

My child has been burnt!

What Now?

Your guide to what happens
from hospital admission to recovery at home



- Why your child must be in hospital
- How you can help your child
- Your child's condition
- Specialised burns treatment
- Healing therapy
- How will your child react
- The importance of diet
- Living with burns
- How to prevent burns



Being in hospital with a burnt child is an extremely traumatic experience. Understanding what is happening at every stage of the treatment will help you to support your child better.

Right now, you are probably feeling confused and helpless, and afraid for your child. Knowing what is happening will give you your sense of control back and make you an essential part of the management plan for your child. It does not help to blame yourself or other people for what has happened, because it will not change anything. Right now, your child needs you to channel your energy, to show love, understanding and support.

Why must my child stay in hospital?

The decision to admit a burnt child to hospital is based on the size of the burn (10% or more) and also on which area of the body was burnt and whether or not smoke or hot gases were inhaled. All electrical and chemical burns, and any burn where other injuries occurred (e.g. in a car accident), will also be admitted.

Burns of the face, hands, feet, eyes, genital area, circumferential burns of the limbs, torso, inhalational burns, and burns over joint areas all require special attention.

The heart of the burns ward and the glue that binds the entire burns team together is the sister in charge and her nurses. These highly trained and experienced people will be there for you and your child 24 hours a day. Help them to help you.

Hospital burns management

AIRWAY: Hot and toxic fumes, gas, steam and smoke can cause swelling of the upper airway. This can happen rapidly and may obstruct the airway completely. When this is suspected, an artificial airway (a plastic tube) will be inserted temporarily to avoid closure of the airway.

BREATHING: If the airways or lungs sustained burns from hot flames, gas or smoke, your child may need to be ventilated for a while. A ventilator is a machine that assists the injured lungs to breathe. Because some children find the plastic tube that protects the airway uncomfortable, your child may be kept in a state of deep sleep (sedation) when on the ventilator.

DEHYDRATION: Burns cause body fluid to seep from the burnt area. When the burn is very big, this can lead to rapid dehydration. If more than 10% of the body surface was burnt, the fluid loss can be so great that drinking liquids alone will not compensate for the losses, so a drip will be required to help make up the deficit. The best way to know if your child is getting enough fluid is by monitoring urine output. To do this accurately in the case of large burns, a urinary catheter (plastic tube) will be inserted into the bladder.

CLEANING & DRESSINGS: Burns (especially the superficial ones where the nerve endings were not destroyed completely) are extremely painful and require very strong pain medications. These can be administered only in hospital. Cleaning and dressing of large burn wounds requires pain



control and nursing expertise, which are found only at dedicated burn centres. Smaller burns and large burns that are already healing can be dressed in the ward dressing room, but in the early stages a child with large burns may require a dressing change under general anaesthesia in the operating theatre. Cleaning and dressing the wounds in theatre can cause bleeding of the wounds, which may sometimes necessitate a blood transfusion during and after the procedure.

DIET: The burn injury causes a stress response in the body, leading to a massive breakdown of protein. The healing process is improved with dietary measures such as large amounts of high protein foods. In cases of very large burns a special feeding tube will be placed through the nose.

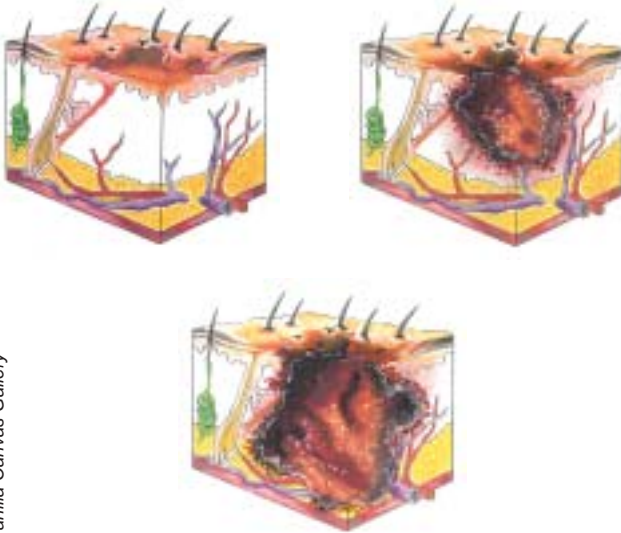
ENVIRONMENT: Large burns require a warm environment to avoid excessive loss of body heat. When the body heat falls below a certain level, a person develops all sorts of problems, including being more prone to infection and bleeding.

