milk

Breakfast

Cereals and Porridge	Use fortified milk add extra cream, sugar, honey and dried fruit
Toast	Add extra butter, jam, marmalade, syrup, peanut butter, chocolate spread. Use all generously
Eggs	Add extra butter, cheese or use fortified milk. Use butter or oil for fried or scrambled eggs
Cooked Breakfast	Shallow fry

Main Meals

Soup	Use half milk/half stock and serve with cream and bread and butter
Meats	Use plenty of oil to deep/shallow fry. Add gravy/cheese sauce/white sauce made using fortified milk or cream
Potatoes	Add extra butter/cheese/cream cheese/crème fraîche
Vegetables	Serve with butter, oil or a rich sauce
Pasta	Toss in olive oil or butter before adding sauce
Sandwiches	Apply butter generously. Use full fat mayonnaise or cream cheese and stir in chopped meats, fish or egg

Puddings

Milk Puddings	Use fortified milk
Custard	Make with fortified milk and cream
Instant Whip	Use fortified milk and serve with cream
Yoghurt	Use full fat thick and creamy yoghurt. Use ones with more than 150kcal per pot
Cakes/Sponges	Serve with cream or custard

Copyright © 2019 Bassetlaw Clinical Commissioning Group

MUST Snacks - snack options for between meals only

MUST Score 1 minimum of 2 snacks and 2 drinks or shots daily

MUST Score 2+ minimum of 2 snacks and 3 drinks or shots daily

Biscuits

(2 of the following)

Digestives with butter

Cream filled

Chocolate

Shortbread

NOTE: Please do not give plain or wafer biscuits

More Sweet Snacks

2 pieces of malt loaf with butter

Flapjack

Scone with butter and jam

Custard/Bakewell tart

Millionaire's Shortbread

Chocolate brownie

Crustless jam/lemon curd sandwiches

Cakes

Chocolate cake with jam and cream

Victoria sponge with jam and cream

Lemon cake with lemon curd and cream filling

Carrot cake with cream cheese

Ginger cake and butter

Fruit cake and butter or cheese

Milk Based Snacks

Thick and creamy yoghurt

Fromage frais (2 small pots)

Mousse

Crème caramel

Trifle

Instant whip

Milk pudding with jam

Milk jelly (see recipe)

Lemon Fool (see recipe)

Savoury Snacks

Mini pork pie

Sausage roll

Scotch egg

Cheese with cracker and butter

Cheese biscuits

Cheese scone with butter

Quiche

Half a sandwich with cheese, chicken, chopped meats, egg, peanut butter, salmon and tuna

Copyright © 2019 Bassetlaw Clinical Commissioning Group

MUST Snack, Drink and Shot Recipes

MUST Score 1 minimum of 2 snacks and 2 drinks or shots daily

MUST Score 2+ minimum of 2 snacks and 3 drinks or shots daily

Milk Jelly Snack

(Makes 4 portions)

12g jelly crystals or 135g jelly cubes

2 tablespoons milk powder

150mls evaporated milk

Directions

Make the jelly up to 1 pint as directed but substitute 150ml water with evaporated milk

Add milk powder and whisk

Put in the fridge to set

1 portion = 200 calories and 9g protein

NOTE: not suitable for patients on thickened fluids

Super Shake Drink

(Makes 1 portion)

200ml full fat milk

1 tablespoon skimmed milk powder

3 heaped teaspoons of vitamin fortified milkshake powder (e.g. Nesquik or supermarket own brand)

Directions

Mix milk powder and milkshake powder together in a glass

Gradually add in the milk and stir well

250 calories and 12g protein

Super Soup Drink

(Makes 1 portion)

1 sachet of cup-a-soup

1 tablespoon skimmed milk powder

200ml full fat milk

A little boiling water

Directions

Mix the soup powder with a little boiling water to dissolve

Heat the milk and stir into the cup-a-soup and milk powder until dissolved

250 calories and 15g protein

Super Choc Shot

(Makes 3 portions)

150ml double cream

30g skimmed milk powder 90ml full fat milk

2x standard size chocolate bars

Directions

Put cream, milk and milk powder in a saucepan and heat until milk powder has dissolved

Add finely chopped chocolate bars

Heat gently and stir until chocolate bars have dissolved

Blend, pour into 3 small glasses and chill

1 portion = 100ml

Copyright © 2019 Bassetlaw Clinical Commissioning Group

MUST Snack, Drink and Shot Recipes

MUST Score 1 minimum of 2 snacks and 2 drinks or shots daily

MUST Score 2+ minimum of 2 snacks and 3 drinks or shots daily

Super Cream Shot

(Makes 1 portion)

