Flashcards leprosy



- **These flashcards contain information about working with people with leprosy.**
- **These Flashcards are made for the use of fieldworkers.**
- **These flashcards are based on the information about leprosy from the RehApp.**

rehapp

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The goals of the flashcards are:

- To meet the needs of people with disabilities and their families.
- To improve knowledge and skills of fieldworkers in providing basic (functional) rehabilitation services for people with disabilities and their families.
- To enhance participation in daily, family and community life.
- To improve the quality of life of people with disabilities and their families.
- To support you (as fieldworker) in the process of guiding a family by providing you with a resource you can keep with you on your phone (offline) or in your bag.

What can you do with these flashcards:

- To help guide your visits to families that have a family member with leprosy.
- Make an inventory of the needs of the person with leprosy and his/her family.
- Learn about the implications of a disability for the person and their family.
- Use them to do an assessment.
- Use them to set goals for a person with leprosy.
- Use them to help you discuss interventions with the family.
- Use them to help you keep client records.
- Use them to help you monitor process.

Index:

Note: These flashcards contain information about leprosy. The content is organised according to the ICF domains. These cards don't replace the knowledge and skills of doctors and therapists. We advice you to seek their advice first.

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Leprosy

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Leprosy: content

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- ❑ Disability prevention

Body functions & structures:

- ❑ Skin problems
- ❑ Eye problems
- ❑ Muscles weakness or paralysis
- ❑ Pain

Activities & Participation:

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- ❑ Mobility aids
- ❑ Community participation

Personal factors:

- ❑ Personal empowerment
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Environmental factors:

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- ❑ Peer counselling
- ❑ Religious support
- ❑ Laws and regulations
- ❑ Assistive technology
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- ❑ Hygiene measures
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Card 1

Introduction

Introduction

Leprosy is an infectious disease caused by the leprosy bacillus (Mycobacterium leprae) which can affect people of any sex or age, including children. It is most probably spread through droplets of moisture passed through the air during talking, coughing or sneezing from someone who has leprosy but has not yet started treatment. Most people are thought to be naturally immune to leprosy. Very few people (less than 0.01 percent) ever develop leprosy in leprosy endemic countries when they should become infected. Like many other infections, leprosy is treatable with antibiotics.

Leprosy usually starts as a skin patch with loss of sensation to feeling temperature, touch and pain. It can also attack the nerves and damage them. If leprosy is not treated, this nerve damage can lead to sensory and movement problems of the eyes, hands and feet. But, if a person with leprosy receives correct and timely treatment, most permanent nerve damage can be prevented.

Additional information

Get to know what leprosy looks like with the SkinApp.

Get to know more about amputations/loss of a limb in the amputation chapter of the RehApp.

Disability prevention

Early recognition and correct treatment of the disease is most important to prevent disabilities.

There are various aims of disability prevention for people affected by leprosy:

- Prevent and take early care of eye problems, such as eyes that forget to blink or are unable to blink.
- Prevent injury and take early care of wounds in hands and feet with loss of sensation.
- Avoid wounds by using protective footwear, eye and hand protection.
- Enable people to take good care of their own skin, eyes, hands and feet.
- Prevent and take early care for skin cracks and callus (thickened and hardened part of the skin or soft tissue).
- Keep joints in hands and feet mobile when muscles are weak or paralysed.
- Improve strength with exercise for weak muscles of the eyes, hands and feet.
- Enable people affected by leprosy to help each other solve common problems.

The best ways to prevent impairments in leprosy are the following:

- Raise public awareness which may lead to early reporting.
- Ensure early diagnosis to detect the disease in time.
- Treat leprosy with multi-drug therapy (a combination of 3 drugs – Rifampicin, Clofazimine and Dapsone) before it affects the nerves, eyes, hands and/or feet.
- Stay alert to identify and treat nerve inflammation early. This is generally recognized by pain, loss of sensation of hands and/or feet and muscle weakness.









PLASTIC SPLINT



SHOE ADAPTED TO BE A SPLINT



SIMPLE SPLINT MADE FROM A SANDAL





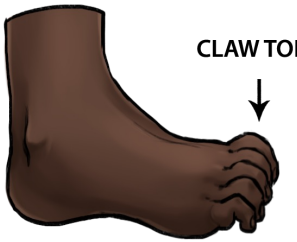
Body functions and structures:

Information and Actions to take

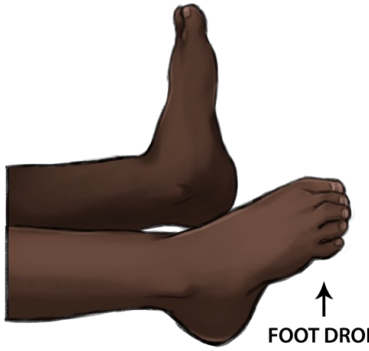








CLAW TOE(S)



FOOT DROP



Skin problems

Patches and nodules

Patches with sensory loss to hot, cold, touch and pain are the early signs of leprosy. Nodules, lumps on the skin, may also be a sign of leprosy.

- Patches look flat and lighter than the surrounding skin and are dry and with hair loss.



- Nodules are solid elevations on the skin (>0.5 cm) that can look purple to black, dark, red or brown.



There can be one patch or nodule, but also many. Be aware that inflammation can occur in skin patches and nodules, which is noticeable with swelling, redness and warmth.
Note: please download the SkinApp for more information.

Signs

- Patches with loss of sensation to temperature (hot, cold), touch or pain.
- Enlarged and painful nerves.
- Loss of sensation and movement in eyes, hands and feet.
- Swelling of the face, hands and feet.
- Earlobes that are thick and knobby.

Actions to take

- To test whether the person has sensation in the patch, touch the patch with a feather, a whisk of cotton or a piece of tissue paper.
- Compare with the same area on the other limb.
- If it feels different or there is no feeling at all, consult a medical expert as soon as possible.

Card 2

Body functions and structures

Card 3

Body Functions and structures

Loss of sensation in hands and feet

People affected by leprosy may permanently lose feeling in their hands and/or feet as a result of nerve damage. This can continue even after treatment for the disease has been completed and the person is declared cured. The person with sensory loss is at a high risk for injury and wounds which makes it important to take extra care during daily activities.

Signs

- A person may develop blisters, injuries, burns, wounds to hands and feet that do not hurt while doing her daily activities.
- A person with loss of protective sensation of their feet may not feel the wounds caused by thorns, glass or by poor fitting or tight footwear or nails or objects within the shoe.

Actions to take

Teach people with loss of sensation to take good care of their:

- eyes;
- hands;
- feet.

Hand condition

Keep hands in a good condition as the skin of the hands can become dry and cracked. If there is no feeling in the hands, they can easily be injured by fire and rough handles. Necessary protection is needed to prevent harm to the hands during activities of daily living.

Signs of harm to the hands

- Callus (thickened and hardened part of the skin or soft tissue) build up on tips of the fingers and hands. Tips of the fingers may become hardened, but palm of the hand may develop callus in different high-pressure areas.
- Cracks may develop in the fingers and palm of the hand.
- Redness of the skin maybe indication of infection.
- Back of the hand may feel warm and/or be swollen.
- Blisters and wounds that are usually painless.

Actions to take

A) Dry, callused and cracked skin of the hands.

1. Check every day for callus and cracks on the hands.
2. Soak hands in water for 20 minutes, every morning and evening. **Note:** Don't use hot water.
3. After soaking, scrape off hard skin with something rough like a stone. **Note**: be careful not to hurt the hands.
4. Rub oil, such as Vaseline, on the hands.

B) Hands with sensory loss.

1. Check every day for wounds on the hands.
2. Use gloves or a thick cloth to hold pots/pans and other hot items.
3. Don't hold hands close to the fire when they are cold.
4. Wrap cloth around the handles of tools to protect the hands.
5. Use pliers for holding nails.









Card 4

Body functions and structures

Card 5

Body functions and structures

Feet condition

Keep feet in a good condition as skin on the feet can become dry and cracked. If there is no feeling on the bottom of the feet, they can easily be injured when walking. The use of appropriate footwear can protect the feet from potential harm. **Note:** the feet can be much drier/more cracked than hands, because hands are often washed before/after meals and when using the toilet.

Signs of harm to the feet

- Callus (thickened and hardened part of the skin or soft tissue) build up on the bottom of the feet.
- Redness of the skin at the back of the feet
- Skin at the back of the feet feels warm to the touch.
- Blisters and wounds that are usually painless.

Actions to take

A) Dry, callused and cracked skin of the feet.

