Healthy Living

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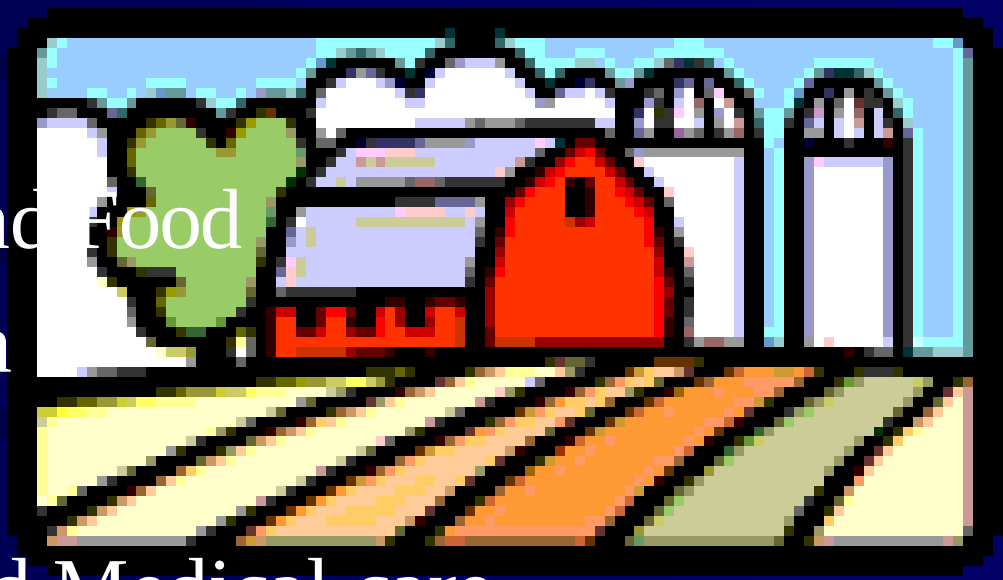
- **FARMS**
- F - Fluids, Fever, and Food
- A - Air, and Oxygen
- R - Rest
- M - Medications and Medical care
- S - Situations and Support



Prevention FARMS

The things that cause the red cells to sickle are: dehydration, fever, low oxygen, stress, cold exposure, and slow blood flow. Preventive care tries to prevent these known causes of red cell sickling.

F - Fluids

The kidneys let too much water go in someone with sickle cell. This water must be replace by drinking extra clear fluids such as water, fruit juice, or sodas. Alcoholic drinks, including beer, pull more water out of the body and cause dehydration. Water can also be lost through sweating on a hot day, with a fever or by exercising, vomiting, diarrhea, or just not drinking enough to keep up with the water lost in the urine. Keeping enough water in the body can prevent a pain episode.

