

Specialist treatment after your burn injury (adults and children)

Burns and Plastic Surgery

Information for Patients/carers

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Introduction

The aim of this booklet is to help answer some of the questions that you may have about the care of your/your child's burn injury.

In the Midlands, burn care is provided by

- a burns centre (in Birmingham),
- a burns unit (in Nottingham) and
- a burns facility (in Leicester).

All the hospitals in our network work together to offer the right care for burn injuries.

Our goal is to meet the physical, psychological, and social needs of our patients.

In Leicester, our specialist burn service uses a team approach. The team includes

- a consultant surgeon and their surgical team
- specialist burns nurses
- physiotherapists
- occupational therapists
- administrative staff
- specialist paediatric nurse (children only)
- play specialist (children only)

Other staff who may be involved in your care are dietitians, psychologists, and staff who can make devices which help to flatten scarring (specialist clinical prosthetists).

**Health information and support is available at www.nhs.uk
or call 111 for non-emergency medical advice**

Visit www.leicestershospitals.nhs.uk for maps and information about visiting Leicester's Hospitals
To give feedback about this information sheet, contact InformationForPatients@uhl-tr.nhs.uk

Depending on your/your child's needs, you/they may get specialist scar management, medical tattooing (adults only), skin camouflage consultation, or support from burn-related charities.

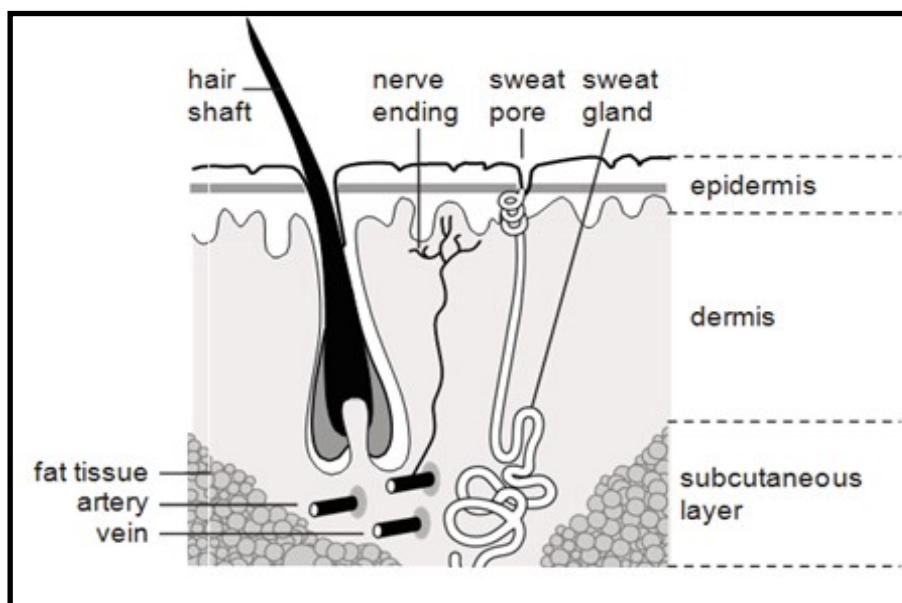
We hope this booklet is helpful. If you have any questions, please contact us.

What happens to my/my child's skin when it has been burnt?

To explain why problems happen it is important to know a little about the skin:

- Skin is the largest organ in your body
- Skin gives you lots of information about feelings such as heat, cold and pressure. Nerve endings in the skin pick up this information and send messages for your brain to interpret and act upon.
- Skin regulates your body temperature. When you are hot you sweat to cool down. When you are cold tiny hairs trap warm air against the body to warm up.
- Skin provides a covering for your body. It is a barrier to infection and gives you your appearance.
- Parts of the skin are also important in looking after your immune system, making vitamin D and storing blood.
- Skin changes as we get older. Young children's skin is smoother, softer and thinner than adult skin. The skin of babies and young children can be drier than adult skin.
- Skin is made up of 3 main layers: the epidermis, dermis and subcutaneous layer as seen in the image below.