1. Check every day for callus and cracks on the feet.
2. Soak feet in water for 20 minutes, every morning and evening. **Note:** Don't use hot water.
3. After soaking, scrape off hard skin with something rough like a stone. **Note**: be careful not to hurt the feet!
4. Rub oil like Vaseline on the feet.



B) When having loss of sensation of the feet.

1. Check feet for wounds and redness with the help of e.g. a mirror.
2. Check if the skin of the feet feels hot.
3. Always wear protective footwear!
4. Regularly check footwear for damaged parts, stones, nails or other sharp things.



Card 6

Body functions and structures

Blisters

Hands and feet with loss of sensation are at risk of blisters. Blisters are small pockets of clear fluid under a layer of skin using caused by heat or friction.

Causes

- Heat: from direct contact with hot cups, hot liquids or surfaces, open fire, hot sand or tarmac of the road.
- Friction**:** skin rubbing back and forth over hard surfaces, e.g. unpadded cleaning, cooking and work tools and using poorly fitting footwear.



Signs

- Bubble of skin filled with fluid
- Uninfected blister = filled with clear fluid
- Infected blister = filled with pus

Actions to take

- Identify what caused the blister and act to prevent recurrence. For example, if the cause is a rough work tool, modify the handle with a soft cloth
- Do not open or puncture the blister.
- Clean the blister gently with mild soap and clean tap water without breaking the skin. Make the area dry. Paint the blister with a mixture of benzoin and iodine tincture (50:50) will help the blister to dry quickly.
- Apply a thick layer of clean gauze or cloth, as padding over the blister and the surrounding area. Do not put the footwear on over this thick layer.
- Rest the injured part. The person can continue his daily routine without using the affected part. E.g. if you have a blister on the forefoot and have to walk, walk on the heel only.
- **Note**: if the blister is broken, it should be treated as an open wound.

Card 7

Body functions and structures

Cracks and Callus

Cracks are most commonly found in the creases of the hand, around the heels of the foot, and in the toe creases. If cracks are not treated, they may become openings for (fungal) infection, which can spread into the joints and bones, causing loss of the infected finger or toe. If infections are ignored, the crack may eventually heal, but they will leave thick scar tissue, which can cause the fingers or toes to become stiff, change shape, and make them difficult to use.

Callus is a thickened and hardened part of the skin or soft tissue, especially in an area that has been subjected to friction. Sometimes callus is protective, e.g. manual workers (farmers, labourers, fishermen etc.) develop callus on their hands as natural protection against damage. This type of callus will only be dangerous if it increases into a large hard plaque.



Causes
If the nerve that controls sweating is damaged, the skin can become very dry. Skin that is too dry will crack.

Signs of fungal infection
- The skin around the cracks is white and spongy.
- The area feels damp to the touch.

Actions to take
Teach and encourage the person affected by leprosy to take good care of the skin by paying attention to the following issues:
- Prevention of cracks
- Treatment of cracks without fungal infection
- Treatment of cracks with fungal infection

Prevention

Prevention of cracks

- Keep the skin soft and elastic as it will become less likely to crack.
- The hard-dry callus that forms in and around the creases of the hand and fingers should be removed.
- All callus under the feet should be removed.

Treatment - no infection

Treatment of cracks when there is no fungal infection

- Carefully remove callus around the edges of the cracks after soaking.
- Carefully dry wet skin after washing or soaking with a soft absorbent cloth e.g. in the spaces between the toes.
- Cracks can usually be managed by the person themselves by following good self-care.



Treatment – an infection

Treatment of cracks when there is fungal infection

- If laboratory services are readily available, arrange a microscope examination of a skin sample from the affected area.
- Treat with anti-fungal cream such as Clotrimazole©, Canesten© and Daktarin©. Only cream preparations are useful as treatment options, powder preparations are used in shoes to prevent re-infection.

Note: skin cracks are wounds and should never be neglected! If the crack is not healed after a week, seek medical advice.



Card 9

Body functions and structures

Wounds

People who have loss of sensation on their hands and feet, are at high risk of developing wounds while doing normal day-to-day activities.

Causes of wounds

Not feeling damage due to sensory loss.

- Hot things that may burn hands or feet, e.g. hot pots, fires, hot sand.
- Sharp things like thorns or nails might break the skin.
- Sharp objects like knives or axes might harm the skin.
- Standing and walking for long periods of time may break the skin under the foot
- Poor-fitting footwear.

Prevention measures

- Protect contact of the skin with hot things by, e.g.:
  - protecting or fencing off cooking places;
  - keeping a safe distance from open fire;
  - protect hands when drinking hot liquids.
- Protect the touch of skin with sharp things by, e.g.:
  - checking foot soles for thorns and using thicker soles on footwear;
  - regularly cutting finger and toe nails;
  - carefully using sharp knives during cutting or sawing.
- Wear appropriate fitting footwear by e.g.:
  - ensure footwear is correct size, has thick undersole and soft innersole;
  - ensuring footwear is not too hard, tight, lose or broken;
  - avoiding walking barefoot.

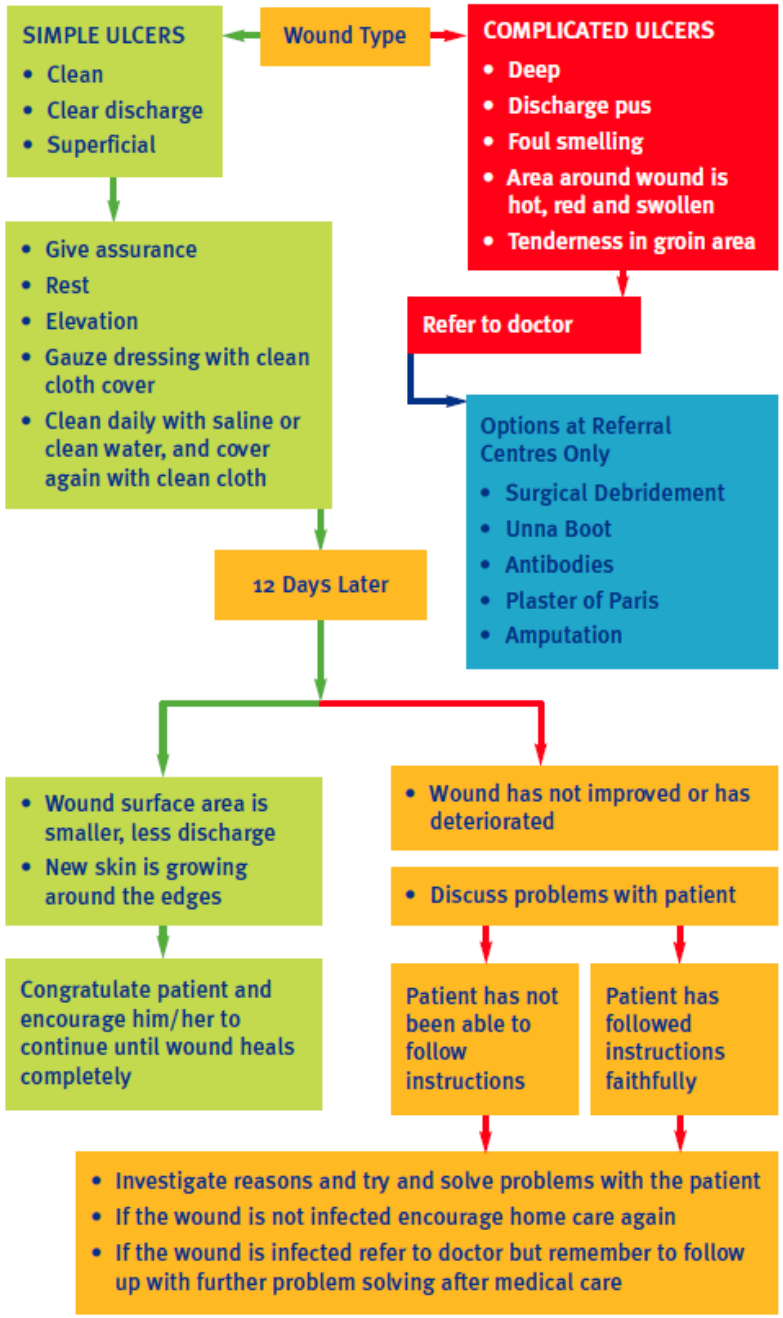
Actions to take

Simple wounds can be managed by the person themselves, with support from the fieldworker or caregiver, by following these 4 principles:

1. Rest
2. Good wound healing environment
3. Hygiene
4. Protection from infection

➢ **View the decision flowchart for a detailed description on wound treatment.**





Card 10

Body functions and structures

Card 11

Body functions and structures

Rest

Almost all wounds heal if they are rested, and almost all wounds will get worse if they are not rested! Find out whether the person is able to change daily activities to prevent from walking too much. For example, can the person walk on the heels so the foot does not touch the ground with the forefoot? Can the person use crutches? Can the person temporarily swap work with another person, or are other transportation options available?