F - Fluids

Water Needs for Sickle Cell Patients

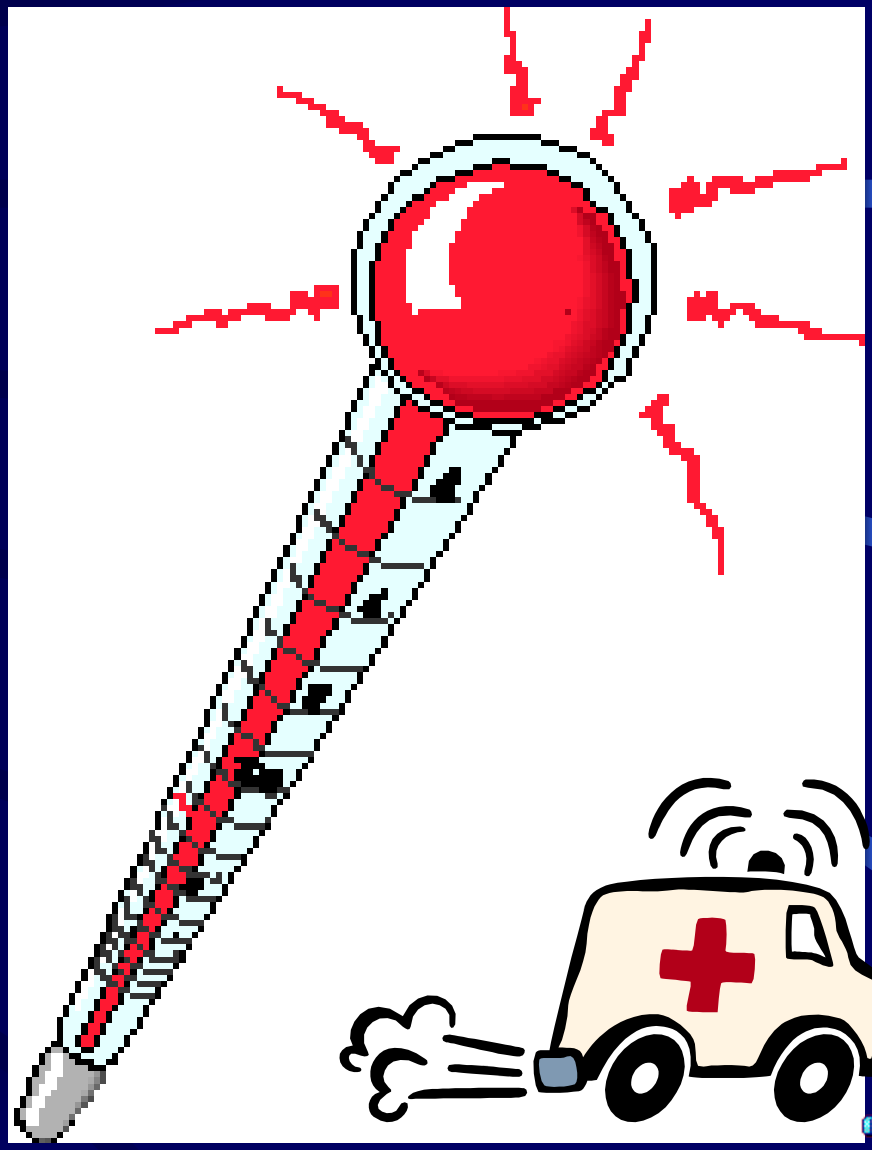
15 Lbs. - 3 glasses per day

30 Lbs. - 6 glasses per day

Over 60 Lbs.- 10 glasses per day

Fever

Fever can be the first sign of a serious infection. A fever over 101 F or 38.4 C should be seen at the sickle cell clinic or the emergency room.



