

# What is Malnutrition?

NutriCaRe - Improving Nutrition & Hydration, Enhancing Care & Recovery

Malnutrition, or undernutrition, happens when your body does not receive enough calories and proteins that it needs.

Poor eating/drinking can happen because of:



Illness/Disease



Taste Change



Cognitive/  
Mood Issues



Changes in Environment



Bloatedness



Nausea/Vomiting



Chewing/  
Swallowing Difficulties



Diarrhoea

Malnutrition can result in:

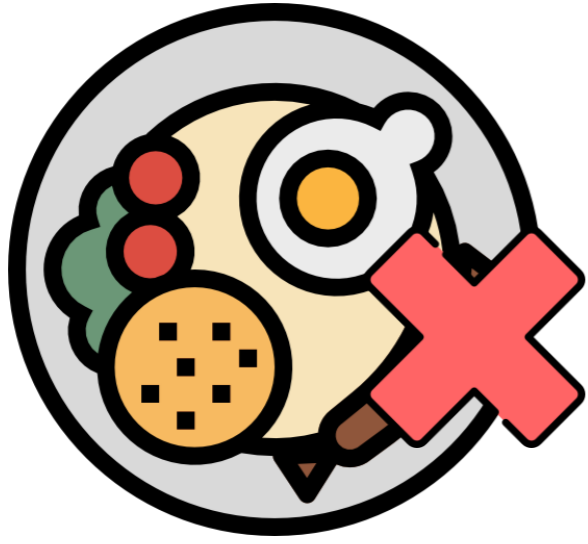
- Higher risk for falls
- Poor healing and increased infections
- Higher risk of post surgery complications
- Longer hospital stays
- Hospital re-admissions



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## Signs of Malnutrition



Lack of appetite or disinterest in food/drinks



Fatigue and irritability



Difficulty concentrating



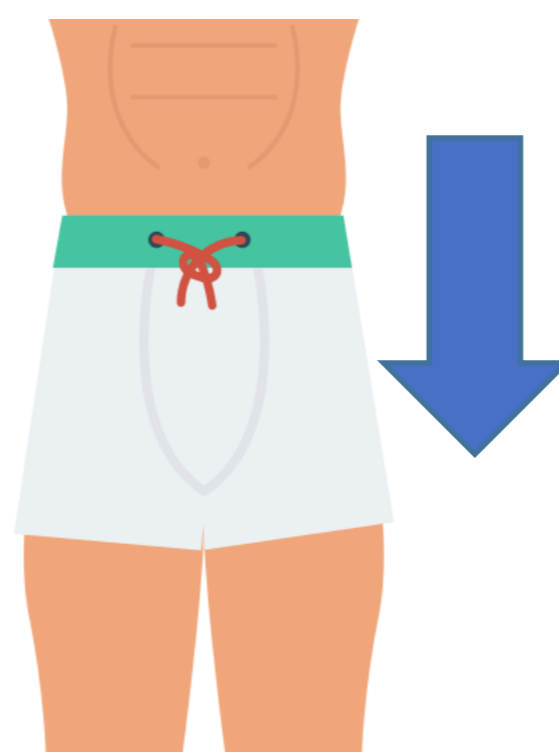
Constantly feeling cold



Constant illnesses and longer recovery time from illnesses



Depression



Loss of fat, muscle mass and body tissue

# Food Fortification

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Food fortification means to increase the nutritive value of foods.  
How can I help someone improve his/her overall nutritional intake?  
Add any of the following ingredients to the main food item below to improve its nutritional value, without increasing its portion size!

## Canned Tuna in Oil



1/3 can (40g)  
90 kcal,  
10g protein

## Kaya\*



2 tablespoons (30g)  
110 kcal,  
0g protein

## Sesame Oil



1 tablespoon (15ml)  
110 kcal,  
0g protein

## Main Food Item



Wholemeal bread  
1 slice (30g)  
80 kcal,  
3g protein



Porridge  
1 bowl, (250ml)  
210 kcal,  
3g protein



Cream Crackers  
3 pieces (30g)  
120 kcal,  
2g protein



Oats /Nestum  
4 tablespoons (30g)  
120 kcal,  
5g protein

## Chocolate Spread\*



2 tablespoons (30g)  
170 kcal,  
2g protein

## Fruit Jam\*



2 tablespoons (30g)  
110 kcal,  
0g protein

## Honey\*



2 tablespoons (30g)  
90 kcal,  
0g protein

## Peanut Butter



2 tablespoons (30g)  
190 kcal,  
8g protein



\* This food may raise sugar levels in patients with diabetes

# Food Fortification

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How can I help someone improve his/her overall nutritional intake?