Foot wounds

- Spend as much time as possible lying down, with the foot raised above the level of the heart, especially when the wound is infected, and foot is swollen.
- If the person is unable to take bed rest, aim to rest the injured foot as much as possible by using a wheelchair, crutches or a walking stick.
- If walking is unavoidable, do it slowly, take frequent rest, walk on the heels and use protective footwear.

Hand wounds

- Aim to rest the injured hand as much as possible by raising it above the level of the heart, especially when the hand is infected and swollen, with the help of e.g. an elevation sling.
- Splinting may be used to rest and protect the affected hand.





Splinting for wounds

Splints help to hold the finger(s) in the best possible position and prevent soft tissues from shortening during the healing process.

- Splints can be made out of any smooth but stiff materials such as plastic or rubber tubing, wood, bamboo, etc.
- Wear the splint for 23 hours a day: remove the splint 1 hour a day to massage the finger and move the joints to prevent stiffness.

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Body functions and structures

Good wound healing environment

Actions to create a good wound healing environment

- Keep the wound and surrounding skin clean by washing with clean running water which is at near body temperature.
- Remove dead skin, tissues and foreign bodies (like cotton wool or threads of gauze).
- Protect the wound and surrounding skin from physical (scrubbing over the wound) or chemical injury (washing wound with antiseptics).
- If there are signs of systemic infections use antibiotics.
- Reduce swelling with elevation and light compression.
- Keep the wound bed moist (not too dry and not too wet).
- Cover wound with clean cloth or bandage and changes it if it gets wet.

➢ **See the wounds decision flowchart for treatment of simple and complicated wounds.**

Note: many medications commonly used on wounds, such as gentian violet and iodine, are antiseptic but delay healing by causing the wound to become too dry. If medications are prescribed, regularly inspect the wound and discuss with the medical specialist when medication can be stopped.

Steps in wound care

Steps to take for good wound care

1. Trim away callus from the wound edges.
2. Cut away all dead and overhanging tissue from the wound edges.
3. Clean the wound carefully with water to which a tablespoon of salt has been added. **Note**: do not scrub it!
4. Soak a gauze dressing in saline (a mixture of salt dissolved in clean water), squeeze out excess saline so that the dressing is left moist, and then place it over the wound.
5. Cover with clean cloth or bandage but do not make the dressing too bulky. There should only be enough bandage to hold the dressing in place.
6. When changing the dressing, remove the soiled dressing carefully. If it is stuck to the wound, soak it first before removing it and avoid damaging the new healing skin.
7. Teach the person how to keep the dressing dry during rain and bathing activities, e.g. by:
   a) wrapping plastic around the dressing. Ensure a good seal around the top of the dressing by using tape or a rubber band; or
   b) putting a plastic bag around the dressing and seal it at the top either with some tape or a rubber band.

➢ **View the decision flowchart for a detailed description on wound treatment.**

Card 13

Body functions and structures

Hygiene

Many infections can be prevented by maintaining a clean environment. Particular attention should be paid to bathing and toilet areas because drains are a reservoir of infection. Routine cleaning will reduce the risks of infections greatly.

Actions to take

- Use a cup of bleach (hypochlorite) in half a bucket of water to clean the bathing/toilet area.
- The bleach solution should be used to flush and/or rinse the toilet.

Protection from infection

The clean, moist wound environment should be accomplished with a cloth or bandage cover. The wound covers should be changed if discharge from the wound has soaked all the way through or if it has gotten wet from rain or bathing. Otherwise, it will be at risk of infection.

Signs of infection

- Expanding redness around the wound.
- Yellow or greenish-coloured pus or cloudy wound drainage.
- Red stripes spreading from the wound.
- Increased swelling, tenderness, or pain around the wound.
- Fever.

Note: if a particular area of the hand or foot is hot, it may indicate that bones in the hand or foot are infected. This can lead to destruction of the hand or foot, requiring amputation. Refer to a medical specialist immediately!

Actions to take

- In the early stages of wound healing: change the dressings at least once every day.
- As the wound begins to heal, change dressings every two/three days.
- Always soak gauze dressings well before trying to remove them: they may be stuck to the wound and delay healing by damaging new healthy skin.

Note: no medication (for example, antibiotics or antiseptics) is required in the management of cracks and simple ulcers. If you suspect that a wound is infected refer to a medical specialist for proper treatment.

Card 14

Body functions and structures

Eye problems

Ocular (eye lens) problems can be caused by complications related to nerve damage to the facial nerves and the trigeminal nerves that provide sensation to the eyeball and/or inflammation caused by leprosy immunological reactions. Persons with a sensory loss in hands or feet depend on vision to safely perform self-care, work, and other daily activities. Great disability and dependency result if the person has no vision and is without hand and/or foot sensation. Therefore, all efforts to prevent vision loss are important. This may include:

- Improving access to specialist eye services.
- Ensuring prescription of eyeglasses.
- Referring for cataract surgery.

No feeling of a need to blink

Loss of corneal (the clear part covering the coloured front part of the eye) sensation is a result of nerve damage to the trigeminal nerve of the eye. It can lead to people not feeling the need to blink and not feeling if something is in the eye.

The eye can become dry and if things like sand, insects or eyelashes get into the eye, the cornea can get a wound. This may cause scars which can result in blindness. The loss of corneal sensation causes the person to forget to blink putting them at risk of dry eye and injury. When the eye is dry, also the vision of the person is not as good.

Signs

- The person is observed to go long periods of time without blinking or does not complain of eyelashes touching the eye.
- Person complains that vision does not seem to be as good, particularly at the end of the day or after riding next to the window on the bus or train.

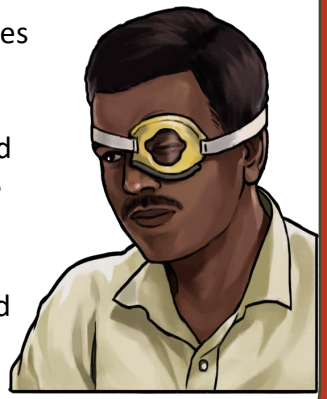
Card 15

Body functions and structures

Actions to take

Teach and encourage the person affected by leprosy to undertake the following measures:

- **Check for a 'dry eye'.**
  - If the vision seems less, the person can blink the eyes for 5 minutes.
  - If the vision is better after 5 minutes, the vision limitation was caused by a 'dry eye'. In this case, advice the person to develop the "think blink" habit and protect their eyes from drying effects. Also, artificial tears or bland eye cream can be used to prevent the eye from becoming too dry.
  - If the vision does not improve after 5 minutes, refer the person to a medical specialist.
- **Develop the "think blink" habit.**
  - Blink whenever one sees a common object, such as a mango tree or a cow.
  - If the "think blink" is practiced regularly, it becomes a habit and the eye is regularly cleaned and kept moist.
- **Protect the eyes.**
  - Wear protective glasses or eye shield to protect the eyes against drying effects of wind, damaging effects of sunlight, smoke or dust, and from things getting into the eyes.
  - Also, a hat or cap can be worn, or a scarf can be used to be pulled over the face and protect the eyes.
  - Sleep under a blanket or mosquito net to protect the eyes from dust and insects.



Inability to close the eyelids

The inability to close the eyelids is the result of facial nerve damage making muscles weak or paralysed. When the eyes cannot be closed, they are exposed to the drying effects of air and foreign objects during the day and night. The cornea (the clear part covering the coloured front part of the eye) is at risk of ulceration (wound formation) and damage and can cause blindness if neglected.

Signs

- When a person is asked to close the eyes, a gap is observed between the eyelids.

Actions to take

Teach and encourage the person affected by leprosy to:

- ensure good eye care;
- do regular eye exercises;
- get an eye surgery or consult a specialist, if possible and applicable.

Note: when the eye cannot be closed, the eyeballs move upwards (Bells' reflex). Sometimes the eyeballs move completely under the eyelid and so the eye is also moistened, and 'dirt' is wiped from the eye.