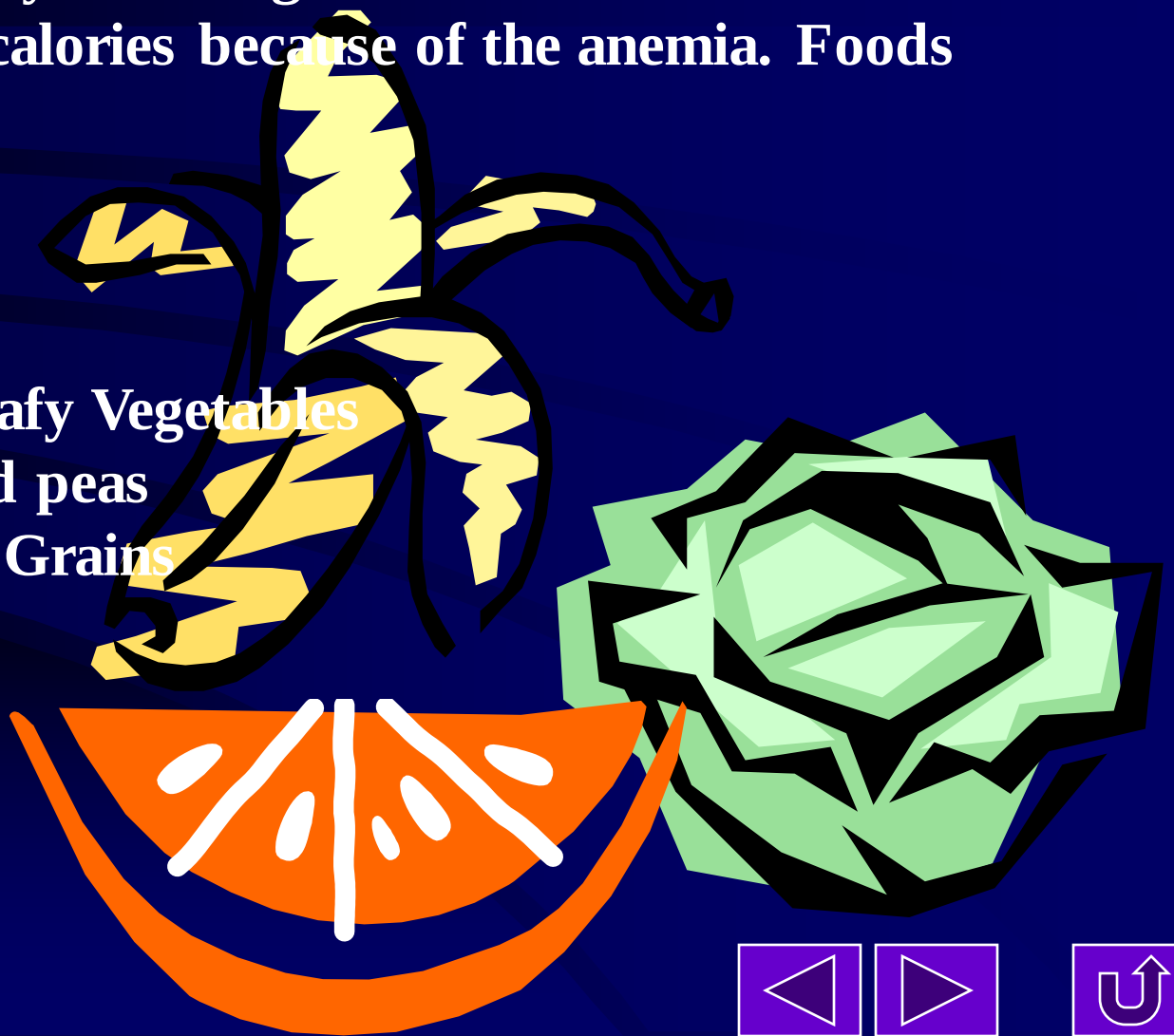
Fever

Fever blockers like aspirin and acetaminophen (Tylenol, Panadol.....), Ibuprophen (Motrin, Pediaprophen..) should not be used to lower a fever unless directed by your health care provider. These medicines can cover over a serious infection that could harm the patient. Aspirin should not be used for fever in children because it could cause Reyes Syndrome, a serious problem.

Food

Eating healthy foods will keep the body strong. Eat at least 3 meals a day. Growing children with sickle cell may need extra calories because of the anemia. Foods to eat include:

- **Fish**
- **Eggs**
- **Oranges**
- **Green Leafy Vegetables**
- **Beans and peas**
- **Nuts and Grains**



