THE ROLE OF DIET IN HEALING PRESSURE ULCERS

Dietetics Department
Therapy Care Group
Shrewsbury and Telford Hospital NHS Trust
Providing a dietetic service to
The Robert Jones & Agnes Hunt Orthopaedic Hospital NHS Foundation Trust

Patient Information
**Introduction**

Diet plays an important role in promoting pressure ulcer healing and nutritional needs are often increased. If these needs are not met, this may delay or impact the healing process.

A balance of all food groups is required to meet the essential nutrient needs for pressure ulcer healing. This booklet explains how to make some dietary changes in order to promote the healing process.

**The most key dietary elements include:**
- Protein
- Vitamin C
- Vitamin A
- Zinc
- Iron
- Fluid intake
- Supplementation

**Protein**

Protein requirements are often higher than normal. This is because large amounts of protein can be lost from the ulcer as exudate. Protein is needed to repair and promote the growth of new tissue at the ulcer site.

**Good sources of protein include:**
- Meat
- Fish
- Eggs
- Milk and milky products e.g. yoghurts, custard, semolina
- Quorn
- Tofu
- Beans
- Lentils
- Nuts

You should aim to consume two large portions of protein foods each day, which can be consumed at lunch and evening meal.

Additionally, it is advised to aim for at least one pint of milk per day to help reach protein needs. Milky products such as semolina, custard and yoghurt are also useful.

It is important to aim for a milky pudding at least once a day. These could be consumed after a meal or as a mid morning or mid afternoon snack. These types of products are also useful for their Calcium content, therefore promoting bone health.


**Vitamin C**

Vitamin C is vital nutrient, assisting with the formation of new tissue and is therefore essential in the promotion of pressure ulcer healing.

Vitamin C is found in all fruit and vegetables. Some fruit and vegetables provide very rich sources as noted below.

**Good sources of Vitamin C include:**

- Berries
- Citrus fruits
- Oranges
- Butternut squash
- Potatoes - including sweet potato
- Tomatoes
- Peppers

Fruit smoothies and fruit juices also provide a rich source of Vitamin C, such as orange, cranberry, blackcurrant drinks fortified with Vitamin C and Ribena. Aiming for one to two small glasses (150mls) per day is useful.

Aim for at least 5 portions of fruit, vegetables and salad per day. You should aim to include at least one portion of vegetables/ salad at each meal and may wish to snack on fruit or include within a pudding.

A portion of fruit is approximately 80g which is equivalent to a medium size fruit such as an apple, two small fruits such as two satsumas or a slice of melon. A portion of vegetables is approximately 80g which is equivalent to a bowl of salad or three heaped tablespoons of sweetcorn, peas, beans or pulses. A portion of dried fruit is approximately 30g or a heaped tablespoon.

If you have Kidney (Renal) Disease and follow a potassium restricted diet, it may be worth discussing this with your Dietitian before including lots of Vitamin C rich drinks and fruit, vegetables and salad in your diet as some may not be suitable for you.

Even if you have Diabetes, it is important to consume fruit to meet Vitamin C needs and ensure a balanced diet. If you have concerns over your blood sugar levels, it may be worth discussing this with your Dietitian.

**Vitamin A**

Vitamin A also has an important role in pressure ulcer healing and the formation of new tissue. It also strengthens immune response and the body’s ability to fight infections.

**Good sources of Vitamin A include:**

- Cheese
- Eggs
- Yoghurts
- Liver
If you are pregnant it is important to restrict foods rich in Vitamin A as large amounts can affect your unborn baby.

**Zinc**

Zinc has a role in all stages of pressure ulcer healing and requirements are increased during the healing process.

Zinc is found in many foods, especially fresh foods. Foods containing Zinc are also rich in other nutrients required for pressure ulcer healing.

**Good sources of Zinc include:**
- Meat
- Fish
- Eggs
- Cheese
- Milk
- Bread and cereal products

Smaller amounts of Zinc can be found in beans, lentils, fruit and vegetables.

**Iron**

Iron is an essential mineral with several important roles in the body. Iron helps with the synthesis of new tissue and provides oxygen to the pressure ulcer site to support healing.

**Good sources of Iron include:**
- Red meat
- Green leafy vegetables e.g. spinach, kale, cabbage, broccoli
- Beans
- Nuts
- Dried fruit e.g. apricots
- Fortified breakfast cereals

It is important to aim for at least two Iron rich sources in your diet over the day. It is important to try and consume good sources of Vitamin C with foods rich in Iron as Vitamin C enhances Iron absorption. For example, glass of orange juice with a bowl of breakfast cereal.

**Fluid**

To keep your skin elastic and promote good blood flow to the pressure ulcer site, a good fluid intake is required.

You should aim for **at least eight cups of fluid per day**. Suitable fluids include fruit juice, smoothies, water and milk. Tea and coffee can be consumed in moderation.

**Supplementation**

Please discuss with you Dietitian or GP before taking any additional vitamin or mineral supplementation. Currently, there
is no additional benefit of taking vitamin and mineral supplements in the absence of deficiency for the healing of pressure ulcers.
Your weight – Overweight vs. Underweight

Your weight plays an important role in pressure ulcer healing and prevention. Being underweight will increase your risk of pressure ulcer development and prevent healing.

