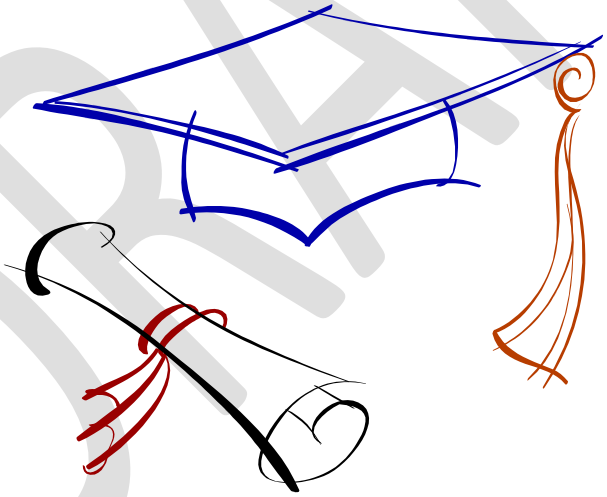
Pressure Ulcer **Prevention** and **Treatment**

An educational resource and activity pack for non qualified care staff



Introduction

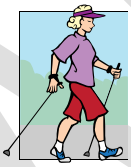
This resource pack provides you, as a carer, with information which the Tissue Viability Nurses and District Nurses feel necessary to support you in your daily caring role to reduce the risk of residents in your care developing pressure damage.

You already work with the District Nurses in South Tees whom often request that you carry out various tasks which you may or may not fully appreciate how the task can contribute to the prevention of pressure damage.

In addition you care for residents independently of the District Nurses. Many of the residents are potentially at risk of developing some level of pressure damage.

Please read the pack and work through the information and activities.

Information sections are marked with 

Activity sections are marked with 

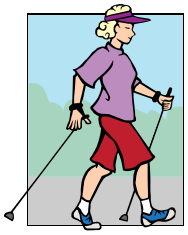
If there are any areas that you are not sure about then you are encouraged to contact your allocated mentor for advice and assistance.

On satisfactory completion of the pack, you should be able to explain:

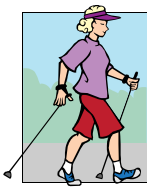
- what a pressure ulcer is and how it is caused
- explain factors which contribute to the development of a pressure ulcer
- explain who is at risk of pressure damage and why
- explain how you can reduce the risk of developing pressure damage
- explain the care required for a resident with a pressure ulcer

The final part of the pack asks you to think about one of your clients and complete some work around how you support them in preventing pressure damage.

On completion, you will then receive a certificate for your records.



Lets start with an activity in your workbook!



Activity One

This is an activity to complete prior to reading the following sections. Do not look ahead – it is for you so you can see what you already know about pressure damage!

1) Write down what you understand by the term “pressure ulcer” or “pressure damage”

2) What do you think causes pressure damage / ulcers?

3) What do you think are the first signs that there may be some pressure damage?

Section 1

Skin

Before looking at broken skin, we need to understand the function and anatomy of unbroken skin.

The skin is the largest organ in the body (good quiz question!) with several functions and layers. The layers are the epidermis, the dermis and the subcutaneous layer.

- Epidermis: Outer layer. The outer cells are flat and lifeless and look like overlapping scales. If unbroken it blocks passage of most bacteria
- Dermis: Tough elastic tissue. Contains the nerve endings, blood vessels, lymph vessels, hair follicles, erector muscles and sebaceous glands
- Subcutaneous: contains fat, sweat glands and blood vessels

Functions of the skin:

- Protection – barrier against infection, trauma, UV light, temperature, toxins.
- Sensory organ / communication
- Vitamin D formation
- Temperature regulation
- Secretion of sebum
- Excretion of waste
- Framework

Although all of these functions are important, the two areas which we will focus on in relation to pressure damage are **Protection** and **Sensory**

Protection:

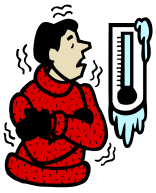
The skin protects the body from bacteria and infection; therefore, any break in the skin will put the individual at risk of developing an infection, by providing an open door for bacteria.

