

A Patient's guide to

pin site care

(Upper and lower limb external fixation)

Limb Reconstruction Unit

rnoh.limbreconstruction@nhs.net

Introduction

Before you leave hospital you will have been taught how to care for your pin sites. Care of the fixator can be daunting, so the aim of this leaflet is also to give you this information in written form.

Pin site care is important because the wires and / or half pins pass through the skin and muscles and into the bone. This increases the risk of an infection on the skin spreading down into the bone.

Pin sites may fall into one of three categories; 'calm', 'irritated' or 'infected'. These categories are explained in detail in the following section of this booklet. If the pin sites are 'calm' we recommend cleaning the pin sites every 5-7 days. If the pin sites are irritated or infected, you should clean the sites and change the dressings as soon as the dressing becomes saturated. In all 3 cases the pin sites should be dressed after they have been cleaned. Dressings should be removed before showering the limb or attending hydrotherapy or swimming sessions.

Checking your pin sites

You should always check your pin sites for signs of infection when you clean them, or in between if you are concerned that they may be infected.

The calm pin site

There should be no discharge, swelling, pain or tenderness where the pin or wire enters the skin. It should look like an ear piercing (Figure 1).



Figure 1: A calm pin site

The irritated pin site

Pin sites may become irritated or inflamed, which shows as a redness around the wire or pin. The site may also ooze a clear straw-coloured fluid (exudate). This tends to occur in the first couple of weeks after the operation or when the position of the bone is being adjusted, this happens because the wire is being pulled through the skin.

The skin surrounding wires near to joints such as the knee, ankle, or elbow can also become irritated and ooze after exercise or increased activity. Sometimes adding extra padding to the pin site dressing can help reduce skin movement around the wire. An irritated pin site is not an infected pin site. Dressings may need changing more frequently than normal.

The infected pin site

The signs of an infected pin site are:

- Increased pain in the area
- Spreading redness of the skin
- Increased discharge or pus (not always present)
- Increased swelling
- Difficulty weight bearing
- You have a temperature or feel unwell.



Figure 2: An infected pin site

What to do if a Pin site becomes infected

If a pin site becomes infected, clean it and redress it at least once a day. If the dressing is very wet, then it should be changed.

If you are cleaning the infected site at the same time as your other pin sites, then you should always clean the infected site last. Thorough hand washing and drying thoroughly with a clean towel is very important to prevent the infection spreading to the other pin sites.

If you have the signs of an infected pin site you should start oral antibiotics and keep your limb elevated.

It is important that you inform all medical, nursing and pharmacy staff if you are allergic to any medicines. If you do not have any antibiotics, or are unsure if your pin site is infected then you should visit your GP for a review.

If your pin site does not improve after taking the antibiotics, or you would like some advice then you should contact a member of the limb reconstruction team. Contact numbers are on page 18 of this booklet.

If you are in severe pain, the limb is very swollen and red and you feel unwell then you should attend your local Accident and Emergency department.

Cleaning the pin sites

Swimming/showering

- If you wished to attend a hydrotherapy session or go swimming, we recommend that you do this on the day that you clean your pin sites.
- You should not attend hydrotherapy or swimming if your pin sites are inflamed or infected.
- You should remove your dressings prior to getting in the pool. After getting out of the pool you should shower the limb and fixator. A mild soap can be used.
- You will need two towels, one for your body and a separate one (washed at a high temperature) for the affected limb.
- Pin sites should then be cleaned and redressed using the following method

Prepare the equipment

Gather all the equipment before you start.

You will need:

- A dressing pack, containing gloves
- Cleaning solution. This may be Alcoholic Chlorhexidine solution which is pink in colour or Prontosan Wound Irrigation Solution which is clear in colour
- Sterile non-shedding gauze swabs (one per pin site)
- A non adhesive foam dressing pad
- Sterile Scissors

Sometimes people can be allergic to the cleaning solutions. Please inform us if you know you are allergic before your fixator is applied. In rare cases the cleaning solution may also cause a skin reaction (Figure 3). Should this occur please stop using it and contact a member of the limb reconstruction team. Contact numbers are on page 18 of this booklet.