Card 16

Body functions and structures

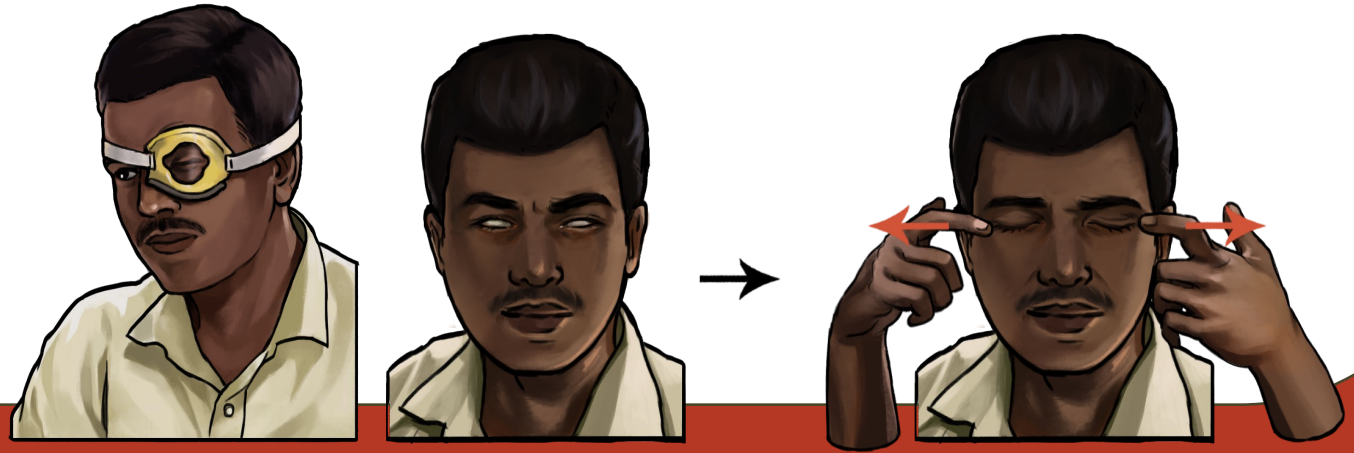
Eye care

The person with eye problems can be assisted in looking after the eye themselves. If the eye cannot be closed for a period shorter than six months, refer the person to an eye hospital as this condition may be reversible!

Actions to take

- **Clean and check the condition of the eyes.**
  - Every morning and evening, clean around the eyes with clean water and a soft cloth.
  - Regularly check the condition of the eyes in a mirror: if the eyes are red, immediately consult a medical specialist.
- **Check vision in each eye.**
  - Ask the person to identify something in the environment that she can clearly see from a fixed distance. For example, the name of a shop, a tree, or a sign from a certain distance. Always use that sign and look at it from the same distance to determine if the person continues to see it clearly.
  - If vision worsens and does not improve with "think blink" exercises, seek professional help.
- **Protect the eyes.**
  - Wear protective glasses or eye shields to protect the eyes against the drying effects of wind, the damaging effects of sunlight, smoke, or dust, and things getting into the eyes.
  - Also, a hat or cap can be worn, or a scarf can be used to pull over the face and protect the eyes. Wear protective glasses or an eye shield to protect the eyes. Also, a hat or cap can be worn, or a scarf can be used to be pulled over the face.
  - Sleep under a blanket or mosquito net to protect the eyes from dust and insects.

Note: never rub the eye when it is itchy! Instead, pull the eye closed by stretching/pulling the skin at the side of the eyes.



Card 17

Body functions and structures

Eye exercises

Regular blinking and complete closure of the eyelids at night keeps the cornea healthy. The following eye exercises can be performed to stimulate this:

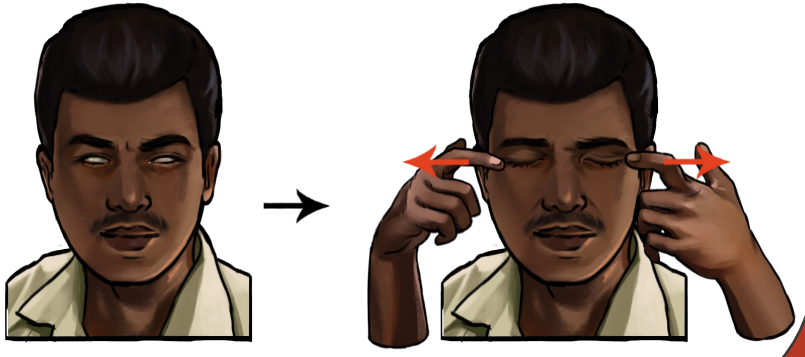
A) Active exercises

1. Close the eyes as much as possible. If the face muscles are still strong enough, the eyes will close with no gap.
2. Keep the eyes tightly closed while counting to ten.
3. Perform this exercise every day as often as possible.



B) Passive exercises

1. Close the eyes as much as possible. If the person still has a gap between the eye lids, use the hand to gently pull outwards until the eyes close.
2. Keep the eyes closed with the hands while counting to ten.
3. Perform this exercise every day as often as possible.



Card 18

Body functions and structures

Eye surgery or specialist

Eye surgery: when people try to close their eyes but still have large gaps between the eyelids, they may benefit from surgery. A fairly simple operation on the eyelids can help to protect the cornea from dryness, improving a person's appearance and it may prevent blindness.

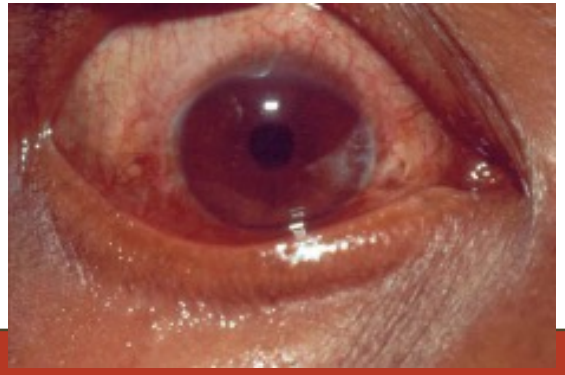
Specialist: if the person has been using steroid medication (e.g. prednisolone) to manage the inflammation in leprosy reactions, they may be at risk for developing glaucoma (damage to the optic nerve) and cataracts (a clouding of the lens inside the eye). An eye specialist should monitor eye pressure and treat it when pressure is too high. Surgery to remove the cataracts can restore vision. This is essential to improving daily function and safety in people with sensory loss to hands and feet.

Action to take

- Refer to the nearest eye hospital for eye specialist and possibly surgery.

Red eye

Redness in the eyes of people affected by leprosy may indicate dry eyes, infection or indicate a serious problem that needs urgent medical care.



Action to take

Refer to a medical specialist immediately!

Card 19

Body functions and structures

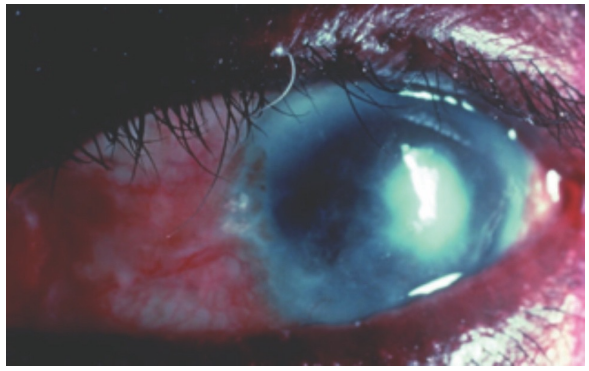
White spots or cloudy eyes

White spot: if the cornea has a dull, white spot, there could be an ulcer on the eye. **Note**: corneal ulceration is an emergency. If it is not treated very quickly, the person may become blind!

Cloud eyes: a dense cloudy white area over the black centre of the eye may be a cataract (a clouding of the lens inside the eye). Early cataract formation can happen in leprosy due to inflammation and reactions.

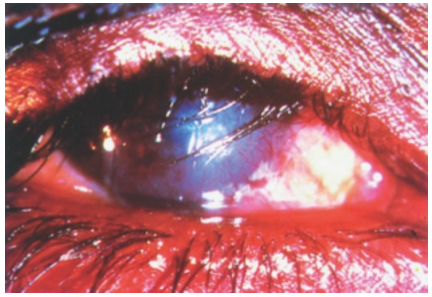
Action to take

- In either case, refer to a medical specialist immediately!



Eyelashes touching the eyeball

A common eyelid problem seen in leprosy is entropion causing the eyelids to turn in and eyelashes to be misdirected and grow inwards toward the eye (trichiasis). Eyelashes can damage the cornea as the eyelashes move over the cornea while blinking.