40ml double cream

Flavouring to taste such as vanilla, strawberry, chocolate, coffee, peppermint

Directions

Mix flavouring with cream

(Be aware not to stir too much or the cream will thicken)

240 calories and 2g protein

Super Juice Drink

(Makes 1 portion)

100ml lemonade 75ml cordial

2 tablespoons icing sugar

1 tablespoon golden syrup

Directions

Mix ingredients together and shake well

450 calories and 2g protein

Super Float Drink

(Makes 1 portion)

100ml lemonade

100ml fresh fruit juice

1 scoop ice cream

1 tablespoon caster sugar

Directions

Mix ingredients together and shake well

300 calories, 3g protein

Lemon Fool Snack

(Makes 3 portions)

300mls double cream

3 tablespoons caster sugar

Juice of 1 to 1½ lemons

2 tablespoons skimmed milk powder

Directions

Put cream and milk powder in saucepan and heat until milk has dissolved

Add sugar

Bring to the boil for 3 minutes

Mix the lemon juice to taste

Pour into 3 dessert bowls and chill

1 portion = 100mls
620 calories and 5g protein

Copyright © 2019 Bassetlaw Clinical Commissioning Group

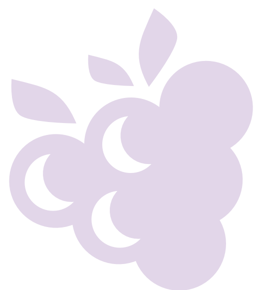
Hydration

How Much Do We Need to Drink to be Well Hydrated?

Fluid requirements are very individual and impacted by a variety of factors including, but not limited to:

- Body size
- Health
- Environment

As a general rule of thumb we need a minimum of 2 litres of fluid a day.



All fluid counts towards hydration except alcohol. Aim for 6 - 8 glasses of fluid per day.

In reality this can be very challenging so aim for optimal hydration, which is the best intake you can encourage and assist a resident to achieve even if it's not 6-8 drinks per day.

It is important to realise that an additional 20% of the daily fluid intake can come from diet. High fluid foods such as fruit, ice lollies, jelly and milk puddings all contribute valuable fluid to the diet.

Traditional Signs of Dehydration

These are non-specific, especially in frail elderly people. Research shows there is no single diagnostic sign or symptom for dehydration. The following symptoms may be useful to consider in a combination with low fluid intake

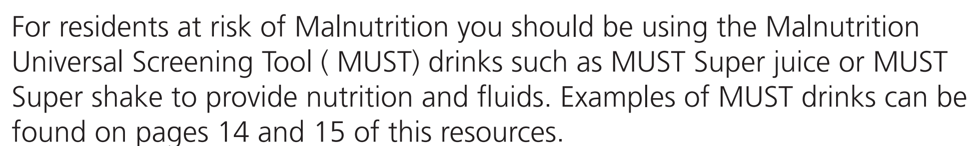
Acute signs/symptoms

- Thirst
- Headache
- Dry mouth or lips
- Feeling dizzy or light headed
- Very small amounts of dark coloured, concentrated urine
- Dry inflexible skin
- Confusion
- Poor fluid intake or missing drinks

Long term signs/symptoms

- Constipation
- Water infections
- Increased risk of falls
- Pressure sores
- Reduced clinical outcomes
- Reduced quality of life

Copyright © 2019 Bassetlaw Clinical Commissioning Group



For residents at risk of Malnutrition you should be using the Malnutrition Universal Screening Tool (MUST) drinks such as MUST Super juice or MUST Super shake to provide nutrition and fluids. Examples of MUST drinks can be found on pages 14 and 15 of this resources.

It's also worth considering the use of :

- Full fat milk
- Hot chocolate and malted milk drink made with milk
- Milky coffee

Remember, many residents may need reassurance to change their drinking behaviour. They might think that drinking more will worsen their incontinence and they may worry they are troublesome to staff. It can take time to establish a new routine but be sure to encourage every sip - it all adds up to increasing fluid intake.

Fluid Intake Chart

When a fluid intake chart is used it is meaningless if the data is inaccurate and could give the impression of better hydration than is actually being achieved. Sometimes using a chart for a short time period when there is concern rather than routinely, can be more effective.