Structure of undamaged skin



Types of burn

Burns can happen in lots of different ways. They can vary in size (described medically as the 'total body surface area' or TBSA of your burn), and in how deep the damage goes.

Accidental burn injuries such as scalds and burns from items such as hair straighteners are common in children. These can happen more when they start to crawl, walk and explore the area around them.

An exact assessment of the depth and size of your/your child's burn injury is very important so that the burns team can plan the best treatment for you/your child.

Superficial (epidermal) burn

This involves the outer layer of the skin (the epidermis). It is red and painful, for example, sunburn. There may be blistering and it usually takes 1 to 2 weeks to heal.

Once healed a superficial burn is usually treated with cream massage. Sun protection of factor 50+ is always advised to stop further damage.

Superficial dermal burn

The epidermis and part of the dermis is damaged. The top layer of skin is often blistered, with temporary skin loss. It can be watery and swollen and at first will be very painful.

These burns take around 2 weeks to heal. There may be some long term change in colour in the damaged area. Visible thickened scarring is unlikely to occur. Treatment is usually limited to cream massage and SPF 50+ sun protection.

Deep dermal burn

Deeper burn injuries affect more layers of skin and structures such as nerves, sweat glands and hair follicles. Your/your child's surgery team will say if your/your child's burn injury can be treated just with dressings or whether a skin graft (tissue taken from elsewhere to help healing) may be recommended.

Although skin grafting can improve healing times, deeper burns generally take longer to heal. They are more likely to scar so a specialist scar assessment and treatment will often be offered.

Full thickness burn

A full thickness burn affects all layers of the skin. It can occur where the temperature has been very hot, or your/your child's skin has been exposed to heat for a long time, or both of these factors.

A child's skin will burn more easily than adult skin.

There will be some tightness but sometimes less pain at first as the nerves that feel pain are often damaged. Full thickness burns usually need skin grafting, and any treatment options will be discussed with you/your child by the burns team. You/your child will be offered scar management treatments to manage your/your child's long term scarring.

Healing

Your/your child's specialist team will look after you/your child and give advice during the healing stages.

The burn wound will need to be cleaned thoroughly to reduce the chance of infection. This can sometimes be upsetting for you/your child. Specialist play therapists can help make children's dressing changes easier to cope with.

If your/your child's burn is affecting your/their ability to move around or is over a joint, you/your child will be seen by a physiotherapist to make sure that you/your child maintain your movement. If needed your occupational therapist may make you/your child a 'splint' or offer a neck collar to help stop joints tightening up when resting.

To improve healing and reduce scarring, having extra protein and calories is important. It also helps if adults reduce, or ideally, stop smoking to help blood flow and recovery. If you would like more information about these issues speak to one of the team. They can give you an information leaflet and signpost you to help.

You/your child may be given soft paraffin to massage into a newly healed burn wound. Be very careful when using this, as it is flammable. It can catch fire if it is near a naked flame or someone smoking.

Signs of infection

As the barrier of skin has been lost due to the burn injury, you/your child need to be aware of the signs of infection as listed below:

- More pain
- There is an unpleasant smell
- There is a change in the colour of any wound fluid
- There is increased redness or swelling
- You/your child may have flu like symptoms and a high temperature of 38°C or above

Get medical advice if you think the burn may be infected. An infection can be treated with antibiotics or specialist dressings.

If your child becomes unwell – Toxic Shock Syndrome

Very rarely a person may become unwell with a burn injury of any size.

Toxic Shock Syndrome is a rare but serious complication of infection. It can make a child feel really poorly very quickly and is a medical emergency. In some rare cases it can be life threatening. It is important that you phone the ward and speak to a doctor if your child has any of the following

- High temperature/shivers
- Rash
- Diarrhoea or sickness
- Muscle aches
- If she/he goes off their food and drink
- If she/he becomes very sleepy
- Stops peeing
- Headaches

If your child is extremely unwell seek help immediately - take your child to the nearest Emergency Department or call 999.