Actions to take

- If only a few eyelashes are misdirected: the eyelashes can be removed with good tweezers and by a well-trained person. If not done correctly, the broken eyelash stub can cause more damage.
- If 5 or more eyelashes are misdirected: surgery is needed to rotate the eyelid outwards. In this case, refer to the nearest eye clinic or health centre.

Card 20

Body functions and structures

Muscle weakness or paralysis

Nerve damage in leprosy can lead to muscle weakness or paralysis. Therefore, the muscle strength of people affected by leprosy should be assessed regularly to see if it has changed.

Risk/Problem

New muscle weakness or paralysis could indicate acute inflammation of the nerves which can be treated to prevent permanent impairments. **Note**: if recent muscle weakness (less than 6 months) is detected, refer to the nearest health centre. Early detection and treatment can prevent permanent nerve damage.

Actions to take

- Assess the muscle strength of the following body parts:
  - Eyes
  - Hands
  - Feet
- Teach and encourage the person to do exercises to strengthen muscles in:
  - Eyes
  - Hands
  - Feet

Assess muscle strength

Eyelid muscle

To test the strength of the eyelid muscles:

1. Ask the person to close the eyes.

- If the person can close their eyes, try to open them with the fingers. If it is easy to open the eyes, this means that the muscles of the eyelid are weak.
- If the eyelid muscles are paralysed, the person cannot close their eyes completely.
  - The muscle strength is strong/normal if (some) resistance can be given.



Card 21

Body functions and structures

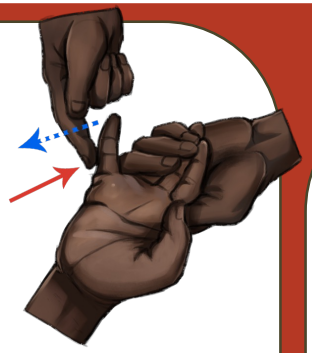
Hand muscle

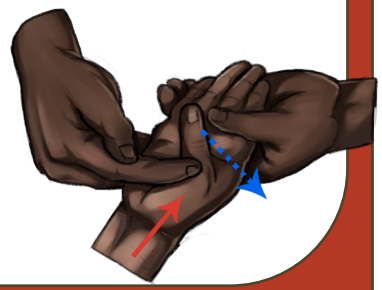
A) Little finger

To test the strength of movement of the little finger:

1. ask the person to move the finger, sideways, away from the other fingers; and
2. try to push the little finger back.

- If the little finger can be pushed back easily, there is muscle weakness.
- If the little finger cannot be moved at all, there is paralysis.
    - The muscle strength is strong/normal if (some) resistance can be given.

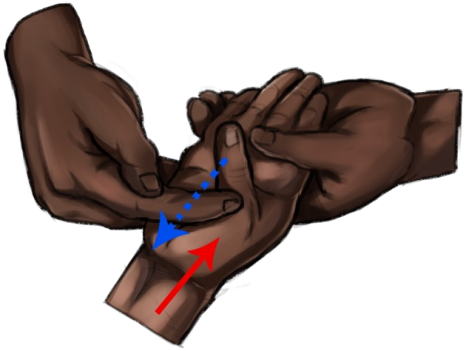




B) Thumb

To test the strength of movement of the thumb:

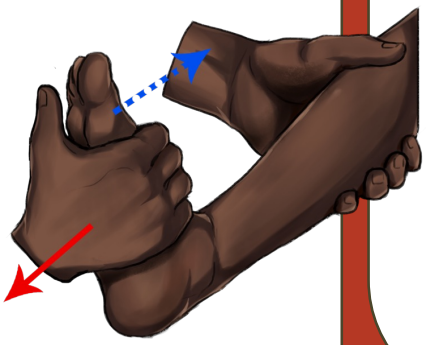
1. support the person's hand and ask the person to hold their hand flat - with the palm upwards - and lift the point of the thumb upwards towards the nose; and
2. try pushing the thumb down to a flat position by pressing on the base of the thumb.
    - If the person does not resist and the thumb can be moved down easily, there is muscle weakness.
    - If the person cannot point the thumb upwards at all, there is paralysis.
        - The muscle strength is strong/normal if (some) resistance can be given.



C) Foot muscle

To test the strength of movement of the foot:

1. support the person's lower leg with one hand; and
2. ask the person to lift the foot;
3. try to push the foot down.
    - If the foot can be pushed down easily, there is muscle weakness.
    - If the person cannot lift the foot at all, there is paralysis.
        - The muscle strength is strong/normal if it is hard to push the foot down.

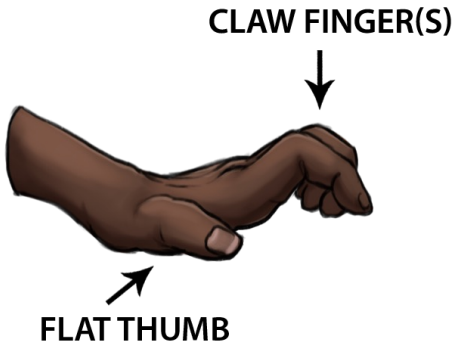


Card 22

Body functions and structures

Claw fingers

People with weak or paralysed hands can develop “claw” fingers and “flat” thumb: the fingers are curved or bent. One can experience difficulties pinching, straightening the fingers and thumb and spreading the fingers. Joints of the fingers and thumb can become stiff (contracture) but can be kept flexible even though the joints are bent from paralysis.



Actions to take

- Give advice on splinting for clawed fingers and flat thumb. **Note:** this is not needed when joints are mobile/not stiff.
- Teach and encourage the person to do daily hand exercises.

Note: a paralysed hand can be surgically corrected. Make sure that the surgeon has had training in leprosy surgery and that follow up (physiotherapy) is available.

Splints for claw fingers

Splints can be given to prevent fingers from becoming stiff in a bent position. If fingers are bent but can be straightened with gentle pressure (fingers are still mobile), splints can be helpful to correct or lessen the bent position of the fingers. Most people are not able to wear splints during the day because they must use their hands freely for day-to-day activities. Splints can be best worn only at night. **Note:** splints are not needed when hands are mobile - daily exercises will suffice.

Attention points

- Splints can be made of any stiff but smooth material such as plaster, plastic or rubber tubing, wood, bamboo, etc. Splints must always be padded to prevent pressure wounds!
- Best is to wear the splint only at night. If used for longer periods, then the splint should be removed regularly to examine for signs of pressure. During the day, regularly massage and move the fingers to keep them mobile.
- The thumb splint can be worn during the day and can help with activities such as writing, buttoning clothes, turning keys, and picking up coins.

Card 23

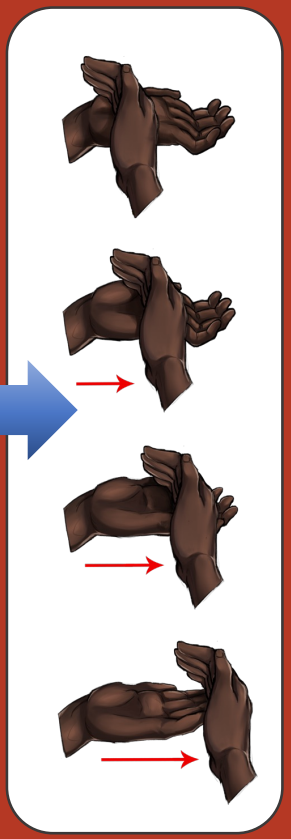
Body functions and structures

Claw fingers exercises

To stretch and prevent contractures of the fingers

1. Soak the hands in water and then rub oil on the wet hands, e.g., Vaseline. The oil or Vaseline serves to keep water in the skin tissue; it is water in the skin tissue that prevents the skin from drying out and losing elasticity.
2. Sit down and place the 'claw hand' on the thigh, palm facing up.
3. Push the other hand slowly over the open claw hand towards the fingers so that the 'bent fingers' are pushed flat.
4. While the fingers are flat, count to ten before releasing the hand.
5. Do this exercise as much as possible so it will become a habit.

- Other simple daily exercises include: sitting on the hand (hand under the thigh), palm facing down and/or putting the hand under the head when sleeping.



To stretch and prevent contractures of the thumb



1. Soak and rub oil on hands.
2. Sit and rest hand, palm down on the knee with the thumb off to the inside.
3. With the other hand gently push the thumb down to stretch the space out between the thumb and index finder. **Note:** push down near the web space and not at the tip of the thumb.
4. Hold the thumb down for 10 seconds.