The skin also protects the body from chemicals; therefore you should be aware that when applying cream to a broken area of skin, the ingredients of the cream will be absorbed into the body much sooner than when the skin is intact.

The skin protects the body from mechanical damage. That is, the skin will prevent the body from damage caused by things like pressure, shear and friction. Mechanical damage can be likened to wearing shoes that may be a bit tight. We can wear them for a short period of time with no real damage occurring, however, if we wear them to go shopping for the day we develop a blister that

becomes very painful and will take a few days to heal. The skin can no longer protect us from that mechanical damage.

Sensory organ:



The skin allows us to feel heat, cold, pain and discomfort.

If we stay in one position for some time we would normally feel discomfort which would then trigger us to move and change position. If you lose that sensation, you don't feel pain or discomfort. If you are **not able to feel the discomfort** then you will not have that trigger to move and change position. This may happen to people with diabetes, people that have developed Multiple Sclerosis, suffered a stroke or become paralysed

It is important in these circumstances that you become their sensors and that you are aware of anyone whom is not able to change their own position. You must change their position for them as **pressure damage can develop in as little as 2 hours.**

Skin changes in the older person

As we get older our skin changes, we also slow down and we get prone to knocks and bumps. Therefore, with age there is an increased chance of injury, along with poor response to repair.

- Barrier function reduced. There is increased risk of irritation or damage
- Reduced vitamin D production with an increased risk of brittle bones
- Temperature control. There is a decrease in the number of sweat glands, subcutaneous fat and blood supply, which increases the tendency to feel the cold and for the skin to become dry
- Elasticity and tensile strength of the skin is reduced. The skin does not retain its original shape after stretching and distortion
- Sensitivity of the skin care alter, increasing incidence of allergic contact dermatitis.

Care of the skin

The skin produces lipids, sebum and sweat from the glands; these provide the skin with a barrier, which is relatively impermeable to water. Removal of this skin barrier, can cause dryness and make the skin more vulnerable to friction damage. Excessive washing and in particular the use of soap can remove this barrier. Soap can change the pH of the skin, which is normally acid to alkaline. It is this factor that causes the dryness

Constant washing of the skin should be avoided. However, it is important to keep the skin socially clean. To achieve this, clean the skin with a mild soap or non-soap cleanser or foam. If you have to wash an area of the body, for example the bottom, several times a day, it will become sore in the same way that your nose becomes sore when you have a cold. In this case, consider a foam cleanser and the use of a barrier cream such as Sorbaderm. Once it has been washed the skin should be dried thoroughly using a patting motion.

It is not advisable to use talcum powder, as it tends to soak up the natural oils of the skin and dry it out. Talc can also irritate the skin if it moulds into the skin creases. If the skin is very dry, the use of bubble bath etc in the bath can also increase dryness. Instead, try using an emollient to moisturise the skin. Some of these emollients can be used in the bath in place of some other additives and some will even lather. Emollients can be used as a soap substitute and as a moisturiser after bathing.

Emollients

Emollient soothes and hydrate the skin and are indicated for dry skin and maintaining good skin condition. Their effects are short lived and therefore they should be applied frequently, even after improvements occurs

Emollients recommended within South Tees include:

- Doublebase
- Dermol (if irritation evident)
- Epaderm
- Hydromol (added to water)

Barrier creams

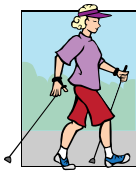
Barrier creams are not emollients. They are used to stop irritants (e.g. sweat, urine and faeces) coming into contact with the skin. They are used, for example, around stoma sites, sacrum or buttocks with the aim of preventing **moisture lesions**. However, it should be noted that they **do not prevent the development of pressure ulcers.** Therefore, unless the patient has a problem with continence or perspiration, **stop** and consider:

Why am I using this product

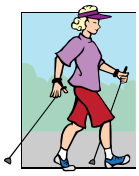
Will it benefit the patient?

Is it the most appropriate product to use?