When to start a fluid intake chart:

- If you have a new resident to help assess their hydration needs
- If a resident is exhibiting any signs/symptoms suggesting possible dehydration
- If fluid intake is observed to be low
- If a resident is showing signs of a urine infection
- It has been requested by a medical professional

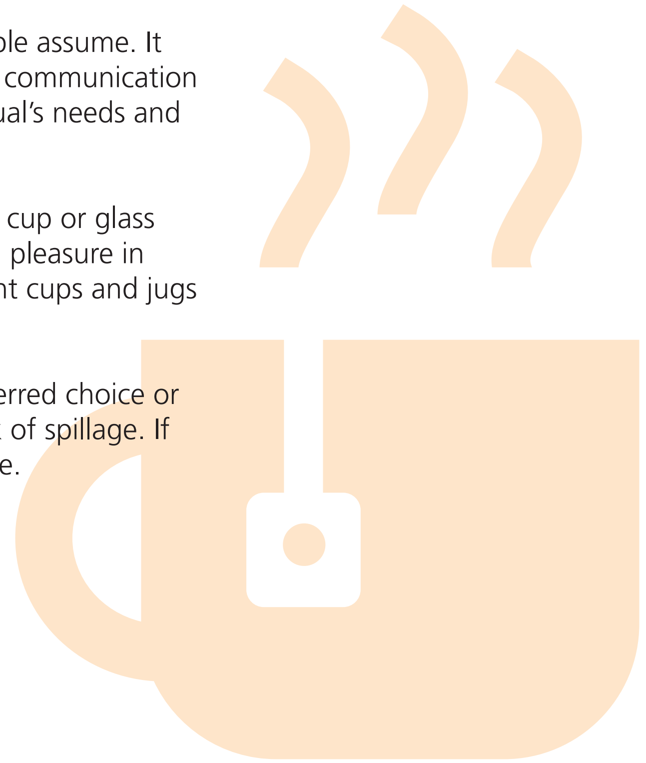
The chart should be continued for 3 days initially and continued if needed. Bearing in mind the additional 20% of the daily fluid intake that comes from diet, adding a food intake chart may be useful to help fully assess hydration.

If the fluid intake chart shows that a resident is having problems drinking an adequate amount, adapt their drinking regime to help overcome this and ensure all involved staff are aware of the changes to their care plan.

 Copyright © 2019 Bassetlaw Clinical Commissioning Group

Drinking Behaviour

Persuading older people to drink is not as easy as many people assume. It needs understanding of the individual, persuasion and good communication skills to provide optimal hydration which matches an individual's needs and maintains their dignity.



You need to encourage and enable residents to drink from a cup or glass where at all possible. This helps to maintain their dignity and pleasure in drinking in a manner similar to other residents. Lighter weight cups and jugs may be helpful.

Aids should only be considered when this is a resident's preferred choice or when they have been assessed by a nurse to have a high risk of spillage. If aids are used these should be normalized as much as possible.

Positive influences on drinking behaviour

- Availability of drinks - everywhere, at any time, at the right temperature and of the right type.
- Help and support while drinking - staff having the time to make residents comfortable, encourage and put drinks in their hands.
- Pleasure from drinking - it helps swallowing and chewing and makes mouths feel pleasant.
- Social interaction - drinking with others is part of everyday life and is usually enjoyable.
- Reassurance to residents that there is prompt toileting support - residents should be reminded that improving hydration will NOT cause extra toileting in the long term.
- Education - understanding the importance of drinking and getting into a regular drinking habit.

Negative influences on drinking behaviour

- Physical incapacity- fragility, poor grasp, reduced sense of taste and thirst (common in the elderly) or 'too tired'.
- Cognitive impairment - so people forget to drink.
- Fear of incontinence and frequency of urination - this is a major factor for many older people.
- Perceived lack of staff time - residents 'don't want to be a bother'.
- Hydration aids - not used effectively or not available when required.
- Drinking being seen as a nuisance or a chore - creates negative responses when offered a drink.
- Residents with challenging behaviour who have negative responses to most suggestions and interventions.

 Copyright © 2019 Bassetlaw Clinical Commissioning Group

When considering your residents' drinking behaviours and possible solutions ask yourself whether they:

Can Drink

If they can drink but are unaware of how much they should drink - then you need to consider how best to educate them about correct hydration levels.

If they drink independently but are forgetful and require prompting, think about an individual regular regime with or without aids to help monitoring.