Pain

Burn injuries are often painful, mostly during the early healing phases. You/your child can take over the counter medication such as paracetamol and/or ibuprofen or Calpol. Ask your pharmacist for advice.

It is really helpful to take pain medication before you/your child come to appointments. If you/your child are finding it difficult to cope with the pain following a burn injury, please talk to the burns team. They can assess whether prescription pain medication may be needed.

Itching

Itching is common and caused by the natural healing processes in your body. This may be from dry skin, developing scar tissue or nerves re-growing. It can happen at any stage of recovery.

Itching can be mainly frustrating when it disturbs sleep. The following things can help:

- Keeping cool
- Using moisturisers if the burn has healed
- Using over the counter antihistamines (hayfever tablets) if they suit you/your child
- For more severe itching which is interfering with daily life, a doctor or pharmacist can tell you about stronger, specialist medications.
- Do not scratch the itchy area. This causes damage to the healing wound/skin/skin graft donor site and may even leave it open to infection.

Scar tissue

Once your/your child's burn has healed and any scabbing has fallen off it is described as a scar. Scar tissue formation is a natural healing process. It usually takes around 1 to 2 years or sometimes more for the scar to stop changing and become fully 'mature'.

Without the outer layer of skin to put pressure on any deeper layers, the new scar tissue can become raised and lumpy. It can also look very red due to the increased blood flow as a result of the healing process. A raised, red and lumpy scar is called a 'hypertrophic scar'.

Any redness in a scar usually fades over time. Hypertrophic scars often need special treatment to become softer, flatter and more flexible (pliable).

Scars will never 'vanish'. The new skin will never be as strong or behave exactly as it did before injury. The following issues can be improved with a range of specialist treatments:

- Scar appearance
- Scar comfort
- Scar height, texture and softness
- Your/your child's acceptance of the scar
- Confidence following a burn injury

Assessment of scars

Your/your child's occupational therapist will look at the colour, pliability, density and height of the scarring. They will check if, and how the scarring affects movement and daily activities such as work, school, home and social.

As scars mature the new skin can become tighter. With children or pregnant women with a burn injury, the surgical team will keep track of scarring closely. This is to make sure that it is not restricting normal growth due to being less pliable than uninjured skin. Sometimes operations are available to release tight restrictive scar tissue in these cases.

Treatment: how do I manage my/my child's scars?

Scar massage/moisturising

After a burn injury, the skin may be dry and itchy. This is due to damage caused to the sweat and oil producing glands. It is important to moisturise regularly. Use a thick, non-perfumed cream such as: Nivea, Diprobase, QV cream, Epimax, Hydramol, Dermal 500 or a supermarket brand dry skin cream of choice.

- Apply firm pressure to the scars.
- The skin being pressed should go white (as you are temporarily limiting the blood flow).
- Use small, circular movements across and around the scar. It can also help to gently stretch the scar as you work. Your/your child's occupational therapist will show you how to do this.
- Try to massage the scarring at least 3 times a day. This depends on the area and site being treated. Scar massage can be done more frequently than this on a 'little and often' basis

throughout the day. You may be happy for a partner, carer or family member to help with the massage. Your/your child's occupational therapist can coach them in how to do this if needed.

Pressure therapy

Pressure therapy can soften and flatten burn scars. It may also ease itching.

A pressure garment is specially designed to be worn over burn scars and under clothes. It acts like a 'second skin' to stop scars from becoming raised. It replaces the pressure that the normal outer skin layer would give.

Your/your child's occupational therapist can measure you for a custom-made garment or fit you/your child with a ready-made one. You will get at least 2 garments to allow for washing. Pressure garments are usually worn 23 hours a day for 1 to 2 years, sometimes longer.

Pressure therapy is a well-known and accepted scar treatment. The occupational therapist will discuss your/your child's needs to make sure this treatment is right for you/your child.