A thumb splint can be made from plaster and attached with a strap to position and stabilise the thumb. It helps do this exercise and other daily activities such as holding a pen for writing or turning a key to open a door.



To strengthen the muscles of the thumb

Strengthening the weak thumb muscles is important to improve the pinch and opposition used for buttoning, zipping, turning keys, etc. The following exercise is suggested:

1. Use a clothespin between the top of the thumb and the fingertips.
2. Then, try to open the clothespin with your fingers.
3. Repeat the movement 10 - 20 times.

Card 24

Body functions and structures

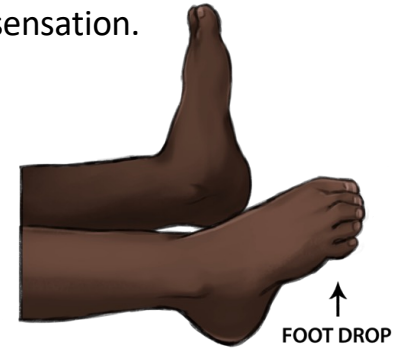
Claw toes and foot drop

People with weak or paralysed muscles of the toes or foot can develop different problems:

- **Claw toes:** this is caused by damage of the posterior tibial nerve, causing the small muscles of the foot to bend the toes into a 'claw' position. This can lead to pressure and wounds on the back of the toes from shoes and contribute to increased pressure on the tips of the toes and under the ball of the foot during weight bearing and walking.



- **Foot drop:** this is caused by damage of the nerve that passes around the back of the knee and outside of the leg, resulting in weakness and paralysis of muscles which help lift the foot up. The foot drops and hangs loosely in a downward position during walking. Foot drop can lead to a lot of foot damage if the foot also has a loss of sensation.



Actions to take

- Teach and encourage the person to inspect the foot and toes daily and to do daily exercises for claw toe or foot drop.
- If referral services are present, send the person to get a foot drop spring or an ankle-foot splint to lift the foot in a corrected position for walking.
- Help to choose appropriate footwear to accommodate the toes and the foot.

Note: a paralysed foot can be surgically corrected. Make sure that the surgeon has had training in leprosy surgery and that follow up (physiotherapy) is available.

Claw toes exercises

To stretch and prevent contractures of the toe(s)

1. Use fingers to gently pull the toes one by one.
2. Do this separately with every claw toe.
3. Repeat the movement several times a day.



Card 25

Body functions and structures

To strengthen small muscles of the foot

1. This exercise will help to strengthen the muscles which help straighten and separate the toes.
2. Straighten the toes back out and try to spread the toes apart.
3. Now place the foot with the claw toe on a cloth, carpet, newspaper or towel and try to crumple the cloth with the toes. Repeat the movement several times.

Note: one should do this exercise only if the person can straighten and spread the toes, otherwise it will worsen the claw contracture position.



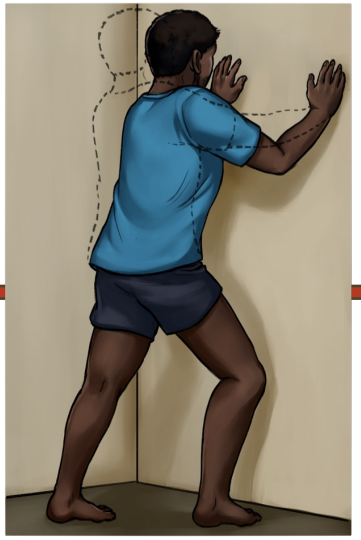
Foot drop exercises

To stretch and prevent contractures of the foot

Following are passive stretching exercises for foot drop to stretch the ankle joint. These exercises will prevent contractures of the ankle and ensure the heel can touch the floor when standing and walking. However, most patients will never develop severe ankle contractures because of cultural habits – like squatting (toilet) or just sitting together in squatting position, walking uphill, or cycling.

Note: when there is loss of sensation in the foot – which is most often the case – these exercises are not recommended!

EXERCISE 1



Exercise 1

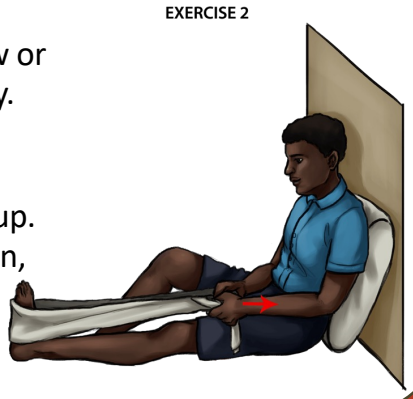
1. Stand about three feet from a wall,
2. finding balance with both hands.
3. Put the weak foot behind and ensure the toes are facing forward.
4. Keep the heel on the floor and lean forward with a straight knee.

Card 26

Body functions and structures

Exercise 2

1. Sit with your back straight up against the wall, adding a pillow or cushion for support if necessary.
2. Place a cloth around the paralysed/weak foot.
3. Pull the cloth to force the foot up.
4. Hold the foot in upward position, while counting to ten.
5. Let go down the foot again and repeat the exercise 10 times.

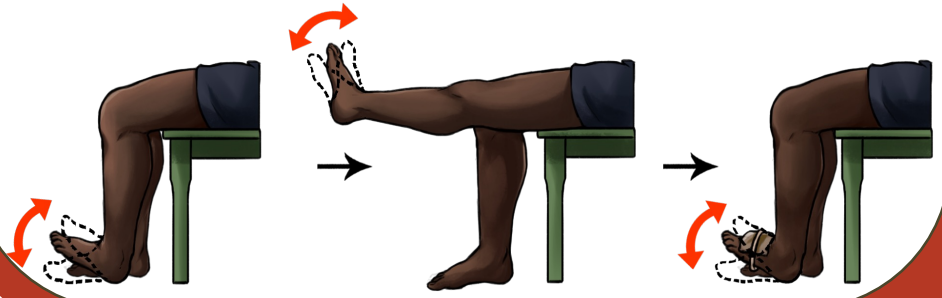


To strengthen foot muscles

This exercise, which is rarely needed, helps to strengthen the muscles which lift the toes and foot. **Note:** when there is weakness in the eyes, hands and/or feet, strength will be determined/influenced by daily routine activities and by status of the nerve.

1. Lift the toes and foot up as much as possible.
2. Hold this position for a count of ten.
3. Repeat several times a day.

As the foot gets stronger, similar exercise can be done with the leg stretched up. As well, resistance can be created with a small weight or another person can press the foot down while the person tries to lift the foot and toes up.



Splinting for foot drop

For people with foot drop, splinting of the foot makes walking easier and help to prevent contractures, wounds and ankle injuries. Leave the splint on as much as possible. There are various types of splints: choose a suitable splint based on available local materials and financial possibilities. Do this in consultation with a rehabilitation specialist.

Different types of splints

A. **Plastic splint:** this splint does not allow for active ankle movement. If there is sensory loss to the bottom of the foot, blisters and wounds caused by the splint may go unnoticed until the splint is removed, and the foot checked.


PLASTIC SPLINT

B. **Shoe adapted with elastic:** it dynamically assists the foot to lift and allows the person to use their own muscles to push the foot down.


SHOE ADAPTED TO BE A SPLINT

C. **Splint made from a sandal**: this splint may not allow ankle movement.


SIMPLE SPLINT MADE FROM A SANDAL

Card 27

Body functions and structures

Footwear

Footwear reduces the risk of damage to the feet and can help to heal wounds. Encourage people to choose their own footwear, as they are more likely to wear footwear they have chosen. Replace footwear after six months to avoid wear which could be harmful to the feet. **Note:** not all shoes are good; badly-fitting shoes can cause wounds and hamper the healing process. Therefore, ensure good fitting footwear!

Planning for footwear

1. Clearly explain the need for protective footwear to the person.
2. Make a tracing of the feet: let the person stand on a piece of paper and draw around the person's feet.
3. With the foot tracing, the person should be referred to a hospital with a footwear workshop. A local cobbler is often also able to make suitable protective sandals when instructed by a professional from a leprosy referral centre.



Good footwear

Appropriate footwear consists of:

- a hard sole to prevent penetration by sharp objects on the ground;
- a soft inner sole to reduce pressure on the foot while walking;
- plenty of height/space around the toes, especially if the person has claw toes;
- a well-fitted upper part that does not harm the instep (the arched middle portion of the foot in front of the ankle);
- Velcro fastenings, if the person has impairments to the hands or eyes.

Note: footwear should be acceptable so that the person will wear it.