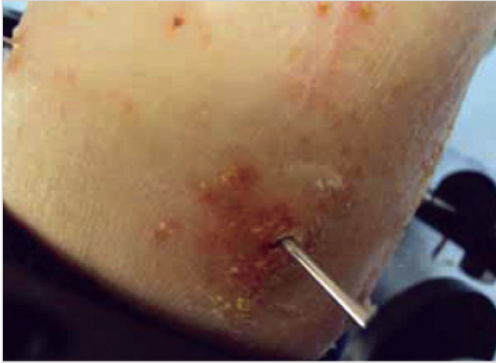


Figure 3: Skin reaction to alcoholic chlorhexidine solution

Wash your hands

Washing your hands thoroughly using soap and water is the most important factor in preventing bacteria being transferred to your pin sites.

- Make sure you wash both the front and back of your hands, in between your fingers, thumbs and nails. Dry hands thoroughly using a clean towel.
- Open the dressing pack carefully, only touch the edges with your hands
- Pour the cleaning solution into the container within the pack
- Open the packs of gauze, foam and scissors and empty onto the sterile field. (Figure 4)



Figure 4: Prepare the equipment

- If you have not had a shower and the old dressings are still in place, remove them now and throw them away in the bin.
- Wash your hands again.
- Put on a pair of gloves.
- Using the scissors cut up and key-hole the foam dressings. You will need at least 1 pad per pin site. (Figure 5)



Figure 5: Cut up and key-hole the foam dressings

- Take a piece of gauze, dip it into the cleaning solution which may be pink or clear in colour and squeeze out any excess.



- Use this piece of gauze to wipe the skin around the wire. Remove any dried blood. After you have cleaned the skin, clean the wire from the skin upwards. (Figure 6)

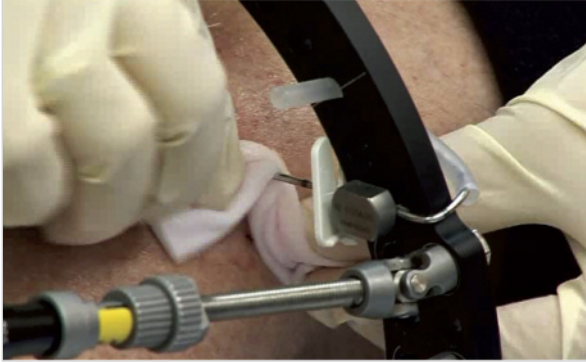


Figure 6: Clean the skin around the wire.

- You may have a scab or crust (Figure 7) between the wire and the skin. Do not forcibly pick this off, it will lift and fall away when it is ready.



Figure 7: A crust

- Wait until the cleaning solution evaporates and then cover with a foam dressing pad and secure it with the clip attached to the wire or pin. (Figure 8)

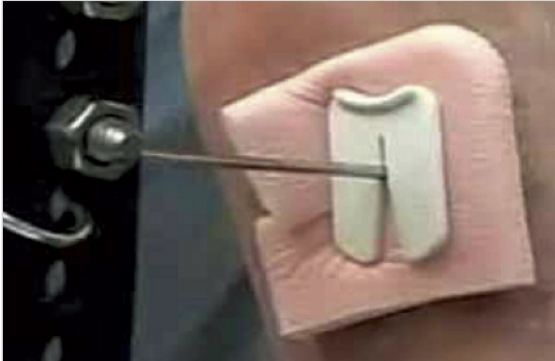


Figure 8: Secure the dressing using a clip or bung attached to the wire or pin.

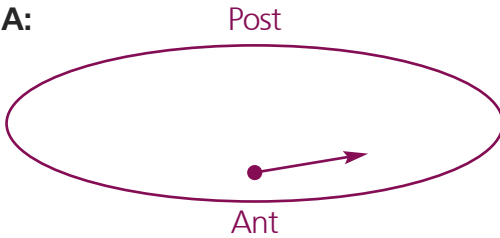
- It is important to ensure there is enough padding between the clip and the skin. If the clip is very tight it could cause a pressure sore.