Silicone gels

Silicone gels have been found to help soften, flatten and improve the appearance of scars. They come in various forms such as gel in a tube or a roller stick, a spray, or a sheet.

You/your child may be given a sample of gel from the hospital. If this is found to be suitable, the GP may agree to prescribe it, at the request of your occupational therapist.

If you wish to buy gel yourself, your occupational therapist can advise on a suitable type. They can give written instructions on how to use it.

Some gels may not be suitable for younger children due to the risk of them choking. Please check that any gel used is suitable with your therapist.

Elastomers

Elastomers are a putty like material. They can be mixed and moulded to the exact shape of the scar.

Like silicone gel they can help to soften and flatten scarring. They are very useful for scarring which is concave shaped as they can fill the 'hollow' part, putting pressure on the scarred area.

Elastomers are usually held in place by splints, bandages or pressure garments. They may not be used with younger children because of a risk of choking.

Exercises

It is important to maintain movement by doing exercises during recovery from a burn injury. It is much easier to **prevent** joint stiffness (contracture) rather than change it once a joint has tightened.

If your burn is over a joint and has taken more than 3 weeks to heal you/your child are at more risk of a contracture. Your/your child's therapist will advise on how to stop this happening by giving you/your child a programme of stretching and exercise.

Maintaining the length of scarring through positioning or exercise helps prevent contracture of joints

and muscles. The ideal time to stop the scarring from shrinking and avoid contracture is in the first few months after healing.

Your/your child's stretches should be gently held and slowly increased as your scar relaxes. Depending on how much scarring there is, the exercises may take time and hard work. By following the advice given, you/your child will have better function and comfort. You/your child may even avoid the need for future surgery.

Splints

Splints can be used to treat burn scarring by stopping tightness occurring over a joint and to prevent 'contractures'. Areas at particular risk are the neck, armpits, elbows, hands, knees and feet. They are usually worn when resting and often removed to encourage function. Splints can be custom made from a lightweight material that is moulded to fit the individual, or ready made.

Common areas of concern

Bathing

Bathing or showering is important. It helps to cleanse the skin and let you/your child move the burned area without the limits of clothing. The following steps are essential:

- Take off any pressure garments, splints or gels before bathing.
- Test the temperature of the water with an unburned area of skin before you/your child get in as the skin may be more sensitive than usual to hot or cold temperatures.
- Use mild non-perfumed soaps such as 'Johnson's' or 'Simple' soap.
- Wash gently but firmly with a wash cloth. This will help to clean off flakes, scabs or loose skin. Dry the area gently with a clean towel.
- The bath is a good place for children to play. Playing in the bath can help a child's movement and function. Your child's therapist will help you choose activities which can help.

Blisters

Newly healed skin is thinner and more sensitive than normal skin. It is common in the first few months of healing for small blisters to develop over healed areas and donor sites.

To help prevent blisters:

- Follow the bathing/showering routine above
- Always wear clothing that is comfortable and does not rub.
- Avoid 100% synthetic clothes.
- Wear well fitting pressure garments.
- Wear a small dressing over the blister to protect it from pressure garments/knocking.

Pimples/cysts

These may appear as black, red or yellow spots which have risen up to the surface of the skin. There may be small areas of damaged skin trapped underneath the skin graft, or the sweat glands and hair follicles may need to find their way back to the surface.

How to deal with pimples/cysts:

- Soak in warm water to soften the skin.
- Place a small piece of gauze over the area and press directly onto it to remove the cyst. This will remove the contents and prevent infection.
- Apply a light dressing until this has healed over.

Dryness

Healed burns and donor sites tend to be dry, flaky and itchy due to a lack of oil in the skin from damaged oil glands. Remember to cream and massage regularly throughout the day.

Itching

To reduce itching

- Wash your /your child's skin with warm water only. Soap may dry the skin and hot water may wash away body oils.
- If you/your child are wearing pressure garments make sure you/they are wearing them as instructed and all the soap is rinsed out after washing.
- Keep wearing the pressure garments as the pressure may help to reduce the itching.
- **Do not scratch.** This will cause blisters and raw areas over the healing skin.
- If itching becomes very severe contact your/your child's doctor to discuss further options.