Barrier cream currently recommended in South Tees Trust is Sorbaderm



Now complete *Activity Two* in your workbook



Activity Two

1) List the three layers of the skin

2) What are the functions of the skin?

3) Which two of these functions are particularly important to be aware of when aiming to prevent pressure damage and why?

Function 1:

Function 2:

4) What would you use to cleanse the skin?

5) Why would you use a barrier cream / spray?

6) What would you NOT use a barrier product for?

7) What would you use an emollient for?

Make a note of any questions you wish to ask or any ideas you may have so far…..

Now you can start to read **Section two** explaining about pressure damage / ulcers and how they are caused…..

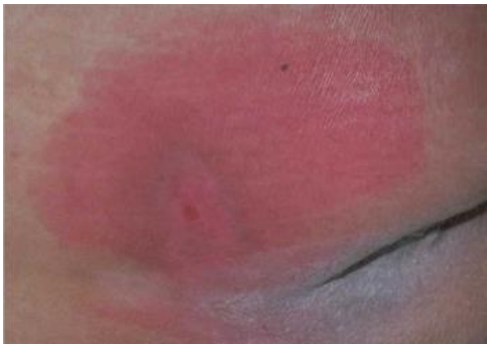
Section 2
Pressure Ulcers / Pressure Damage

Pressure Ulcers / damage are caused by three types of pressure.....

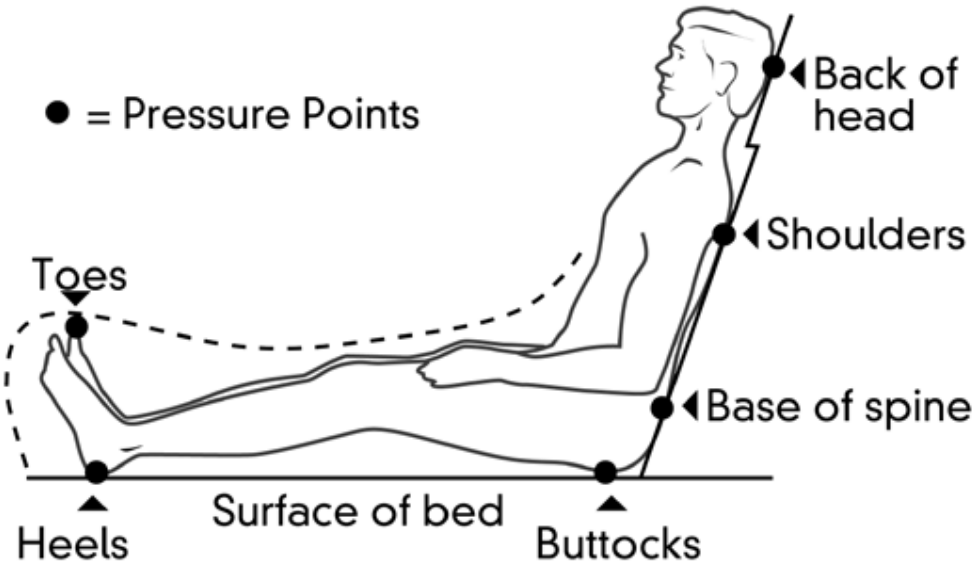
1) **Direct Pressure** – caused by an area of the body not being moved. The blood supply is reduced or even cut off and damage occurs to that area of the body. Identified by a red area or a round wound if the skin is broken.
2) **Shearing** – when a client is moved or moves in a way which causes the skin to move but the underlying tissues to stay where they are. Often identified by bruising type damage or, if the skin is broken, a tear drop shaped wound.
3) **Friction** –when the skin appears to have been "scraped" over a surface. Identified by a rough appearance to the skin as if a cheese grater has been used!