Always use a new piece of gauze to clean each pin site and if you are concerned that a pin site is infected, leave this one until last.

A non perfumed moisturiser can be used on the affected limb if your skin is dry, however it should not be rubbed directly into the pin sites.

My External Fixator

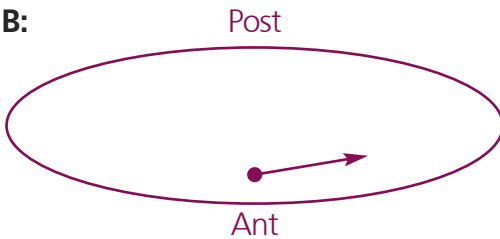
Ring A:



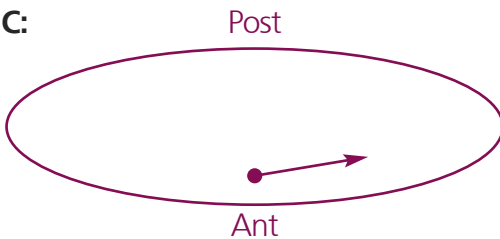
Key:

1, 2, 3 Wire no's
i, ii, iii Pin no's
(counter-clockwise)

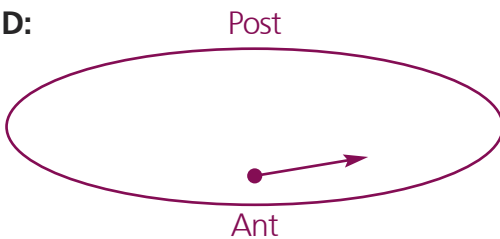
Ring B:



Ring C:



Ring D:



Your clinical nurse specialist will complete this page.

Pin site record chart

These pages to be completed if there is a problem with your pin sites.

Date	Pin site no.	Redness	Tenderness	Pus	Swab	Antibiotic
12/11/06	4	✓	✓		✓	Flucloxacillin

Pin site record chart

These pages to be completed if there is a problem with your pin sites.

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Pin site record chart

These pages to be completed if there is a problem with your pin sites.

Date	Pin site no.	Redness	Tenderness	Pus	Swab	Antibiotic

Your hospital details

Hospital number: _____

Consultant: _____

Ward & Ext.: _____

Nurse Specialist: _____

Physiotherapist: _____

Contact numbers

Hospital switchboard: 020 3947 0043

Outpatient appointments: 020 8909 5516

Limb reconstruction team secretary: 020 8909 5890

Clinical Nurse Specialist Limb Reconstruction: 020 8385 3012

Clinical Nurse Specialist Paediatrics: 020 8909 5409

The team may also be contacted via email:

rnoh.limbreconstruction@nhs.net

In the event that you are unable to contact a member of the limb reconstruction team and feel that you have an urgent problem, you should visit your GP or local emergency department for advice.

Please note that this is an advisory leaflet only. Your experiences may differ from those described.

References

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Davies R, Holt N, Nayagam S (2005) The Care of Pin sites with external fixation. *J. Bone Joint Surg Br.* 87B (5) 716-9

Santy-Tomlinson J, Vincent M, Glossop N, Jomeen J, Pearcey P (2011). Calm, irritated or infected? The experience of the inflammatory states and symptoms of pin site infection and irritation during external fixation. A grounded theory study. *Journal of Clinical Nursing*.20 (21/22) 3163–3173

Timms A, Vincent M, Santy-Tomlinson J, Hertz K. (2011) Guidance on Pin Site Care. Report and Recommendations from the 2010 Consensus Project on Pin Site Care. RCN. London.

If you have any comments about this leaflet or would like it translated into another language/large print, please contact the Clinical Governance Department on 020 8909 5439/5717.

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