Overweight

If you are overweight it is advisable that you aim for weight maintenance. Gaining weight may further exacerbate immobility and cause difficulty with pressure ulcer care. However, it is essential that you maintain a sufficient nutrient intake to promote ulcer healing.

If weight loss is a goal you have, it is advisable to postpone this until your pressure ulcer(s) have sufficiently healed before trying to lose weight.

Underweight

Being underweight in the presence of a pressure ulcer can lead to the loss of protein stores and muscle tissue. This can affect the healing process and also increase your risk of developing further pressure ulcers.

Increasing your daily calorie and protein intake can help to achieve weight gain, particularly muscle mass. If you have a poor appetite, eating little and often is key e.g. breakfast, lunch and an evening meal with nourishing drinks and snacks in between meals.

You can add extra calories to your food by using extra sugar and fats e.g. thick spread butter on bread, double cream in mash potato, cheese on top of soups, adding sugar to puddings and drinks and also by choosing nourishing snacks and drinks.

<table>
<thead>
<tr>
<th>Nourishing drinks</th>
<th>Nourishing puddings/ snacks</th>
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<tbody>
<tr>
<td>Chilled fortified milk (1 pint full cream milk with 2-3 tbsp dried skimmed milk powder)</td>
<td>Rice pudding</td>
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<tr>
<td>Milky coffee made with full fat milk</td>
<td>Custard</td>
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<tr>
<td>Hot chocolate made with full fat milk</td>
<td>Thick and creamy yoghurts</td>
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<tr>
<td>Horlicks made with full fat milk</td>
<td>Angel Delight made with full fat milk</td>
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<tr>
<td>Ovaltine made with full fat milk</td>
<td>Blanmange</td>
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<tr>
<td>Fruit Smoothie – Full fat milk, fruit of your choice with 2 scoops of ice cream/full fat yoghurt</td>
<td>Egg custard</td>
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<tr>
<td>Over the counter drinks – Complan/Meritene Energis*</td>
<td>Cheese omelette or scrambled/boiled egg</td>
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<td></td>
<td>Fruit scone with thick spread of butter</td>
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<td>Cheese and crackers</td>
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*If you have Diabetes or Kidney (Renal) Disease, please check with your Dietitian before using over the counter Complan/Meritene Energis drinks.
Example meal plan

**Breakfast**

Scrambled egg made with added full fat milk and toast with thick spread of butter with a glass of orange juice.

**Mid morning**

Fruit smoothie made with full fat milk, 1 scoop ice cream, 1 tsp sugar, blueberries and raspberries (blended)

**Lunch**

Cheese and tomato omelette/ Vegetable soup with added cream, cheese sprinkled on top
Full fat yoghurt

**Mid afternoon snack**

Cheese and crackers (3-4)

**Evening meal**

Beef stew with vegetables e.g. potato, carrots, peas
Glass of full fat milk
Custard and fruit

**Supper**

Glass of full fat milk/ Horlicks made with full fat milk
or
Bowl of fortified cereal topped with dried fruit made with full fat milk

The above is only an example. Remember to ensure adequate fluid intake over the day. Aim for at least 8 cups of fluid per day.

Other Sources of Information

- **Patient UK** - Provides leaflets on health and disease translated into different languages as well as links to national support/self help groups and a directory of UK health websites.  
  *Website:* [www.patient.co.uk](http://www.patient.co.uk)

- **NHS Choices** - Provides information on health lining and various conditions, as well as providing health news and links to services and local support.  
  *Website:* [http://www.nhs.uk/Pages/HomePage.aspx](http://www.nhs.uk/Pages/HomePage.aspx)

- **NHS 111** is a new service to make it easier for you to access local NHS healthcare services in England. You can call 111 when you need medical help fast but it’s not a 999 emergency. NHS 111 is a fast and easy way to get the right help, whatever the time. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones.
• MECC (Making Every Contact Count)
  Healthy Diet and Physical Activity
  Shropshire Tel: 0345 6789025
  Telford & Wrekin Tel: 01952 382582
• Eating Well : www.nhs.uk/change4life
• Stopping Smoking - 0800 022 4 332 - www.smokefree.nhs.uk
• Reducing Alcohol Intake - 0800 917 8282 - www.patient.co.uk/support/Drinkline.htm or www.units.uk
• Being Active: NHS Choices at www.nhs.uk or www.activeplaces.com

Contact details for more information

Royal Shrewsbury Hospital
Mytton Oak Road, Shrewsbury SY3 8XQ
Telephone: 01743 261139 Email: Dietitians@sath.nhs.uk

Princess Royal Hospital
Apley Castle, Telford TF1 6TF
Telephone: 01952 641222 extn 4453 /4874 Email: Therapycarecentre@nhs.net

Robert Jones & Agnes Hunt Orthopaedic & District Hospital NHS Trust
Gobowen, Oswestry SY10 7AG
Telephone: 01691 404536 Email: Dietitian@rjah.nhs.uk

Further information is available from
• Patient Advise and Liaison Services (PALS)
  PALS will act on your behalf when handling patient and family concerns, they can also help you get support from other local or national agencies. PALS is a confidential service.

Royal Shrewsbury Hospital Tel: 0800 783 0057 or 01743 261691
Princess Royal Hospital Tel: 01952 282888
Robert Jones & Agnes Hunt Hospital Tel: 01691 404606

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