Can't Drink

If they can't drink due to the increased risk of choking or swallowing problems you need to seek Speech and Language Therapy input

If they are unable to drink independently they will require appropriate assistance and possible aids which will make drinking easier whilst still maintaining their dignity.

Won't Drink

They may be lifelong sippers who have never drunk much. Here a gradual approach with education and support that aims to explore the long standing reasons for this will be required.

They may have a fear of urinary incontinence or increased frequency of urination. You need to reassure them about support for their toileting needs and get advice from the continence team if required. Explain that improved hydration will not cause increased urinary frequency in the long term. Concentrated urine from poor hydration irritates the bladder and makes incontinence and frequency worse.

If they refuse to drink, for example clamping mouth shut or spitting fluids out, which can often be linked to dementia, consider why this might be happening:

- Is their dementia worsening?
- Do they have physical or emotional issues?
- Are there any environmental changes?

Are you the right person to bring the drink, is it the right place to have a drink and is it the right drink? A regular drinking regime is required with fluid chart monitoring. Acknowledge the resident's dementia and explore the use of old social behaviours.

End of Life

Seek specialist advice regarding hydration in cases where your resident is in their last few days of life.

Copyright © 2019 Bassetlaw Clinical Commissioning Group

Top 10 Practical Tips for Encouraging Water Consumption

(Based on: Water for Healthy Aging - Water UK Hydration Toolkit)

1. Develop a policy on how you will provide fluids for residents.

2. Use a positive approach where staff remind, encourage and even convince residents to drink more.

3. Water is best served fresh and cool, not left in open jugs. Many people prefer to drink 'little and often'. Try to offer water at mealtimes and between meals.

4. Those in care tend to drink all the water in their glass when they are swallowing their tablets. Offering slightly larger volumes of water at this time encourages them to drink more. More water with tablets.

5. Residents often worry about increased toilet visits in the night, so avoid late evening drinks. Encourage water consumption from when residents wake in the morning.

6. Older people can lose their thirst response and their taste sensation. Never take it for granted that they will know when they need to drink.

7. For trips and for use in outside areas, providing residents with a personal water bottle can help.

8. Where possible, inform families and friends about the importance of promoting fluid intake.

9. As the weather gets warmer, increase the availability of drinking water and encourage residents to drink more. Older people perspire more in warmer weather.

10. Think about the language you use. Offer a drink rather than ask if they would like one - 'Would you like tea or coffee?' rather than 'Would you like a drink?'

Copyright © 2019 Bassetlaw Clinical Commissioning Group

Hydration Based Activities

People are more likely to have a drink with others in a social situation. Research has shown that having a strong social element around eating and drinking improves the quality of life for people with dementia.

Get creative and think about group activities which will educate staff and residents about the importance of good hydration and provide an opportunity to have fun and sample a wide variety of drinks and food with a high fluid content.

Here are just a few of the numerous ways to incorporate hydration into enjoyable activities:

- **Mocktail session, making smoothies and blending juices**

See our recipe ideas to get you started on page 22

- **Formal social drinking events such as themed tea parties using china crockery, picnics and celebration teas**
- **Tasting sessions on water based drinks such as different types of teas, juices, squash, fruit teas or infusions.**
- **A film afternoon with ice lollies, ice creams and milkshakes**
- **Try different and exotic fruits. Make different coloured fruit jellies in a variety of shapes**
- **Theme the drinks trolley for the day with different coloured cups/ glasses/jugs or drinks.**

Copyright © 2019 Bassetlaw Clinical Commissioning Group

Mock-cocktail Recipes

Remember to involve your residents when making these recipes!

Peach Passion Smoothie

Ingredients

15oz sliced peaches

4 scoops of vanilla ice cream

half a cup of orange juice

small dash of milk

Method

Use a blender and whiz until smooth

Chocolate Cocktail

Ingredients

210ml of milk in a pan

one 150g chocolate bar

75ml of vanilla syrup

ice

Method

Add the milk and chocolate to the pan and melt through

Allow the chocolate and milk mixture to cool in a bowl in the fridge for 1 hour

Before serving add the vanilla syrup

Serve over ice

For variety you can try this recipe with a few drops of peppermint essence

Mulled Apple Juice

Ingredients

1 litre of apple juice

strips of orange peel

one cinnamon stick

3 cloves

Honey or sugar to sweeten

Method

Simmer ingredients for 5-10 minutes

Remove cinnamon stick, cloves and orange peel

Sweeten with honey or sugar and serve hot

Tangy Tomato

Ingredients

3 cups of tomato juice

2 tablespoons lemon juice

2 teaspoons horseradish sauce

2 teaspoons Worcestershire sauce

Method

Mix the ingredients well and serve over ice

Garnish with celery

If residents would like their drink with a fiery kick, they can add a drop or two of tabasco sauce to heat things up!