OUTLOOK AND REHABILITATION: For large burns it is essential that the rehabilitation process start immediately. Experts in physiotherapy, occupational therapy and psychotherapy will do this.

It is important to know that burns do not heal quickly. The healing process can take weeks or even years. Every burn will leave a scar on the skin and in the mind. The aim of the treatment is to speed up the healing process and to lessen the physical and emotional scarring.

Does it matter how deep or big a burn is?

Yes. The age of the patient and the percentage of the total body surface area burnt are very important for planning the treatment programme. Burns affect the very young and very old more severely. The diagram below shows the layers of the skin and the impact of the burn wound:



Graphics by David Fourie,
Vanilla Canvas Gallery

Burns have three degrees of severity, each with distinctive symptoms:

Epidermal burns (or first-degree) injure only the outer layer of skin. They are red and painful, and may cause some swelling. The skin turns white when touched.

Superficial dermal burns (or second-degree) are deeper and more severe. They cause blisters and the skin is very red or splotchy. There may be more significant swelling.

Full thickness and deep dermal burns (or third-degree) cause damage to all layers of the skin down to the tissue underneath. The burnt skin looks white or charred. These burns may cause little or no pain because the nerves in the skin are destroyed.

What happens during a dressing change?

It seems so terrible...

Burnt skin unfortunately is an ideal place for bacteria to thrive. These bacteria can destroy skin grafts and can even invade the bloodstream, causing serious complications like *septicaemia* (blood poisoning) and organ failure. In such cases, a child will need to be treated and monitored in the intensive care unit (ICU) and receive antibiotics through a drip.

However, antibiotics are not normally given for burns, because over-using these medications allows the bacteria to become resistant to even the most powerful antibiotics.

It is impossible to remove every single bacterium from the burnt area, **but by changing the dressings daily and rinsing off the wounds with clean warm water, the bacterial load is diluted.** This allows the body's immune system to cope with the infection.

Changing dressings is a painful procedure, so all children receive strong pain medication and also a sedative drug to calm them. You will be allowed — and in fact be encouraged — to accompany your child to the dressing room. Your presence will greatly reassure and comfort your child and it will also be good for you to see the actual wounds and the gradual improvement of the wounds. This way you will be kept in the picture of your child's progress and you will become an integral part of their support. **You can help by staying calm and encouraging your little one** (even if you feel like the one who really wants to cry).



When the child arrives in the dressing room, the old bandages and dressings are carefully removed. A special liquid anti-bacterial soap is then gently applied to the burnt and un-burnt areas and then washed off with a special shower device. This removes bacteria and dead skin. The child is then dried and new antiseptic ointment and clean dressings are applied.

Apart from the twice or more daily ward rounds by the medical, nursing and rehabilitation staff, the entire burns team does regular ward rounds to assess each child. On these days, the dressings will be removed early in the morning and clear thin plastic sheets applied over the wounds so that the team can inspect the wounds without the danger of contaminating them with bacteria.

What the doctors do in the operating theatre

Various procedures are performed in the operating theatre, depending on each child's requirements at the time. The hospital has a dedicated, specially equipped burns theatre. The theatre is heated to prevent the children cooling down too much. A specialist anaesthetist will gently put the child to sleep and ensure throughout the procedure that the child's breathing and circulation remains stable and that no pain is felt.

Dressing changes: These will be done in theatre for very large burns, especially in the early stages of treatment.

Debridement or cleaning of the wound: Sometimes there may be thick patches of burnt tissue covering a wound, thus not allowing the antiseptic ointments to reach the living tissue and not allowing new tissue to form. This requires removal of the dead tissue, called **debridement**. After debridement, a clean, viable tissue bed is formed on to which skin can then be grafted immediately or at a later stage.

Skin grafting: Skin grafting is a process whereby healthy unburnt skin is applied to the burnt area to speed up the healing process. The healthy skin is harvested from the patient. If there is not enough unburnt skin left, donor skin can be used.

The area where the healthy skin was harvested will heal in a couple of days and in the case of extensive burns, skin can be harvested more than once from the same donor area. Like the grafted skin, the donor sites will also always remain visible because the skin tends to be lighter or darker than the surrounding ungrafted skin.

Colostomy: Large burns on the lower abdomen or upper thighs and buttocks may require a *colostomy* (bowel brought out on the abdominal skin and emptied into a bag). This is done to avoid contamination of the wounds by stools passed. Once all the burns are healed, the bowel ends will be joined together again and function normally as before.