Swelling

During the healing process your /your child's limbs may keep on swelling. To control the swelling:

- Make sure pressure garments are worn as advised
- Make sure you/your child exercise regularly
- raise your /your child's limbs when sitting or resting

Changes in skin colour

There may be changes in your /your child's skin colour due to changes in the blood circulation whilst healing. At first your/their skin may appear dark pink, deep red or purple. The colour changes may be more noticeable when standing.

Pigment changes are also usual and can make skin look darker or paler than before the injury. Over time these changes can, but do not always settle down.

To help prevent discolouration:

- Make sure pressure garments are worn as advised.
- Keep arms and legs raised when at rest.
- Ensure you/your child do not stand still in one position for too long.

Remember, it can take up to around 18 months to 2 years for scars to fade.

Sensitivity to the sun

Burnt areas and donor sites (where skin grafts have been taken from) will be more sensitive to the sun. Sun exposure can lead to permanent changes in your /your child's skin colour so it is important that you protect the skin by following these guidelines:

- Avoid direct, prolonged exposure to sunlight for at least 2 summers after your /your child's burn injury.
- Pressure garments do not protect the skin from the sun. Wear cotton garments over these, even on cloudy days such as shorts, shirts etc. Use sunblock SPF50+ on bare skin areas .

Return to nursery, school, college or work

Your occupational therapist can work with you/your child to help a return to everyday activities. This often includes going back to nursery, school, college or work.

Every person is different so advice will depend on the individual's situation.

Therapy may include:

- The therapist contacting nursery, school, college or work with your consent. They may explain about the burn injury. Nursery/school staff may be asked for help in following the therapy plan when a burn injured child is in their care.
- The therapist may help you/your child to think of ways to help with tasks at nursery/school/college or work that have been more difficult since the burn injury.
- The therapist may suggest a group meeting about your child's education if there are a lot of people involved in their burn care.
- Often burn injured adults will have worries about money or work issues. Your occupational therapist can advise you about these matters. If needed they can offer specialist return to work rehabilitation. They can also refer you to other services who may be able to help.

What about the psychological aspects of a burn injury?

Some early problems after a burn can be common. Burn injuries can be emotionally as well as physically traumatic for all those involved. They can include some or all of the following:

- Shock
- Guilt
- Despair

- Disbelief
- Anger
- Frustration
- Fear
- Denial
- Insomnia (sleep problems)

These are all **normal**.

It is common to have flashbacks (reliving the accident) and nightmares.

Adults with a burn injury may feel tearful, guilty and low in mood. Many people can also feel anxious, tense, overthink problems and worry about the future.

Children with a burn injury may seem sad, worried and 'not themselves'. They may be upset when coming to hospital appointments or be distracted from their normal activities.

These things can also affect the rest of the family.

You /your child may have had life saving treatment whilst in hospital. Once back at home it takes patience and determination to get better. It may be hard to keep positive when you/your child look at the scarring each day and it seems to change slowly.

Adapting to a different self-image following a burn injury is an ongoing process. Your burn team can direct you /your child to useful organisations who can help. Sometimes it may be possible for you/your child to talk to other burn survivors. Burn camps and burn clubs are available for burn survivors and their families to meet and have fun whilst supporting each other.

Support from family, friends and the burn team can help with early difficulties. Professional psychological help is available for you/your child/other family members if symptoms persist.

Please ask your burn team for help.

Conclusion

There is a lot of information in this booklet and you/your child may have further questions. Please do talk about any other issues with the burn therapy team.

The way you/your child live with burn scarring may change over time. If you have questions or need further assessment in the future please ask the G.P. to refer you/your child back into the burns service.

What support services are available?

Please talk to your burns team about the following services if you are looking for further information or support:

NHS talking therapies (Improving access to Psychological Therapy or I.A.P.T)

A variety of therapies are offered throughout England to people over 18.