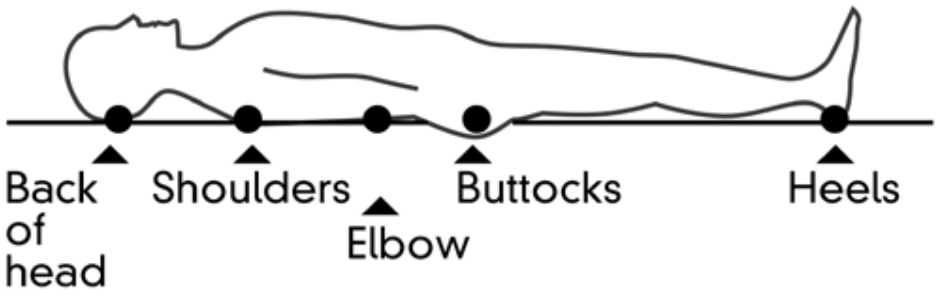
Pressure damage often appears in the first instance as a red or purplish mark or change in skin appearance such as a blister. The skin may feel warm or swollen due to fluid leakage under the surface. It is important that **ALL** red marks and skin changes are reported and investigated as this may be a warning that damage is occurring. It is our role to identify what is the cause of the damage and to rectify this.

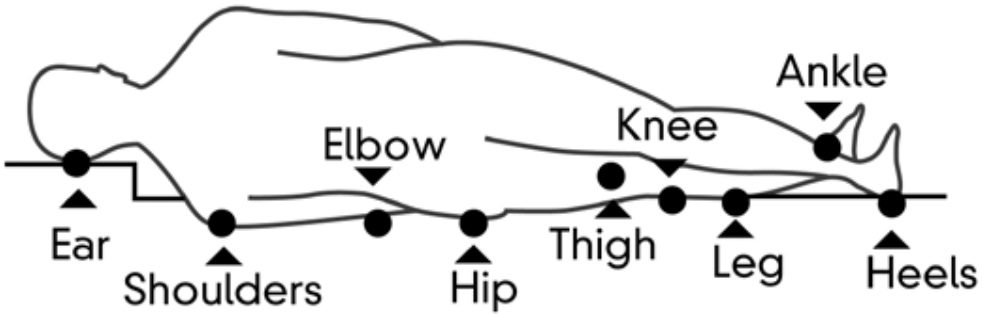
If a red mark changes to white when pressed lightly with your finger then this is said to be blanching. If the red mark does not change to white then this is actually Grade 1 pressure damage and called non blanching erythema.

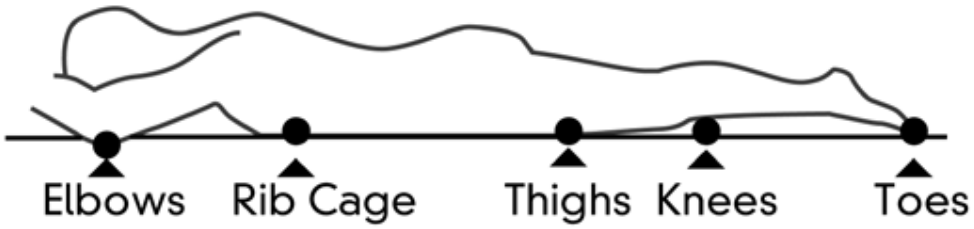


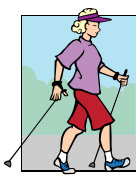
Common sites for pressure ulcers



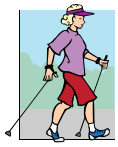








Now complete *Activity Three* in your workbook



Activity Three

1) List the three different types of pressure that causes pressure damage / ulceration and describe each

Type 1

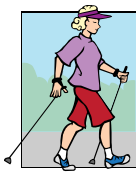
Type 2

Type 3

2) List some common sites of pressure damage (as many as you can!)

In the next activity we have asked you to think about the effect / impact pressure damage has on a resident, staff, family, NHS…
It will allow you to think why we are carrying out exercises like these and for you to appreciate how important you are in preventing pressure damage….

So let's have a try with **Activity Four!**



Activity Four

Impact of pressure damage

What do ***you*** think the impact of pressure damage is?

We can divide this into four areas:

Resident
Staff
Family
NHS / Government

1) **Resident**: Write down how do you think a resident feels when they have a pressure ulcer? Do you think of pain, embarrassment, loss of appetite?

2) **Staff**: How would **you** feel if one of your clients / patients developed a pressure sore? Does this have an impact on your workload? Do you feel guilty?