Copyright © 2019 Bassetlaw Clinical Commissioning Group

Sample Menu for Providing Adequate Fluids within the Care Home

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Early Drink	Tea or juice	Tea or juice	Tea or juice	Tea or juice	Tea or juice	Tea or juice	Tea or juice
Full glass of water given out with early morning medication							
Breakfast	Cereals or porridge Fruit juices Egg and Bacon Toast or Bread Preserves Tea or coffee	Cereals or porridge Fruit juices Egg and Bacon Toast or Bread Preserves Tea or coffee	Cereals or porridge Fruit juices Egg and Bacon Toast or Bread Preserves Tea or coffee	Cereals or porridge Fruit juices Egg and Bacon Toast or Bread Preserves Tea or coffee	Cereals or porridge Fruit juices Egg and Bacon Toast or Bread Preserves Tea or coffee	Cereals or porridge Fruit juices Egg and Bacon Toast or Bread Preserves Tea or coffee	Cereals or porridge Fruit juices Egg and Bacon Toast or Bread Preserves Tea or coffee
Water and fruit squashes/cordials available throughout the morning in the residents lounge							
Mid-Morning	Tea, Coffee, Juice, Smoothie or Milkshake	Tea, Coffee, Juice, Smoothie or Milkshake	Tea, Coffee, Juice, Smoothie or Milkshake	Tea, Coffee, Juice, Smoothie or Milkshake	Tea, Coffee, Juice, Smoothie or Milkshake	Tea, Coffee, Juice, Smoothie or Milkshake	Tea, Coffee, Juice, Smoothie or Milkshake
Water and fruit squashes/cordials served with meal							
Lunch	Roast lamb and mint sauce or poached salmon & parsley sauce Roast/new potatoes, broccoli, parsnip Apple pie & custard Tea or coffee	Pork/vegetable casserole or tuna and pasta bake Creamed potatoes, carrots, peas Lemon meringue pie Tea or coffee	Steak and kidney pie or grilled plaice & lemon sauce Boiled potatoes, green beans, leeks Rice Pudding or Banana & Custard Tea or Coffee	Chicken & white wine sauce or shepherds pie Creamed potatoes, savoy cabbage, carrots Plum crumble & custard or Fruit & ice-cream Tea or coffee	Lancashire hot pot or cod mornay Parsley potatoes, mixed vegetables, broccoli Spotted dick & custard or yogurt & jelly Tea or coffee	Fried cod or cauliflower cheese Chips/mashed potatoes, peas, sweetcorn Fruit compote & custard or blancmange Tea or coffee	Boiled bacon & pease pudding or fish pie Boiled potatoes, carrots, swede Bread and butter pudding or peach melba Tea or coffee
Water and fruit squashes/cordials available throughout the afternoon in the residents' lounge							
Mid-afternoon Tea	Tea, coffee or juice Iced fancies	Tea, coffee or juice Fairy cake	Tea, coffee or juice Lemon cake	Tea, coffee or juice Fruit scone	Tea, coffee or juice Ginger cake	Tea, coffee or juice Banana cake	Tea, coffee or juice Fruit loaf
Water and fruit squashes/cordials served with meal							
Evening	Cheese and tomato flan & salad or sandwiches (salmon or egg) Peaches & cream Tea or coffee	Welsh rarebit & tomato or sandwiches (sardines or ham) Cherry flan & cream Tea or coffee	Sausage & baked beans on toast or sandwiches (cheese with marmite or tuna) Peaches & cream Tea and coffee	Jacket potato (tuna or cheese) or sandwiches (ham or egg) Apricot and almond tart Tea or coffee	Macaroni cheese & tomato or sandwiches (bacon or turkey) Sherry trifle Tea or coffee	Ham with mixed salad or sandwiches (salmon or chicken) Lemon cheesecake Tea or coffee	Broccoli & cheese flan with salad or andwiches (egg or pilchards) Chocolate cake Tea or coffee
Late Evening	Milky drinks & biscuits	Milky drinks & biscuits	Milky drinks & biscuits	Milky drinks & biscuits	Milky drinks & biscuits	Milky drinks & biscuits	Milky drinks & biscuits

Copyright © 2019 Bassetlaw Clinical Commissioning Group