Reconstructive procedures: For some patients carefully selected reconstructive procedures may be needed to improve functional and cosmetic results. These always happen at a much later stage (months to years) and may require multiple operations by a reconstructive surgeon.



What is skin grafting?

Skin grafting is a process whereby unburnt skin is removed in a thin layer with an instrument called a dermatome. These strips of skin can then be meshed with another instrument.

The meshing process allows the skin to be stretched to cover a larger area. Meshed skin has a pattern like fishnet stockings. The skin from the "net" will eventually spread out into the gaps. The pattern will unfortunately always remain, although it will get fainter with time.

Whenever possible, skin harvested to be grafted onto the face or hands will not be meshed in order to achieve a better cosmetic outcome. The harvested skin graft will be secured onto the burn with skin clips (very much like normal staples). These clips cause surprisingly little discomfort. They can be removed after about 5 days, by which time the skin is well stuck to the burnt area and the new skin cells are growing enough to fill the gaps and thicken the graft.

Despite all the preventative measures, the graft may become infected with bacteria. This, however, is rare. When this happens, the graft dies and falls off. The infection will need to be brought under control over a week or so and a new graft will need to be taken and placed.

Donor skin

With very large burns, there may not be enough unburnt skin to be used for the grafts. In such cases a child may then require donor skin from elsewhere. Like kidney, heart and corneal transplants, this skin is donated by caring individuals or their surviving families, or when a person is declared brain-dead.

The burns unit doctors will go to where the donor is at that stage and skin will be harvested. That skin is then treated with antibiotics and kept in a special fluid to keep it in optimal condition.

The donor skin is then grafted onto the recipient child in the burns theatre. Because the skin is foreign to the recipient, it will be rejected by the recipient's body within days to weeks, but it will render life-saving skin cover and buy time until the child's own skin can be harvested and grafted.

Why are the **Physiotherapist** and **Occupational Therapist** so important for my child's care?

Why Physiotherapy?

The physiotherapist plays a vital role in your child's recovery from a serious burn.

This starts with admission and continues long after the child is discharged. The physio will help with your child's

- position and posture
- chest injuries, if the lungs were injured
- stretching of joints with overlying burns to get your child out of bed soon.

Burns over any joint are likely to cause scarring and tightening of the joint. If the joints are not stretched, they eventually become so tight that the child cannot straighten the joint at all. This is called a "contracture". It is very debilitating and requires major surgery to correct the problem. Your child may well not like these painful exercises, but it is absolutely necessary for recovery to optimal functioning.

During each anaesthetic for skin debridement or grafting, the physio will come into the operating theatre and stretch the joints, while the child is asleep. A splint may also be applied to prevent the joint from forming a contracture. These must be worn at all times (even when it is hot and the underlying skin is itching). The physio will also ensure that the muscle strength and tone are optimally maintained.

Why Occupational Therapy?

The role of the occupational therapist is to help the child back to normal functioning.

A thorough assessment will be done early on, after which a treatment programme will be set up for each child. The occupational therapist will make the splints required to avoid contractures. The treatment programme will include activities of daily living, such as feeding, dressing and grooming, which are required to play, work and to go back to school. The therapist will encourage active movement and activities that will also ultimately benefit the child psychologically.

Just before your child is discharged, the occupational therapist will work out a home treatment programme for you. This will include activities, a splinting timetable and scar management advice.

Scar management includes scar massaging with tissue oil or stricture cream. Pressure garments will be made by the therapist to flatten the scar. The garment applies constant pressure to the wound to prevent the raising effect of the wound. These must be worn for at least 23 hours a day and should only be removed for washing or bathing. For smaller burns, special covering tapes and silicone gels can be used. It takes between 18 and 24 months for the scar to mature.

How you can help the physiotherapist to help your child:

- Help your child by being optimistic and supportive.
- Follow the physio's advice carefully.
- Encourage your child during the physio sessions and praise him or her for any cooperation and improvement of movement.



The physiotherapist helps your child recover from the physical damage of the burns.

The occupational therapist helps with scar management and to get your child back to normal daily functioning.



How you can help the occupational therapist to help your child:

- Encourage your child to wear the splints and pressure garments as prescribed.
- Care for the wound and the garments exactly as told by the therapist.
- Remember that it takes time to get a good result - up to 24 months. Giving up before that will impair your child's chance of optimal recovery.

Do not cancel follow-up appointments with the occupational therapist. Sometimes parents lose heart, and transport is expensive — but it really makes a big difference in the long term to complete the treatment under expert care. Too often, children come back for major surgery for neglected wounds and contractures. This can be avoided!