Harmful footwear

The following footwear should be avoided:

- moulded plastic shoes or sandals
- shoes that have nails as part of their production/repairs
- pointed toed shoes
- fashion shoes with high heels
- sandals that have no restraining back strap

Note: stitching or nailing damaged parts together can be very damaging to the foot. Replace shoes rather than repairing them.

Card 28

Body functions and structures

Pain

Pain is usually a sign of nerve damage, eye inflammation, glaucoma or secondary infection in people with leprosy. When a person experiences pain, it indicates a problem that needs immediate medical help. Always refer to the nearest health facility.

Chronic pain: some people can experience chronic neuropathic pain (pain of the nerves that persists after completing leprosy treatment) that may require long term management. Neuropathic pain often improves when treated with tricyclic antidepressants, anticonvulsants, and/or neuroleptics. In some instances, pain may be relieved by nerve surgery, consult a medical specialist for treatment.



Actions to take

- A painful red eye is an emergency: refer to the nearest eye clinic.
- Acute pain near the elbow, wrist, knee or ankles may indicate nerve inflammation: refer immediately to the nearest health facility.
- Refer chronic pain for specialised treatment.







Activities and Participation:

Information and Actions to take









Card 29

Activities and participation

Activities

Muscles weakness/paralysis, loss of sensation, poor/no vision and/or loss of fingers or limbs can affect the person's ability to do their activities of daily life such as gripping, buttoning, zipping, turning keys, holding cups, cleaning oneself after toileting, walking and other activities. In addition, injuries and wounds can be caused during these activities if sensation is lost and/or vision affected. This requires the person to learn good protection habits to prevent injuries. Training in activities of daily living and utilisation of assistive devices can improve function and safety.

Actions to take

- Teach and encourage care of the eyes, hands, and/or feet that have lost sensation.
- In case of vision loss, also take a look at the Low Vision chapter of the RehApp.
- Encourage the person to ask for help when needed to do daily living activities.
- Discuss ideas that will make activities of daily living easier and safer. This may include:
    - Assistive devices
    - Mobility aids

Assistive devices

Assistive devices can support the person with leprosy to perform various activities, such as:

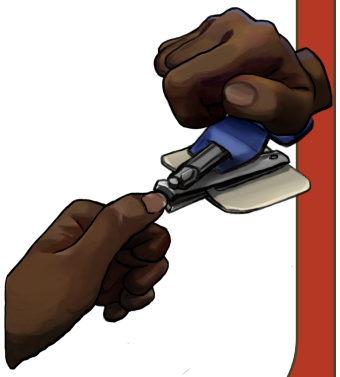
- Personal hygiene
- Dressing and undressing (buttons, zippers)
- Eating and drinking
- Writing

Card 30

Activities and participation

Personal hygiene

Holding small items such as a nail cutter or comb might be difficult for a person with leprosy. These items can be adapted so that the person can take care of their own hygiene. For example, to facilitate easy cutting of nails, attach something on the handle of a nail cutter to broaden it and make it longer.



Dressing and undressing

When a person has weak/paralysed fingers, is missing (some) fingers or has no fingers at all, dressing and undressing can be difficult. There are various tools that can be used to facilitate dressing and undressing:

A. **Button hook:** a hook fixed to a soft handle to facilitate buttoning, which is very challenging for those with thumb paralysis.



B. **Zip puller:** a hook with ring at one end to facilitate pulling on the zipper.



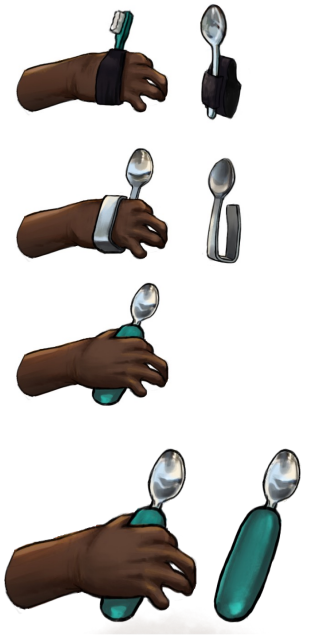
Eating and drinking

When the small muscles of the hand are paralysed it can become difficult to use cutlery (fork, knife, spoon) and to hold cups or glasses. In cultures where eating with the hand is the norm, that can be difficult too. Many local materials can be adapted to make eating and drinking easier, e.g.:

A. **Universal cuff:** A nylon or leather cuff around the palm with a pocket to insert a spoon, toothbrush, comb, etc., is for those without fingers or who have lost their grasp.

B. **Adapted spoon:** a spoon attached to an aluminium cuff to keep the spoon in the hand while eating.

C. **Built up spoon:** a spoon handle is built up with padded soft material to facilitate grip for those with poor hand grasp. The same modifications can be done for toothbrushes, pens, shaving razors, and combs.



Writing

People with impairments of their hands may struggle to hold a pencil. Larger pencils may help, but if this is not feasible, pens and pencils can be adapted using locally available materials.

Pen grip: this soft rubber grip slips onto pen and pencil to facilitate grip while writing.



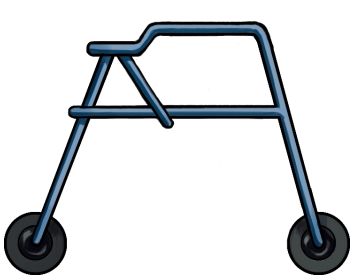
Card 31

Activities and participation

Mobility aids

Mobility aids can help to improve the balance and stability of people affected by leprosy that are needed to do daily activities. It can also offer weight-relief which allows ulcers to rest and heal. Some common mobility aids are:

- Foot lifter strap for people with a drop foot.
- Walking sticks: this can be a cane or simple walking stick.
- Walkers: there are walkers with or without wheels.
- Crutches: this can be an elbow crutch or axillar (armpit) crutch.
- Wheelchairs: they can be passive (pushed by another person), manual, or motorised.







Risk/ problem

- Great care must be taken when choosing aids for people who have lost sensation in the palms of their hands as they can cause damage to the hands, resulting in wounds.
- Training in the use of assistive devices and mobility aids can improve safety, function and personal acceptance of the device.
- Some people prefer not to use assistive devices as they feel it makes them look more “disabled”.

Actions to take

- Identify activities that are causing wounds or are difficult to do and look for solutions.
- Provide or adapt a mobility device:
  - Pad handles and/or the person can wear padded gloves in order to protect the hands.
  - Check the hands regularly for signs of damage, such as redness, heat, swelling.
  - Make sure that the person is in full control and autonomous in using mobility aid to avoid accidental falls.
  - A person needs to take frequent rests when using mobility aids.
- Teach the person to use and maintain the assistive device or mobility aid.

Card 32

Activities and participation

Individuals and families affected by leprosy can face social exclusion on a daily basis. They generally experience more exclusion and participation restrictions compared others. For many people in the community, there is a fear of contracting the disease. There can be fearful reactions to physically visible impairments.

Everybody plays a role to ensure that people affected by leprosy are not discriminated. Increased awareness about leprosy within the community can reduce stigma and discrimination. This will ensure that people affected by leprosy are fully included in society: at home, school, work and in leisure activities.

Community participation

The biggest challenge that people affected by leprosy face (especially those with visible impairments) is discrimination from individuals and institutions. One reason is that there are still much ignorance and many myths and taboos about the disease. These make communities fearful of people affected by leprosy.

Actions to take

- Organise community awareness raising activities about what leprosy is and what it is not. This can be done by means of e.g.:
  - using the mainstream media (spoken, written and TV);
  - using social media if this medium is widely being used;
  - organising community drama;
  - organising a puppetry show.



- Work with people affected by leprosy and local branches of IDEA (a world-wide organisation of people affected by leprosy) to speak up and correct the myths and taboos about leprosy.
- Work with community leaders and try to influence traditions and laws. These are often visible in folk stories and proverbs as well as names given to people with disabilities.
- Work with religious leaders and try to find out how they perceive leprosy. Try to influence negative theology, opinions and practices. Use for instance religious books to convince and persuade these religious leaders to change their attitude and as such, influence their followers.
- Influence and inform disabled people's organisations (DPOs) as they often employ discriminatory practices towards people affected by leprosy.
- Alongside people affected by leprosy, ensure their inclusion in the workplace and at school, e.g.:
  - educate school leaders and teachers to have positive attitudes towards persons affected by leprosy;
  - encourage educators and schoolbook writers to include leprosy in their health/ biology classes/books;
  - stimulate employers to accept people affected by leprosy.











