Patient Advice and Liaison Service (PALS)

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Large print and other languages

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Te informacje mogą zostać na żądanie przedstawione w formatach alternatywnych, takich jak łatwy do czytania lub dużą czcionką, i w różnych językach. Prosimy o kontakt pod numerem 02082238934.

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Patient information

Dermal Regeneration

It is important that you read and understand the information contained in this leaflet before you sign a consent form.

Department of Plastic Surgery

2nd Floor John Harrison House Royal London Hospital London E1 1BB

020 3594 7192 or 020 3594 7195



What is Dermal Regeneration?

Dermal Regeneration is the name given to specialised sheets that cover your wound and act like a skin substitute. These regeneration sheets have names and are often called Integra or Matriderm.

The outer layer is made up of a thin silicone film that acts as the top layer of your skin. Its job is to protect the wound underneath from infection and also allows your wound to "breathe" as it controls heat and moisture loss from the wound.

The inner layer is constructed of a complex web of cross-linked fibrous material made from the cartilage of cows. This acts like a scaffold helping the blood vessels and tissue from your wound to grow into it.

Once this process has started the silicone or outer layer is removed and replaced with a skin graft.

Why do I need this procedure?

There are many reasons why the Plastic Surgeons use dermal regeneration.

- Burn injuries
- Contractures of scars
- Deep wounds
- Wounds that covers areas such as the joints in the arm, leg or foot

When can I resume normal activities at home?

It is natural to think that you may have limitations in carrying out normal day to day activities when you return home following your second stage operation. However, once your wounds have healed and the skin graft has taken, there are no reasons why you cannot return to normal activities at home.

You may be referred to the Occupational and Physiotherapy Departments for scar and exercises which will improve your movement and improve the outcome of your scar.

If you have any concerns about limitations of home or work life, please speak to the plastic surgery team who will be happy to discuss any issues you have.

Contact Numbers

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The scar will reduce a little in size and the colour will settle over time however, it will never look like your normal skin.

The newly covered wound and your skin graft donor site will need to be moisturised several times a day with common creams such as E45 or Aqueous cream. This is to moisturise the areas and also helps relieve itching which can affect some people as the scars mature. By moisturising these areas, you are helping to improve the suppleness of your scar and prevent the skin from becoming dry and flaking.

Protecting your scars in strong sunlight

It is very important that you protect your skin graft and donor sites from strong sunlight. This is because the skin will burn very easily compared to your normal skin and you should use a very strong sun cream to protect these areas and reapply several times during the day to prevent sun burn. We recommend using SPF 50.

If you have any concerns regarding scarring issues please speak to the plastic surgeons or clinical nurse specialist who can advise you on the best course of action to protect your scars and how to manage your scars at home.

Eating and drinking

It is very important that whilst you have this treatment you should eat and drink well. You should have a diet high in protein, carbohydrates and fats that will help your wound heal.

Do I need an operation?

To remove the damaged skin or scar contracture, you will need an operation. This will involve having a general anaesthetic (being put to sleep).

This is the first stage of the process to heal your wound. The plastic surgeons will remove your damaged skin and cover the area with the regeneration template. Once this has been done the template is held in place by stitches and then covered with dressings to hold it in place. In some cases the dressing may include plaster of Paris (POP) to act as a splint to prevent unnecessary movement.

Depending on the size and location of your wound the template maybe left in place for up to two weeks or longer. This allows your wound to rest and start the healing process by allowing the blood vessels in your wound to attach themselves to the base of the template.

The second stage involves another operation when the top layer of silicone is removed and a skin graft is then placed on the top of the template.

Why do I need two operations?

It does take some time for the template to attach itself to your wound and this can take two weeks or more. Whilst this is happening you will need dressings to cover the wound and template.

You will need to return to the Dressing Clinic at the Royal London to have the dressings changed regularly where the nurses and the plastic surgeons can assess how your wound is progressing.

What are the alternatives to this treatment?

There are options available to you if you decide that you do not wish to have this type of wound care treatment. The plastic surgeons can explain what these options are. However, this type of treatment has very clear benefits.

What are the benefits of having this treatment?

- The new skin graft laid on top of the template is much more pliable, it stretches with your normal skin very easily and acts more like the natural skin covering your body.
- It allows the surgeons to cover your wound immediately and this means that any unnecessary fluid loss is kept to a minimum.
- It also acts as a barrier to infection.

Is it safe to use?

Dermal regeneration templates can be used on anyone. The only exceptions are if you are allergic to silicone or collagen from cows.

What are the complications of this treatment?

Like any operation there are risks you should be aware of. The template may not cover your entire wound if you have had trauma to the affected area. This is why the template is stitched to the wound edges and the dressings to cover the area can be bulky in appearance, the dressing will be firmly bandaged into place to prevent any shearing occurring.

There is a risk that the wound can become infected and you should contact the Plastic Surgery Department or the Plastic Dressing Clinic if you have any of the following problems:

- · A foul smelling dressing
- Increased pain that is not relieved by painkillers
- High temperature
- Bleeding through the dressing that appears fresh

What happens when I leave hospital?

- You will be discharged from hospital with the area covered with a firm dressing.
- It is important that you keep this dressing dry.
- You should avoid stretching the wound area unnecessarily as this may shear the template off the wound area.
- The dressing will be changed by the Dressing Clinic nurses every three to five days and it is very important that you keep all your hospital appointments.
- You should also follow the advice the Plastic Dressing Clinic nurses and the plastic surgeons.
- Once enough time has passed you will be given a date to come back to the Royal London Hospital to have the second stage operation carried out.

Once I have had my skin graft what will the wound area look like?

Like any other skin grafts to the body, your graft will look different in colour. It will look darker than the surrounding skin and this is a normal part of the healing process. In most people it can take up to 18 months for the skin graft to mature and you must be aware that although the skin graft has covered your wound, the graft and the donor site where the skin has been taken from will leave you with a permanent scar.