3) **Family**: How do you think the family feels if their relative develops pressure damage in you care? Do you think they would lose faith with you?

4) **National Health Service**: What do you think pressure damage costs the NHS?

In Section three we will look at how we are able to assess whether someone is at risk of developing pressure damage / ulcers. The elements within this are known as “risk factors” and they help us to develop a preventative treatment plan to reduce the chances of your residents/clients developing pressure damage / ulcers….

Section three

Risk Factors

Who is at risk from Pressure damage?

Anyone can develop a pressure ulcer, but some people are more likely to develop one than others. People with a pressure ulcer are also at risk of developing another pressure ulcer when the original wound / damage heals.

People may be at risk of getting a pressure ulcer if, for example, they have;

• Reduced mobility – clients have problems moving and cannot change position by themselves without help

• Sensory impairment – clients cannot feel pain over part or all of their body. They may have experienced a spinal injury or have Multiple Sclerosis or have Parkinson's Disease or dementia for example

•Excoriation - clients are incontinent or have moist skin caused by sweat

• Serious illness or require palliative care

• Reduced skin strength - clients may have had pressure ulcers in the past

• Reduced nutritional intake – clients may have a poor diet and don't drink enough water**

• Poor circulation – clients may have poor circulation caused, for example, by heavy smoking, or disease such as diabetes. They may have heart or lung problems.

• Age - Clients are often elderley

• Acute illness – clients may have an acute illness or have suffered an injury, for example a broken hip. They may be normally independent, able to change their own position, normally eat well etc but **will become more at risk** if they suffer an acute (short term) illness such as a chest infection or urine infection or have a fall. This may well mean that they do not move around as much. They may also have a temperature and feel unwell resulting in them not having such a good appetite. They may also become incontinent which will affect their skin condition. You will need to support them more with moving, eating, keeping their skin in good condition and drinking.

• Medication – clients may take some medication which causes thinning of the skin such as steroids.

• Mental health problems – clients may not fully understand or indeed wish to take advice on pressure ulcer prevention advice

Special attention should be paid to nutritional intake. A good balanced **nutritional intake is vital to contribute to overall health and wellbeing and prevention of pressure damage.

We need vitamins, minerals and fuel from our food to help with skin strength and healing.

Some of the factors which may contribute to poor nutritional intake include:

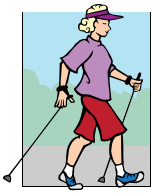
- Acute illness – often results in a loss of appetite, although nutritional requirements may be increased.
- Chronic illness – Disease or drug therapy may affect appetite or result in malabsorption
- Pain – May result in loss of appetite
- Age – Increases the risk of disease
- Mental health disorder – Patients with a mental health disorder are less likely to be aware of the need for a good diet
- Poor fitting dentures or no teeth – Patient may be unable to eat a full range of foodstuffs.
- Alcoholism – Often associated with poor diet and can cause thiamine deficiency
- Poverty – Often results in a poor intake of protein and vitamins
- Lack of care – Food may be placed out of reach

It is important for us to ensure that clients are having a balanced adequate nutritional intake.

Some of the ways we are able to encourage this could include:

- Sit client out in a chair at a table or at least sit up the bed to eat
- Would your client like to wash their hands prior to eating or are there any other routines they normally complete prior to eating?
- Would your client like to eat alone or join other clients in the dining room?
- Ensure dentures are worn if required and that they fit
- Ensure table / tray is clean and free from other items
- Ensure food within easy reach of client and cut into pieces if required
- Does the food look appetizing? Would you eat the food?
- Ensure client is able to use cutlery provided – do they require adapted cutlery?
- Does the client require assistance / encouragement with eating?

Have a go at **Activity Five!**



Activity Five

Risk factors associated with pressure damage

List as many factors as you can (at least ten!) which make a client / resident more at risk from developing pressure damage:

1
2
3
4
5
6
7
8
9
10

List six factors which may contribute to reduced nutritional intake:

1
2
3
4
5
6

Why is it important to ensure your clients have a balanced nutritional intake?

