



Multiple sclerosis information

for health and social care professionals

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Pressure ulcers

Skin, as the largest organ of the body, is crucial for our health and well-being yet is often taken for granted¹. Whilst MS itself does not directly affect the skin there are a number of symptoms which can put people with MS at higher risk of skin breakdown. These include trauma wounds due to sensation changes and balance impairments, leg oedema and increased risk of pressure ulcers due to spasticity, reduced mobility and cognitive function².

Pressure ulcers, also referred to as pressure sores, bed sores, or decubitus ulcers, are areas of localised damage to the skin, which in adults usually occur over bony prominences in any area of the body³.

Pressure ulcers may range from minor breaks to very large deep areas of dead tissues extending over many square centimetres and down to bone. Once present they can be difficult to heal, and can cause general malaise and worsening of most impairments, and they carry a risk of generalised or localised infections. The European Pressure Ulcer Advisory Panel (EPUAP) classification system⁴ for pressure ulcers highlights that damage can be occurring even when the skin is not broken.

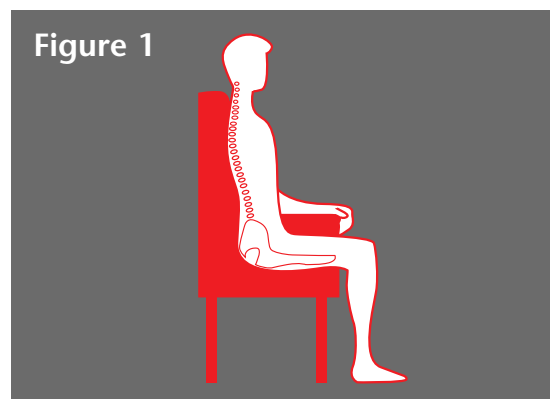
The NICE clinical guideline for management of MS states that prevention and management of pressure ulcers is a key priority. Each pressure ulcer should be reported, the cause investigated and action taken to reduce the risks of recurrence².

Patients and carers should be taught to check for signs of pressure ulcers on a daily basis.

Causes

Pressure sores are caused by a combination of factors both outside and inside the body. The three external factors which can cause pressure ulcers either on their own or in any combination are pressure, shear and friction⁵.

Pressure is the most important factor in pressure ulcer development⁵. Pressure in the seated position for example is caused by the downward forces of the body weight that compress the soft tissues of the buttocks against the sitting surface (Figure 1). This in turn occludes the delicate blood capillary network which supplies the soft tissues. Pressure is at its greatest in the area near bone, particularly the ischial tuberosities where pressure is known to be three to five times as great as that on surrounding tissues⁶.



Shearing forces can also deform and disrupt tissue and so damage the blood vessels. Shearing occurs when the body weight is sliding against a surface, for example when poorly seated or sliding down a bed away from a back rest. Whilst the skeleton and nearby tissues move, the skin on the buttocks

European Pressure Ulcer Advisory Panel (EPUAP) guide⁴ to pressure ulcer classification

Grade	Evidence
1	Non-blanchable erythema of intact skin. Discolouration of the skin, warmth, oedema, induration or hardness may also be used as indicators, particularly on individuals with darker skin.
2	Partial thickness skin loss involving epidermis, dermis, or both. The ulcer is superficial and presents clinically as an abrasion or blister.
3	Full thickness skin loss involving damage to or necrosis of subcutaneous tissue that may extend down to, but not through, underlying fascia.
4	Extensive destruction, tissue necrosis, or damage to muscle, bone, or supporting structures with or without full thickness skin loss.

Pressure ulcers

remains still. During this process the blood capillaries become distorted, damaged or occluded leading to skin ischemia (deprivation of blood) and pressure ulcers can develop.

Damage due to friction differs in that it causes visual damage to the surface of the skin and may be more superficial. It is caused when two surfaces rub together, often skin against a bed or a chair surface. Any moisture present on the skin as a result of excessive sweating or incontinence will exacerbate the problem⁵.

There are a number of additional factors that are known to place people at higher risk of acquiring pressure ulcers. People with MS, particularly those with more advanced disease, may fit into every category:

- neurologically compromised
- impaired mobility or who are immobile³
- impaired nutrition⁷
- obese or underweight⁸
- poor posture
- using equipment, such as seating or beds, which does not provide appropriate pressure relief⁹.