How can I help my child while in hospital?

Helping your child to cope in hospital

- **Be there** for your child as much as you can.
- **Be optimistic** and encouraging, especially in front of them.
- **Be brave**, and try not to cry in front of them.
- **Be at the hospital**, if possible, when your child goes to theatre. You will be allowed to stay with him or her until they are asleep from the anaesthetic.

Help yourself to look after your child

- **Your child needs you more than ever before.**
- **Look after yourself.** Try to eat healthy foods and get enough sleep. Speak to counsellors, friends and family about your feelings and fears.
- **Don't blame** anyone for the accident or ask "what if..."
- **Forgive** yourself or whoever was involved in the unfortunate chain of events. Guilt helps no one get better.
- **Accept help** from friends, family and people in your community. Allow close family and friends also to spend some visiting time at the bedside of your child. It is good for your child and gives you a chance to rest.
- **Remember that healing takes time.**
- At the Red Cross Children's Hospital in Cape Town there is a **support group** for parents on Wednesday mornings from 08:30-10:00. This is a time when you can talk to a psychologist and to other parents about what has happened to you and your child. All parents and family members are welcome.

My child was discharged today — what now?

Depending on the extent of the burn, the stage of healing and your home circumstances, your child may be discharged to a rehabilitation hospital (like Sarah Fox), or straight home into your care.

If your child is discharged home you will be advised to take your child for dressings to your nearest Day Hospital or to come back to the out-patient burns clinic.

Your child may also have to continue with physiotherapy, occupational therapy and psychotherapy, and have their splints or pressure garments checked. **It is essential that your child wears his or her splints or pressure garments, even at home.** Your child may not want to do this and you



It is very important to hold your child, even if the burns and dressings seem to make this difficult. Your child desperately needs your physical contact.

Help the hospital to care for your child and others

- **Adhere to the ward regulations** to stop cross-infection of bacteria from one child to another.
- **Wash your hands regularly** when in contact with your child and wear the protective gown supplied by the ward.
- **Do not pass toys** from one burns patient to another as bacteria can spread this way.
- Please tell visiting **family and friends** not to wander around and stare at the other children in the ward as this can be very upsetting to all involved.

Other experts who will help my child

During his or her stay in hospital your child will also receive treatment from a music therapist, art therapist, reflexologist and aromatherapist. These people play a very important role in your child's physical and emotional road to recovery.

will have to encourage him or her. Without these, the scars will be worse and the child may lose proper functioning of his or her limbs.

It is essential that you do not stop coming for follow-up visits before the burns team tells you to do so. If you stop coming for follow-up visits, it is very possible that complications will set in which will be picked up too late. This will lead to weeks of repeat hospitalisation, therapy and more surgery to get back to the point at which the child was when discharged from hospital. Sadly, this happens all too often.

It is very important to keep your child out of the sun as much as possible, as this will make the scarring worse. Always apply the highest available SPF sunscreen and make sure your child wears a big hat when outside.

Living with burns

Your child has gone through a lot. First there was the trauma of what caused the burn injuries in first place. Then there was the difficult time in hospital with all the pain, the treatments and the separation from home. And now your child will feel scared about coming to terms with a new life situation.

Your child may have severe nightmares, be scared and feel sad. Some children even regress to almost a baby stage. ***This is normal and even though it may be difficult for you, it is best to be understanding and patient.***

He or she may also become shy and afraid to see friends. Many burn survivors are afraid of how people are going to react to them and what they will say, now that they look different. Some people might make fun of or tease your child. You need to be prepared and able to give support when he or she is sad or upset. It helps when parents talk to their children about how they are feeling.

- People will ask questions about the burn and how it happened, so try to decide what you are going to say before you go back into your community.
- Encourage your child to go back to school as soon as possible, and do the things he or she always did. It would be helpful to talk to the school principal and teachers before your child returns to school to explain to them what has happened. They can also address the other learners about how to handle your child and make him or her feel welcome again.

- Try and tell as many people as possible about your child's burn before they see him or her. This is especially important for your neighbours and important people in your community. Doing this will allow you to avoid awkward situations for your child.
- Encourage your child to live as normal a life as possible. Despite being burnt, he or she will still have all the hopes and dreams of other children. You and your family will need lots of support. It may be difficult to accept the way that your child looks and not feel anger or despair. You must be strong to help your child. Answer your child's questions. It is good to talk about what happened.
- Phone the burns unit if you have any specific problems or questions or if you are feeling desperate. The phone number for the burns unit of the Red Cross Children's Hospital in Cape Town is 021 6585155

Write a letter

Often burn survivors and their families worry about how the child will be treated at school. Children can sometimes be cruel to each other — but they can also look after each other.