How can you ensure that you create an environment / situation which encourages your clients to eat well? List six ways.

1

2

3

4

5

6

Section four

Prevention of pressure damage

By looking back at the risk factors in the previous section we are then more able to establish how we can prevent pressure damage developing.

We can list the main interventions required:

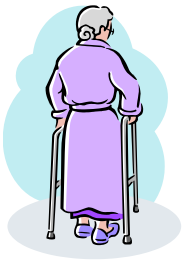
Keeping moving

Use of equipment

Skin inspection &care

A good diet / hydration

Client / resident education and self-care



Now let's look at these individually…

"Keeping moving"

If a resident in your care is deemed to be at risk of developing pressure damage then we should be working with them to find ways to enable them to move around and change position.
They should not be sat or laid in the same position for more than two hours. If your resident has been advised to take bed rest by the District nurses then you need to ensure that they are supported in changing their position every two hours – this intervention should be documented on a chart. You may need to support them changing from one side to another or from one side to their back. However it may be necessary for them to sit out in a chair for mealtimes as this may encourage them to eat well. They should return to bed rest after their meal. The District Nurses may feel that an airflow mattress is required for higher risk residents. This **DOES NOT replace the need for positional changes**. You must continue to change their position every two hours or more frequently if the District Nurses feel that this is required.
If your resident sits mainly in a chair then you need to ensure they stand up or move around every two hours. The District Nurses may advise a pressure reducing cushion to be placed on their chair to help reduce the pressure. This **DOES NOT replace the need for positional changes.**
It may be necessary to vary between sitting in a chair and lying on the bed within the two hourly positional change regime. Try to time this around mealtimes or activities so this plan does not interfere with eating and activities.

It is also important to check that the seat / chair being used by the resident is suitable for them. If the chair is too high the resident may start to slip resulting in “shearing”. If the chair is too low, pressure may increase on the heels on the floor.

Use of equipment

Equipment (mattresses and cushions) come in two main types; those that reduce pressure by **spreading the weight and increasing the surface area**, and those that **relieve pressure by removing the pressure at frequent intervals.**

The home where you work may have access to some of the equipment needed or if the District Nurses have been asked to visit the resident, they will order equipment from TCES.

It is important to remember that pressure relieving equipment does **not** replace the need for repositioning and should be used as an adjunct with a repositioning and skin inspection regime that suits the resident and circumstances.

Some of the equipment selected may be:

- Foam replacement mattresses/cushions:-
  - These consist of several layers of different foams and have a pressure reducing action because they allow the patient to ‘sink-in’ thereby spreading the pressure over a greater surface area.
  - They can be used for patients at low to moderate risk who are still relatively mobile so that they can move themselves in bed.
  - They should be cared for according to the manufacturer’s instructions and will require regular checks to ensure their integrity.
  - They may also require turning and flipping at intervals.

- Static air and gel filled devices:-
  - Air filled devices reduce pressure but may need to be re-inflated at intervals.
  - Gel or fluid filled devices also reduce pressure by spreading weight.

- Alternating pressure overlays:-
  - These attach to the top of the mattress – divan or foam.
  - Double mattresses are available.
  - They work on the principle of cyclic inflation and deflation of air cells over a short period of time, this can be controlled by a dial or by a ‘sensor’ pad which measures the patient weight and then alternates the amount of pressure to different parts of the body giving pressure relief.
  - They can be used for patients at a moderate to high risk.
  - The biggest consideration in choosing an overlay is the weight of the patient. Even moderately heavy patients can ‘flatten’ the mattress when in a seated position reducing its effectiveness.
  - The overall height of the bed may also increase, causing a problem when transferring from bed to chair/wheelchair, leading to a greater risk of falling if used. The District Nurses may have to order a reduced depth foam mattress from TCES, to be placed under the underlay after removing the resident’s current mattress.

- Alternating pressure replacements:-
  - These replace the foam mattress and attach to the base of the bed.
  - As with overlays they use cyclic inflation and deflation of air cells over a short period of time they may or may not contain sensors.
  - For high-risk patients.