The development of a pressure ulcer is known to result in high costs both in human and financial terms⁹. The possible pain, systemic illness, reduced self-esteem and independence can result in a major burden of sickness and impact on quality of life for both patients, their families and carers¹⁰⁻¹².

Prevention

Prevention is far better than cure and most pressure ulcers can be avoided by good anticipatory management.

A number of risk assessment tools have been developed to assist in the identification of those individuals at risk of developing pressure ulcers including the Norton Scale, Waterlow scoring system and the Braden score¹³. However, in evaluations of the effectiveness of these scales there is clearly variation in their sensitivity of predicting those at elevated risk¹³ particularly when, as is frequently the case with an MS patient, they fall into a younger age category as many tools heavily weight older age. A factor frequently excluded from such tools is the presence or impact of spasms which can result in shearing and friction on the skin. This therefore highlights the importance of using risk assessment tools and scales as an adjunct to, but not a replacement for, clinical judgement¹⁴.

Patients and carers should be advised of warning signs that can increase the risk of developing a pressure ulcer. Questions to consider:

- are you eating or drinking less than usual?
- is moving becoming more difficult?
- is your skin regularly exposed to moisture?
- is your skin prone to being very dry, sore or red?
- have you been ill recently?
- have you lost or gained a lot of weight recently?
- has there been any change in your level of spasms?

The latter point can be an indicator of skin breakdown as this can be a trigger for spasms. These can then cause friction and shearing forces on the skin and a vicious cycle can be entered whereby the spasms cause the wound to worsen and the wound exacerbates the spasms.

Every person with MS who uses a wheelchair should be assessed for their risk of developing a pressure ulcer². The individual should be informed of the risk, and offered appropriate advice. Whenever they are admitted to hospital (for whatever reason), their need for pressure-relieving devices and procedures should be assessed. The assessment should be clinical, specifically taking into account the risk features associated with MS, and not simply the recording of a pressure ulcer risk score; it should lead to the development and documentation of an action plan to minimise risk.

Treatment and the multidisciplinary approach

There are a range of interconnecting factors which need to be tackled in order to treat existing pressure sores and prevent them developing again in the future. The involvement of a multidisciplinary team will often be required to achieve a positive outcome. Health professionals from different disciplines will need to work together and might include:

- MS specialist nurse
- district nurse
- GP
- continence adviser
- neurophysiotherapist
- dieticians
- wheelchair services
- speech and language therapist.

Simple tips for the prevention of pressure ulcers:

Reduce pressure	When possible alter position, even slightly, every 20 minutes during the day. If seated this could take the form of rolling slightly from cheek to cheek in the chair.
Appropriate equipment - cushions & mattresses	This includes: bed ¹⁵ , armchair, wheelchair, car seat, office chairs, all equipment when on holiday, hospital or away from home for any reason. Seek advice from a district nurse or occupational therapist. Avoid any form of ring cushion as this can occlude blood vessels and cause pressure damage itself.
Nutrition	Eat a well balanced diet. Advice and diet sheets can be obtained from a dietician. Even a short period of not eating well increases the risk of skin damage, particularly if you are unwell with flu for example
Hygiene and skin care	Skin should routinely be kept clean and fresh. Avoid allowing skin to be wet. Check for red areas on the skin once or twice a day. Reddened areas should fade within minutes when pressure is relieved. If they do not, seek advice from a district nurse.
Transferring	Obtain good instruction and support in transfer techniques and correct use of equipment. Avoid sliding and pushing when this may result in friction.
Positioning	Learn correct positioning for comfort and pressure relief, particularly when seated.

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Resources from the MS Trust

Are you sitting comfortably?:
a self-help guide to good posture
and positioning



Spasticity and spasms factsheet

We hope you find the information in this book helpful. If you would like to speak with someone about any aspect of MS, contact the MS Trust information team and they will help find answers to your questions.

This book has been provided free by the Multiple Sclerosis Trust, a small UK charity which works to improve the lives of people affected by MS. We rely on donations, fundraising and gifts in wills to be able to fund our services and are extremely grateful for every donation received, no matter what size.

MS Trust information service

Helping you find the information you need

The MS Trust offers a wide range of publications, including a newsletter for health and social care professionals Way Ahead and the MS Information Update, which provides an ongoing update on research and developments in MS management.

For a full list of MS Trust publications, to sign up for Way Ahead and much more visit our website at www.mstrust.org.uk



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