Consider writing a letter to the teachers and the parents of your child's classmates individually, asking them not to judge your child by his or her appearance, but to take care of him or her.

If you are not good at writing a letter, or need ideas, a form letter is available on the Phoenix Burns Project website (www.burnsurvivor.org.za), or ask the burns unit at the Red Cross Children's Hospital.

What food should I give my child?

The burnt child requires a very large amount of calories and protein to sustain body function because of all the stress and breakdown processes involved with large burns. The dietician will advise you on the best possible diet for your child:

It is important to have a balanced diet. Divide the child's plate into three equal parts: one part protein, one part fruit and vegetables and one part starch. Look at the diagram for ideas of foods from each part.

Examples of foods high in protein are red meat, chicken, fish, eggs, dry beans, chickpeas and lentils. Examples of foods high in starches are whole-wheat bread, pasta, rice, cereals and potatoes.

It is important to have five small meals a day, rather than three large meals. Try to give a snack, like yoghurt, between meals.

Children older than one year should get half a litre of full cream milk a day.

Children younger than one year should not drink cow's milk, but rather baby formula milk. The hospital dieticians will advise you which one to use.

Your child will be discharged with vitamins, zinc and folic acid to strengthen his or her diet and the healing process. Try to use fresh fruit and vegetables rather than tinned food whenever possible. Use very little salt on the food. Avoid sweets, sugar and fizzy drinks as these have low nutritional value but make your child lose his or her appetite for more healthy food.

Make sure there is always enough water to drink.

Rooibos tea is also a healthy alternative to fizzy drinks.



What can I tell other parents about keeping their children safe from burns?

- Never leave a child near a bath, a stove, candle, lamp or an open fire without an adult nearby.
- **Always make sure when you have cooking pots on the stove, that the handles are turned out of reach of children, that powercords of kettles and other appliances cannot be reached by children, and that tablecloths cannot be pulled.**
- Leave hot drinks such as freshly made coffee and tea well out of reach of children.
- **Always put cold water in the bath first, before adding the hot water.**
- Never allow children to play with matches, candles, crackers, fireworks or open fires.
- **Synthetic clothing, unlike cotton and wool, tends to catch fire very easily and is much harder to put out.**
- Make sure all chemicals are stored out of reach of children. This will prevent serious chemical burns and poisoning.
- **Turn all paraffin devices off and put all candles and lamps out before going to sleep.**
- Keep a bucket of dry sand close by to put out paraffin fires.
- **Do not hang clothing over heaters to dry.**
- Do not use electrical appliances near water.
- **Make sure your entire family knows to STOP, DROP AND ROLL should clothing catch fire.**

IF A CHILD IS BURNT

- ✓ **DO stay calm.**
- ✓ DO remove the child from the danger situation.
- ✓ **DO remove burnt clothing carefully.**
- ✓ DO keep the burnt area under cool running water for about 20 minutes. The cold water stops the burning process and heat damage from spreading further.
- ✓ **DO wrap the burnt area in a clean sheet or in cling wrap.**
- ✓ DO dress the child warmly to avoid body heat loss.
- ✓ **DO take the child immediately to the nearest hospital or day hospital.**
- ✗ DO NOT catch fire yourself while helping the child or get electrocuted in case of an electrical burn. You may be the only help for the child.
- ✗ **DO NOT pull hard on clothing that is tightly stuck to the burnt skin.**
- ✗ DO NOT place the burnt area on ice or in ice water as this will cause more tissue damage.
- ✗ **DO NOT apply Vaseline, butter, toothpaste, steak or turmeric to the wound. It does not do any good and takes a lot of effort to remove from the burnt skin later on.**
- ✗ DO NOT prick open any skin blisters as you may introduce infection into the wound.

For more information on burn issues visit: www.burnsurvivor.org.za or www.pbp.org.za

ANYBODY CAN GET BURNT!

Everybody has a responsibility to help and welcome burn survivors back into our communities. This requires knowledge, awareness and compassion.

**You cannot change the world alone,
but you can change the world for one person!**

This booklet was produced by the Phoenix Burns Project, an organisation dedicated to promoting the interests of burn survivors, burn prevention & education, and related issues.

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