Constant low pressure devices:-

  - These can be either overlays or replacement mattresses.
  - They use a continuous flow of air and sensors to maintain a 'soft' support surface which spreads the patient's weight out therefore reducing the pressure.
  - They can be used on individuals who are moderate to high risk particularly for patients who cannot tolerate the movement of an alternating product.

- Electric profiling beds:-
  - Electric profiling beds reduce skin damage by:
    - Making patient movement easier for the patient, carers and staff to perform, reducing friction and shear.
    - Use of the knee break prevents sliding down the bed reducing fiction and shear.
    - Allowing patients to change their own position.
  - It is vital that an environmental check is carried out to ensure space is available as these beds are larger than a standard divan and require room to 'move'.
  - If the risk to the patient is from shear and friction then a pressure reducing foam mattress may be as effective as alternating mattress.

- Other equipment
  - Friction and shear can be minimised with the use of a glide sheet
  - Manual handling risk assessment should be an integrated part of the holistic assessment in the pressure ulcer prevention care planning process

It is important to realise that whilst any equipment is supplied via TCES and the District Nurses, it is the responsibility of the Home to ensure the equipment is used appropriately and safely. The Home is also responsible for the whereabouts of the equipment.

It is also important that the settings for any dynamic (airflow) mattress are correct – you must ask advice if you are not sure as an incorrect setting could place you resident at further risk.

The following <u>should not be used</u> as pressure relieving aids: water filled gloves; synthetic sheepskins; genuine sheepskins and doughnut-type devices.

- Doughnut / ring type devices may cause damage to areas other than the area you are trying to relieve the pressure from and therefore can cause rather than prevent pressure ulcers.
- Water filled gloves have been found to be ineffective because their small surface area does not redistribute the pressure.
- Sheepskins and fibre filled overlays can be used to provide comfort at the patient's request but neither gives relief from pressure. If used, care should be taken with regard to cross infection. You may have noticed that when using sheepskin devices they create "red areas" of patterned skin which again could develop into pressure damage.

Wheelchairs!

Extra attention must be paid to wheelchairs. A vital piece of equipment for independence and movement but may cause significant damage from a trauma perspective and also pressure damage. A wheelchair may be manual or self- propelled. All wheelchairs must be fit for purpose and used safely. If the chair is the residents own – is it still suitable. How long since it has been checked / measured and established as suitable? Does the cushion give adequate support and pressure redistribution? Is your resident sitting in the chair for too long – are they developing "red areas"? Are wheelchair services involved?

Care must be taken to ensure the wheelchair is suitable and maintained well.

We may be looking at all other aspects of pressure relief but the missing part of the jigsaw may well be the wheelchair!

If you think that a wheelchair is not suitable then report this to you manager.

Skin inspection & care

In order to identify any early signs of pressure damage, a full skin inspection should be carried out weekly or if a resident becomes unwell and is no longer as mobile as usual. Perhaps they are suffering from a UTI or chest infection and are not feeling as well as they normally would. The signs may be quite small but you have an excellent opportunity to identify problems at an early stage as you help care for residents on a daily basis. Ask them if they would allow you to check their vulnerable skin explaining why and what you are looking for. If there are no signs then that's great as you have acted quickly so you then need to ensure that you assist with positional changes and nutrition.

It may be that the skin becomes sore from an episode of diarrhoea or urinary incontinence, which again would mean that the resident has an increased risk of pressure damage due to the skin not being as strong as usual.

In Section One we discussed skin care. Please read this section again to remind you about the importance of skin care and which products we should be using to help us with good skin care.

Good diet and hydration

Please read Section Three again with reference to nutrition.

It is important for your resident to have a well-balanced, nutritional intake as well as being well hydrated.

The skin requires several nutrients for it to work properly and provide the barrier it is designed for! Carbohydrate, protein, vitamins and minerals are all important. If the resident is not eating as they usually do then it is important to find out why this is happening. Are they feeling unwell? Are they having problems with their mouth or the practicalities of eating? Do they have a physical disability which is affecting the mechanics of eating? Have they developed a medical condition? If you feel that they are not eating as well as usual it is important to report this to senior staff, GP or the District Nurse if they are under their care. If the resident suffers obvious weight loss then they may need referring to a dietician or other further investigations. Again it is important to report weight loss to senior staff.