Add any of the following ingredients to the main food item below to improve its nutritional value, without increasing its portion size!

## Sliced Cheese



1 slice (20g)  
70 kcal,  
4g protein

## Main Food Item



Wholemeal  
bread  
1 slice (30g)  
80 kcal,  
3g protein

## Canned Sardines



1 piece (70g)  
100 kcal,  
10g protein

## Braised Peanuts



3 tablespoons  
(45g)  
110 kcal,  
6g protein



Porridge  
1 bowl, (250ml)  
210 kcal,  
3g protein

## Cooked Minced Meat



3 tablespoons  
(90g)  
150 kcal,  
21g protein

## Tofu



2/3 block  
(200g)  
100 kcal,  
10g protein



Cream crackers  
3 pieces (30g)  
120 kcal,  
2g protein

## Chicken Floss



2 tablespoons  
(30g)  
130 kcal,  
10g protein

## Egg



1 large whole  
(60g)  
80 kcal,  
7g protein



Oats /Nestum  
4 tablespoons (30g)  
120 kcal,  
5g protein

## Gravy, Curry (meat)



1/2 cup (125ml)  
240 kcal,  
3g protein

# High Calorie Snacks

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Local desserts: 1 serving size = 1 bowl (250ml) unless otherwise stated



**Yam Paste/ Orh Nee \***  
480kcal,  
3g protein



**Cream Wafers \***  
3 pieces (30g)  
140kcal,  
1g protein



**Yam Cake**  
1 piece (130g)  
200kcal,  
3g protein



**Laddu \***  
1 piece (30g)  
170kcal,  
3g protein



**Jalebi \***  
1 piece (50g)  
150kcal,  
2g protein



**Bubur Cha Cha\***  
380kcal,  
5g protein



**Pandan Cake \***  
1 piece (40g)  
100kcal,  
3g protein



**Snacks between meals  
are helpful ways to  
increase calorie/protein  
intake.**



**Pulut Hitam with  
Coconut Milk \***  
210kcal,  
2g protein



**Chicken Pau**  
1 medium  
(60g)  
140kcal,  
5g protein



**Soya Beancurd\***  
160kcal,  
5g protein



**Chocolate \***  
1 bar (40g)  
200kcal,  
2g protein



**\* This food may raise sugar levels  
in patients with diabetes**

***Offer Variety of Snacks, Be Creative!***



# High Calorie Snacks

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Local desserts: 1 serving size = 1 bowl (250ml) unless otherwise stated



**You Tiao**  
1 stick (50g)  
200kcal,  
4g protein



**Keropok**  
1 serve (30g)  
130kcal,  
1g protein



**Payasam \***  
270kcal,  
4g protein



**Siew Mai**  
2 pieces (50g)  
160kcal,  
4g protein



**Tang Yuan**  
(glutinous rice balls) 2 pieces \*  
150kcal,  
2g protein



**Goreng Pisang \***  
1 piece (65g)  
200kcal,  
1g protein



**Rainbow Kueh \***  
1 piece (70g)  
120kcal,  
1g protein



Snacks between meals are helpful ways to increase calorie/protein intake.



**Butter Cake \***  
1 slice (40g)  
160kcal,  
2g protein



**Ice-Cream \***  
1 scoop (50g)  
180kcal,  
3g protein



**Vadai**  
1 piece (50g)  
150kcal,  
5g protein



**Agar-agar \***  
1 piece (150g)  
120kcal,  
0g protein



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*Offer Variety of Snacks, Be Creative!*