Personal factors:

Information and

Actions to take









Card 33

Personal factors

Personal empowerment

People affected by leprosy can and should be able to speak for themselves. However, after suffering stigma and discrimination, people affected by leprosy can have low self-esteem, which may lead to self-stigma. Consequently, people may not see themselves as worthy of having a voice.

Actions to take

- Help people affected by leprosy to understand their value as a community member and the rights they have.
- Support them as they take steps to speak out their concerns and advocate for their rights.
- Explore how people see themselves and take care of themselves and aim to strengthen and improve this.
- Stimulate them to become members of a self-help group and/or DPO to exchange experiences among peers.

Emotional wellbeing

Having leprosy might have a negative impact on people's emotional wellbeing. A person with leprosy-related impairments, who also faces stigma and discrimination, may suffer from depression and/or anxiety. Also, self-esteem and self-worth can be badly affected. Therefore, it is important to pay attention to the personal feelings of the person affected by leprosy. However, try to involve the family members as much as possible and figure out how they can provide appropriate support.

Actions to take

- Provide information about the rehabilitation process and prospects. This usually reduces people's anxiety. It also facilitates cooperation during the rehabilitation program and helps the person to adjust to the new situation.
- Encourage the person affected by leprosy to participate in self-help groups to have the opportunity to discuss their feelings.
- Create a supportive environment, as people will need social support systems provided by family, friends, and community members:
    - Facilitate peer support by other persons with disabilities/leprosy.
    - Facilitate contact between the people affected by leprosy and their religious leader(s).
    - Assess and facilitate community inclusion and social support.

Note: depression affects up to 80% of people affected by leprosy. Depression is an illness characterised by persistent sadness and a loss of interest in activities once enjoyed, accompanied by an inability to carry out daily activities. This can lead to a variety of emotional and physical problems, such as a loss of energy, a change in appetite, sleeping more or less, feelings of worthlessness, and thoughts of self-harm or suicide. If these problems are observed, refer to a specialist!







Environmental factors:

Information and

Actions to take











Card 34

Environmental factors

Caregiver support

For the caregiver (who is often the husband or wife of the person with leprosy or a close family member), it might take time to learn how to live with a person affected by leprosy. Taking care for a person with a disease cause some degree of emotional stress. Therefore, it is important to also pay attention to the caregiver as well.

Actions to take

- Provide realistic information on the rehabilitation process and prospects.
- Identify how the caregiver can best provide support to the person affected by leprosy.
- Encouraging the caregiver to participate in group support or peer to peer activities to have the opportunity to discuss their feelings.



Peer counselling

Peer counselling consists of emotional and practical support provided by people in similar situations, i.e., other people affected by leprosy. Peer counselling can be a valuable asset to people affected by leprosy, especially when support is provided by somebody who is in a similar situation. **Note**: one should be aware that everybody has their unique coping style; experiences and practices can't just be replicated without adaptation to the person and the context.

Actions to take

Stimulate peers to support each other and/or share experiences on how to e.g.:

- maintain personal relationships and build new ones after the onset;
- take good care of themselves to prevent deformities;
- ensure their inclusion at school and at the workplace;
- make use of (community) resources available to the person.

Assistive technology

The appropriateness of assistive devices, mobility aids and footwear, varies per individual. They can be considered suitable if they:

- meet the individual's needs and environmental conditions;
- can be obtained and maintained in the country at an affordable cost;
- provide mobility and improve function;
- increase independence.

Actions to take

- Based on these attention points, explore together with the person affected by leprosy (and their caregiver) what assistive devices are most appropriate.

Card 35

Environmental factors

Religious support

Being given a diagnosis of leprosy can be a life-changing event for both the affected person and their family. They will most likely ask themselves why this misfortune overtook them. For these sorts of questions, they may benefit from consultation with a religious leader – a priest, an imam, a rabbi - or from partaking in religious rituals. Take into account that not only practical support is needed but also spiritual support.

Note: religion can also sometimes be a barrier to people affected by leprosy participating in society. The major religions do not themselves discriminate against people affected by leprosy, but followers of these religions can misinterpret what the scriptures say and use them to discriminate against people affected by leprosy.

Actions to take

- Work with religious leaders, alongside people with disabilities, to fight leprosy stigma within the community. Use for instance the weekly sermon to inform the public.
- Try to influence negative theology, opinions and practices, e.g. by using religious books to convince and persuade religious leaders to change their attitude and as such, influence their followers.
- Try to correct misinterpretations of religious scriptures.
- Try to explore and deploy the religious practices that gives the person affected by leprosy faith, e.g. participating in religious festivals.





Card 36

Environmental factors

Laws and regulations

In many countries, there are still laws and regulations that exclude and discriminate against people affected by leprosy. A particular problem is that many countries use thumbs/fingerprints for casting votes. Sometimes, people affected by leprosy have lost their fingers and so have no means of voting.

These laws and regulations prevent people affected by leprosy from e.g.:

- attending school;
- getting married;
- owning property;
- voting and/or holding political office;
- being buried in a community cemetery.



Actions to take

- Find out what laws exist in the community that discriminate against people affected by leprosy.
- Promote self-help groups that represent the rights of people affected by leprosy.
- Encourage people affected by leprosy to speak out against injustice and discrimination.
- Identify and promote role models of people who have overcome injustice and discrimination arising from their disabilities.
- Arrange legal representation of people affected by leprosy for property purchase.
- Work with and alongside people affected by leprosy, DPOs, local branches of IDEA and mainstream human rights organisations to:
    - have discriminatory laws repealed;
    - ensure that alternative means of casting votes are available, so they are able to cast their vote like other citizens.

Card 37

Environmental factors

WASH

For people with leprosy, as with other people with disabilities, access to water, sanitation and hygiene (WASH) are essential for wound care, self-care and to meet their daily needs. However, they might face multiple barriers to access WASH-facilities. To protect people's health, the fieldworker and community can work together to assure WASH is safe, of good quality, available, and accessible for all, including those with disabilities. Emphasise the importance of WASH and support the affected person to overcome possible barriers.

Actions to take

- Prevent stigma-based exclusion from WASH services.
- Ensure availability of clean water for wound care, self-care practices, food preparations, and household cleaning activities.
- Ensure WASH is accessible and safe for all.
- Ensure drinking water is safely stored at the household, e.g. in clean containers. Clean water may be contaminated by the time it is consumed because of unclean storage.
- Stimulate the people affected by leprosy and their caregivers to wash their hands with soap after a toilet visit, before handling food and water and when doing food preparations. This will reduce the risk that dirty hands contaminating food and water used in the home.
- Stimulate people not to openly defecate and instruct them how to properly use sanitation and safely dispose of waste.
- Together with DPOs and NGOs, and communities, advocate for available, affordable and accessible WASH facilities for people with disabilities.



Hygiene measures

Eyes, hands and feet that do not feel are at increased risk of getting injured in unclean environments. It is therefore important to regularly clean the environment.

Actions to take

- Remove rubbish:
  - Rubbish is a trip hazard, sharp edges on discarded tins, broken glass etc. are a greater risk for people with hand and feet that do not feel.
  - Rubbish also attracts pests such as rats and cockroaches which not only bring infections, but may also then come and nibble at the fingers and toes of people with loss of sensation when they are asleep.
- Clean the house:
  - Routine cleaning will greatly reduce the risks of infections. Particular attention should be paid to bathing and latrine areas because drains are reservoirs of infections.
  - Use a cup of bleach (hypochlorite) in half a bucket of water to clean the bathing/toilet area. The bleach solution should be used to flush and/or rinse the toilet.

Card 38

Environmental factors

Household safety measures

The greatest risk for people affected by leprosy is the lack of sensation in their eyes, hands or feet. This makes everyday activities within the household dangerous as they can cause injuries and more impairments.

Actions to take

- Undertake sufficient hygiene measures:
  - Remove rubbish.
  - Regularly clean the house.
- Undertake the following safety measures in and around the house:
  - Protect or fence off cooking places.
  - Use stable pots for cooking.
  - Remove sharp edges of e.g. tables that can possibly hurt someone.
  - Remove loose items one can easily stumble upon/bump into.





Climate

Dry season: dries out the skin, a problem that people affected by leprosy already have. Make sure that the person hydrates and oils their hands and feet more thoroughly during dry seasons.

Wet season: long-standing in water can bring problems of fungal infections which can increase the risk of wounds developing. Take care when wearing rubber boots (Wellington boots) as these can be hard and so damage the feet. If worn for too long, they can also increase the risk of fungal infections.

Colophon

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