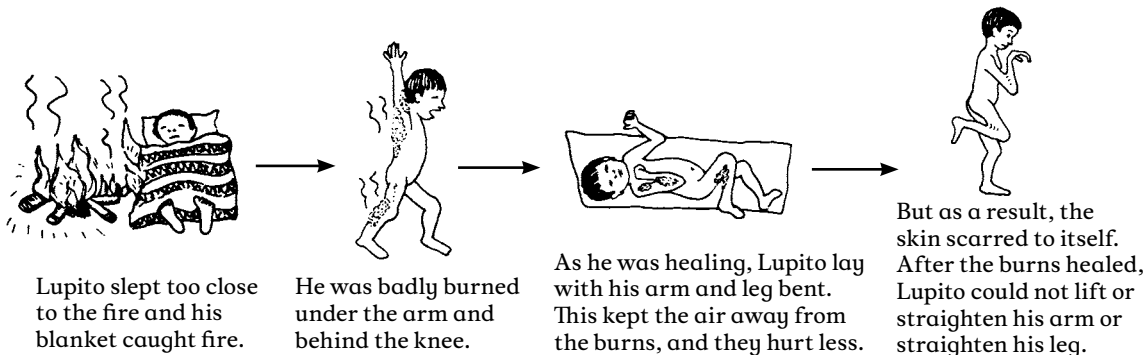


## Burns and Burn Disabilities

Serious burns are common where people cook, warm themselves, or sleep by open fires.

First aid for burns is discussed more in manuals like *Where There Is No Doctor*. Here we give brief information on burn treatment and focus on preventing disabilities from burns. The most common disabilities from severe burns are contractures (joints that no longer straighten) due to the scarring, or sticking together, of skin around joints. For example:



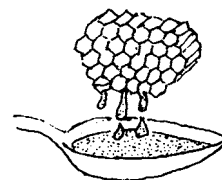
### TO HELP BURNS HEAL:

#### Prevent infection

To prevent or control infection, wash a burn with water that has been boiled and cooled, and add povidone-iodine if you have it (mix 4 parts boiled/cooled water with 1 part povidone-iodine). Scrub gently so the burn does not bleed and rinse with more boiled and cooled water. Then dry the burn by blotting with sterile gauze or sterilized cloth.

When the burn area is clean and dry, put one of the these on it to kill germs (wear sterile gloves):

- silver sulfadiazine: Use a thin layer. Do not use on eyelids or lips, or on children younger than 2 months old. –or–
- honey: Use a thin layer. –or–
- sugar: Pour granulated sugar over the burn until it is covered. Throw away any sugar that does not stick to the burn.



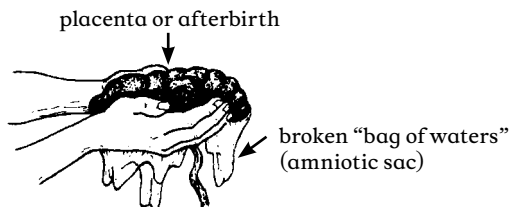
Then gently cover the burn with sterile gauze or sterilized cloth and secure this with tape or bandages. If the burn is on an arm or leg, keep it elevated to lessen swelling.

Once each day, clean the burn, reapply the treatment, and change the covering.

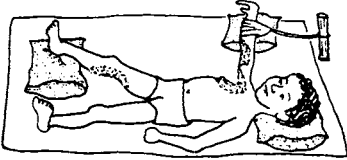
#### To speed and improve healing of burns

Large deep burns heal very slowly and form stiff scars. Healing can be faster and scarring less if a very thin layer of skin from another part of the body is stretched over the burn. Usually this “skin graft” is only done by a surgeon (although some village health workers know how to do it).

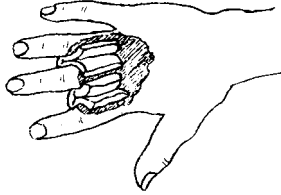
You can also use a fresh, clean “bag of waters” (amniotic sac), the thin membrane that comes out with the placenta after childbirth. Use it only if you are certain the mother does not have HIV, and wash it in boiled, cooled water before using.



**To prevent scarring together of the skin at joints:**



Keep the joints extended (straight) while the burns heal. You may have to support or tie the limbs so that the child does not bend them in his sleep.



For burns between fingers or toes, keep them separated with sterile cloth pads with *Vaseline*.



To keep the chin from scarring to the chest, it is very important to keep the head tilted up as the burns heal.

**RANGE-OF-MOTION EXERCISES**

Begin gentle range-of-motion exercises immediately after a burn injury, and do these 2 or 3 times each day. Injured skin shrinks and contracts for many months after a burn. Without stretching, it may tighten across joints, and cause contractures. Once range of motion is lost it is very difficult to get it back without painful and costly surgery. A child must stretch daily until the burned skin no longer tightens and shrinks. For exercise details, see Chapter 42.



Range-of-motion exercises may be painful at first, and medicines like ibuprofen or paracetamol can help (see p. 134). Pain will lessen as the skin stretches. Doing exercises with bulky coverings on may be difficult—a good time to exercise is when changing burn coverings, before the new coverings go on. Watch to see if movements are becoming difficult for the child—a contracture may be forming. If scarring is severe, range-of-motion exercises may be needed for years after burns heal. Contractures may form and slowly get worse, even with exercises. Before beginning exercises, it helps to rub body oil or cooking oil into a healed burn (not a fresh burn). Reports from several parts of the

world claim that fish oil on healed burns helps prevent thick scarring and contractures.

**CASTING**

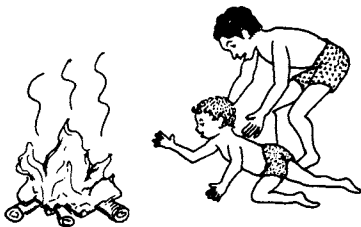
Some contractures can be gradually straightened with plaster casts, see pp. 560 to 562.

**SURGERY**

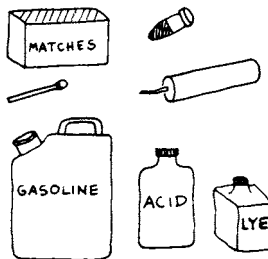
When joints are scarred down or severe contractures form after burns, “plastic surgery” may be needed. Skin may be taken from another part of the body and added over the joint area (a skin transplant).

In case of severe burns that have destroyed fingers or thumb, reconstructive surgery may help to return use of the hand. This surgery is very costly and usually can only be done by special surgeons in larger hospitals.

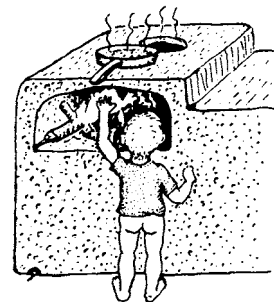
**PREVENTION of burns is important**



Keep small children away from fires. Where there are open fires, be sure an older child or someone else watches the young children carefully.



Keep matches and explosives out of reach of children.



Turn handles of pans on stove so that the small child does not pull them.