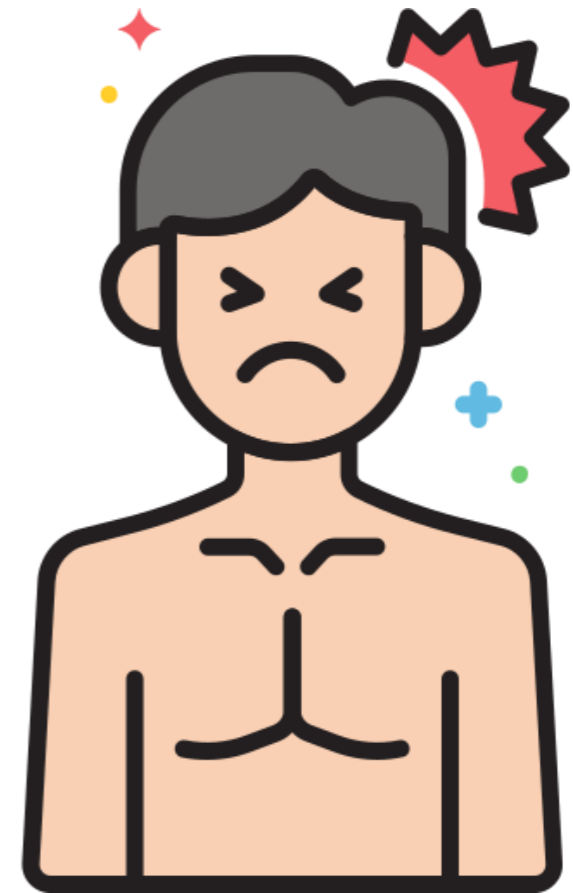
# Ensure Adequate Fluids & Hydration

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Dehydration can result in adverse effects on function & clinical outcomes. Older adults are especially susceptible to dehydration due to their limited ability to take adequate fluids.

## Signs and Symptoms of Dehydration:

- Tiredness and/or Headache (as shown)
- Dry Mouth/Lips
- Dark Coloured or Strong-smelling Urine
- Dry & Loose Skin
- Fever

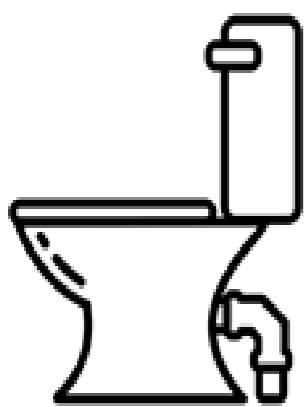


## Causes of Dehydration:

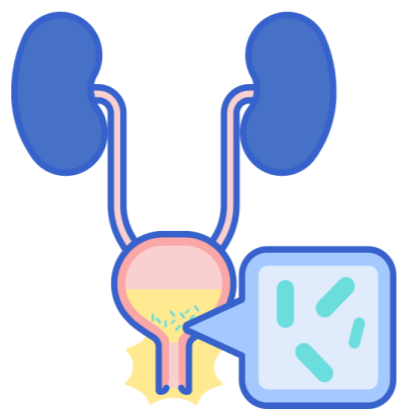
- Vomiting (as shown)
- Diarrhoea
- Insufficient Water Intake



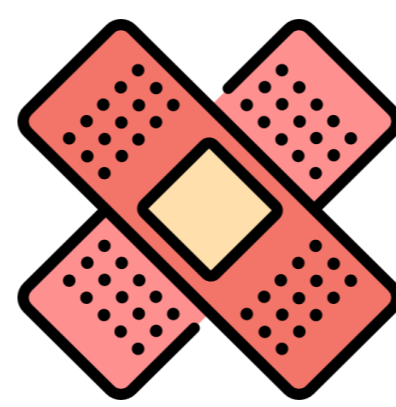
Poor fluid intake may result in complications such as:



Constipation



Urinary Tract Infection



Pressure Sores



Low Blood Pressure



Kidney Injury

# Ensure Adequate Fluids & Hydration

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Nourishing fluids can be served to increase nutritional intake and to ensure enough hydration. Some examples are:



**Full Cream Milk/  
Soya Milk**  
1 cup (250ml)



**Malted Drink**  
(e.g. Milo,  
Horlicks)\*  
1 cup (250ml)



**Bandung\***  
1 cup  
(250ml)



**Yoghurt Drink\***  
1 cup  
(250ml)



**Barley Drink\***  
1 cup  
(250ml)



**Fruit Juice\***  
1 cup  
(250ml)

\* This drink may raise sugar levels in patients with diabetes

## Oral Nutritional Supplements (ONS):

- Specially formulated beverages that contain energy, proteins, vitamins & minerals
- Used to supplement nutritional intake when someone is eating poorly at meals
- Do consult with your doctor/dietitian regarding the consumption of ONS
- The ONS must be taken under the supervision of the doctor/dietitian