Your G.P. can refer you or you can refer yourself by telephone or online. This service may have a different name depending on where you live. You can find your nearest NHS talking therapies service by going to: www.nhs.uk

Leicester, Leicestershire and Rutland talking therapies ('VitaMinds')

Tel: 0330 094 5595

Email: enquiries@vhg.co.uk

Website: www.vitahealthgroup.co.uk

Mental health support for under 18's:

NHS mental health services for people under 18 can include 'CAMHS' which stands for 'Children and adolescent mental health services'. Your GP or a member of your burn care team can refer you.

You can find your nearest CAMHS by going to: www.nhs.uk. There is also information on the website about the transition between adolescent and adult services.

British Burn Association (BBA)

At Royal College of Surgeons of England, 35-43 Lincoln's Inn Fields, London, WC2A 3PE

Tel: 020 7869 6923

Email: info@britishburnsassociation.com

Website: www.britishburnassociation.org/

This is a registered charity concerned with all aspects of burn care. The BBA aims to promote the study of burn injury, therapy, prevention and rehabilitation.

Children's Burn Trust

PO Box 13402, Ingatestone, CM4 9YR

Tel: 07802 635590

Website: www.cbtrust.org.uk/

This is a national charity dedicated to providing rehabilitation support for burned and scald injured children and their families, as well as prevention and awareness campaigns.

Changing Faces

The Circle, 33 Rockingham Lane, Sheffield, S1 4FW

Tel: 0345 450 0275 Support line: 0300 012 0275

Website: www.changingfaces.org.uk

A national UK charity supporting people who have disfigurements of the face/body from any cause.

Dan's Fund for Burns

4 Dagden Road, Shalford, Surrey, GU4 8DD

Tel: 07526 847699

Website: www.dansfundforburns.org

This is a UK based registered burns charity that offers practical help in a wide range of circumstances to adults in the UK following a burn injury.

The Katie Piper Foundation

PO Box 334, 19-21 Crawford Street, London, W1H 1PJ

Survivor support line: 0300 365 0055 open 9-5pm, with voicemail facility

Website: katiepiperfoundation.org.uk/

The Katie Piper Foundation is a registered charity whose aim is to have a world where scars do not limit a person's function, social inclusion or sense of wellbeing. They can provide additional services to standard NHS care for adults.

Contact details

Your burns consultant/doctor is:

Your nurse is:.....

Your occupational therapist is:.....

Your physiotherapist is:.....



Wound dressings

If you have concerns about your/your child's wounds call the following:

Children:

Children's Day Care Unit (CDCU) 8am to 6pm Mon to Fri on 0116 258 6317 or 0116 258 6922.
Out of these times, call ward 19 on 0116 258 5244 or 0116 258 5534.

Adults:

Burns and Plastics Nurses (BPDC) on 0116 258 5328 Monday to Friday 8am to 4pm.

Out of these times, call the Kinmonth Unit 0116 258 5327 or Ward 9 0116 258 5375. These are the main wards that offer care for burn injured patients.

The burns therapy team can be contacted on 0116 258 6826 Mon to Fri 8.30am to 4.30pm. If all the therapists are treating patients, please leave a message clearly stating

- Your/your child's name,
- outlining your query
- and leaving your contact number

and the team will get back to you.

Space for your notes/questions:

اگر آپ کو یہ معلومات کسی اور زبان میں درکار ہیں، تو براہ کرم مندرجہ ذیل نمبر پر ٹیلی فون کریں۔
على هذه المعلومات بلغة أخرى، الرجاء الاتصال على رقم الهاتف الذي يظهر في الأسفل

જો તમને અન્ય ભાષામાં આ માહિતી જોઈતી હોય, તો નીચે આપેલ નંબર પર કૃપા કરી ટેલિફોન કરો

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Aby uzyskać informacje w innym języku, proszę zadzwonić pod podany niżej numer telefonu

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