If the resident actually has developed a pressure ulcer then it is even more important to ensure they have a good nutritional intake. A wound requires fuel and energy to re build and so nutrition is vital. If the resident is not eating very much then they may require some supplements to help increase protein levels.

Hydration is also vital for good skin condition and also wound healing. If the resident does not wish to drink then we need to find out why. Are they worried they will not make it to the toilet in time? Are they taking medication (water tablets / diuretics)? Do they suffer from pain when they pass water? Are they not able to pass water properly and feel they are holding on to their urine? Again it is important to report this to senior staff whom may feel that the GP should see the resident.

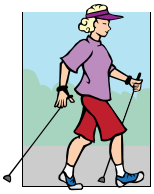
Education / self care

As part of our role it is important to help the resident keep as much ownership and independence as possible and be proactive in preventing pressure damage. It is also important for family and friends to appreciate their role in prevention of pressure damage.

It is not enough to simply hand a leaflet to the resident / family but to talk through the information and see how well they understand. Encourage them to ask any questions and create and help create an environment where no question is a “silly” question. This is a team effort and all members of the “team are as valued and important as the other.

As you become more aware of risk factors, by working through this information, you will be able to discuss with more confidence the need for appropriate, simple actions to contribute to towards preventing pressure damage. Many of these actions will be undertaken by the resident with your support. Our role is to encourage those actions and continuously decide whether they are effective.

If you are unsure whether preventative actions are effective then ask your colleagues, manager or District Nurse for further discussion and advice.



Activity Six

Pressure damage prevention

List the five areas where you can help with pressure damage prevention:

1

2

3

4

5

What does NOT replace the need for positional changes?

What two main types of equipment are available – how do they work?

List three items which should **NOT** be used for pressure relief

1

2

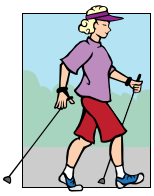
3

Why is it important to ensure that seating is correct for your resident?

When / how often would you complete a full skin inspection of your resident?

Why might a resident not be drinking adequate fluids?

How can you help a resident and their family be more aware of pressure damage prevention?



Activity Seven

Case Study

Now you have worked through the information booklet and activities, it would be useful for you to use all the points you have learnt to see how you would use this in your everyday work environment.

Please select a resident / client whom you are caring for. You should **not** use their full name in this exercise but you could perhaps use their initials.

Resident initials:

Date:

Now give a little bit of background information such as how long they have lived in the establishment, why they need to be cared for.

Do they have family or friends who are involved with them?

Now work your way through the risk factors that you have been learning about and see which ones you feel are applicable to your resident, explaining each one as you go…

Now list some of the actions you would take in order to reduce the risk of your resident developing pressure damage…… (you may wish to base this section around the risk factors you have identified..)

Who else could support the resident with these actions?

Explain how you feel that you have successfully used interventions to prevent pressure damage.

How fantastic to feel that you have helped prevent your resident suffering from a potential life threatening event!

Well Done!

You have completed your Workbook

However – this is not the end of your mission!

Use this book as a reminder.

Hopefully you have enjoyed completing this workbook and learning more about pressure damage and how you can help in its prevention…

Remember to read through this perhaps once every couple of months – you are a key member of the team and ultimately the main group of people whom will benefit from your knowledge and care are the **residents you support and care for**.

We do plan to update this work on a yearly basis.

Acknowledgments:

Prepared following initial idea and request from Tracey Garnett, Clinical Lead for District Nursing, Guisborough & Redcar Locality.

Idea based on an original document produced by

Information based on:

Pressure Ulcer and Moisture Lesion Prevention and Treatment Guidelines – South Tees Hospitals Foundation Trust

Skin Care & Protection – A guide for patients and carers

Pressure ulcers - Information for patients and carers. South Tees Hospitals NHS Foundation Trust