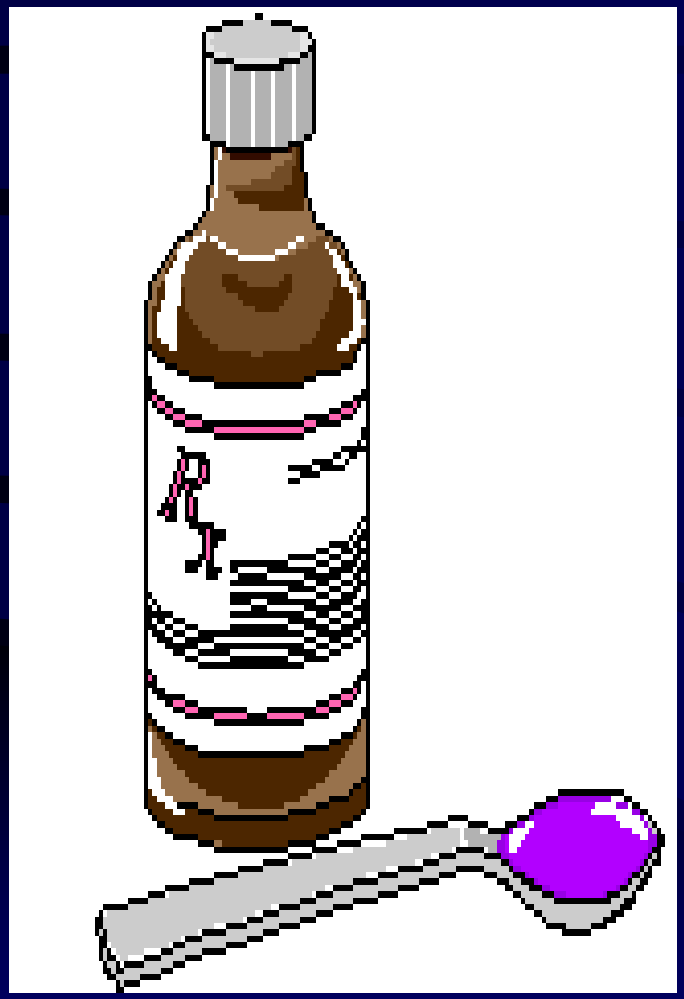
A - Air, Oxygen

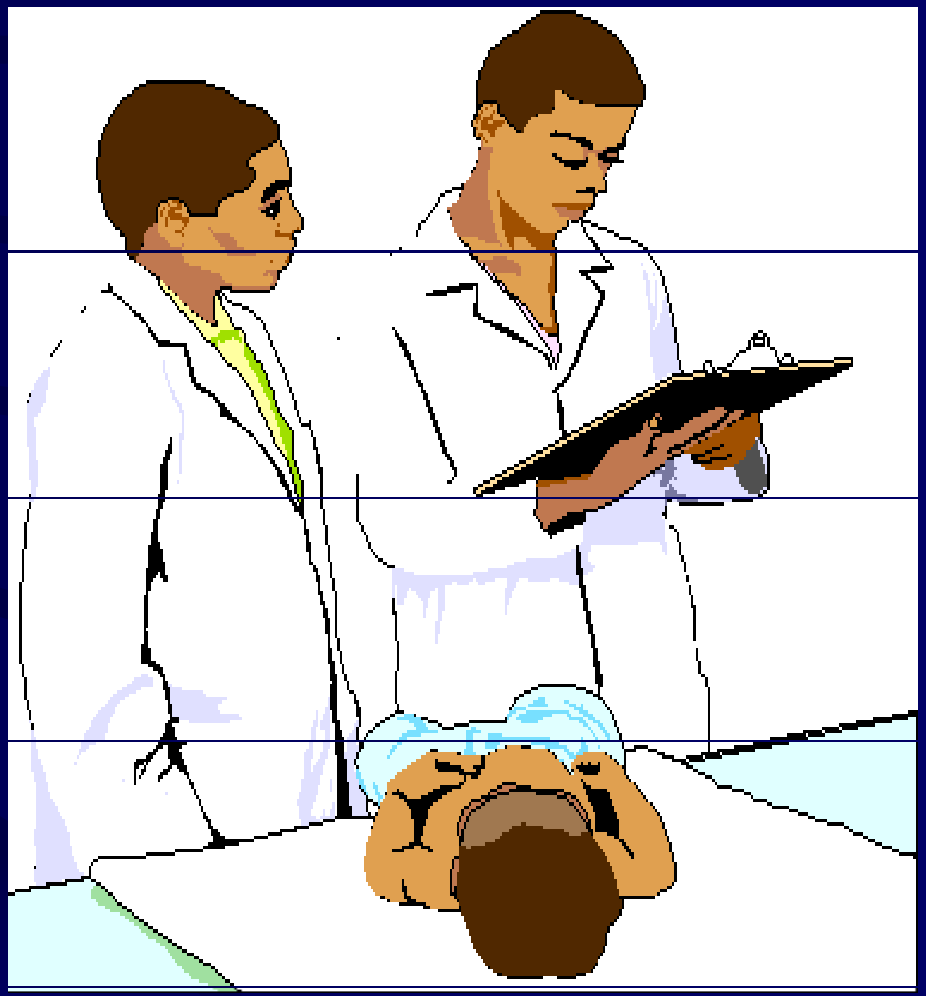
To keep enough oxygen in the body, treat asthma, do NOT smoke, and do not push the body to where you can not catch your breath. Air travel in pressurized aircraft is safe, but going from low to high altitudes may cause a pain episode. One should drink extra fluids and arrange for supplemental oxygen while on the airplane.

R - Rest

Take rest breaks and do not over do it.

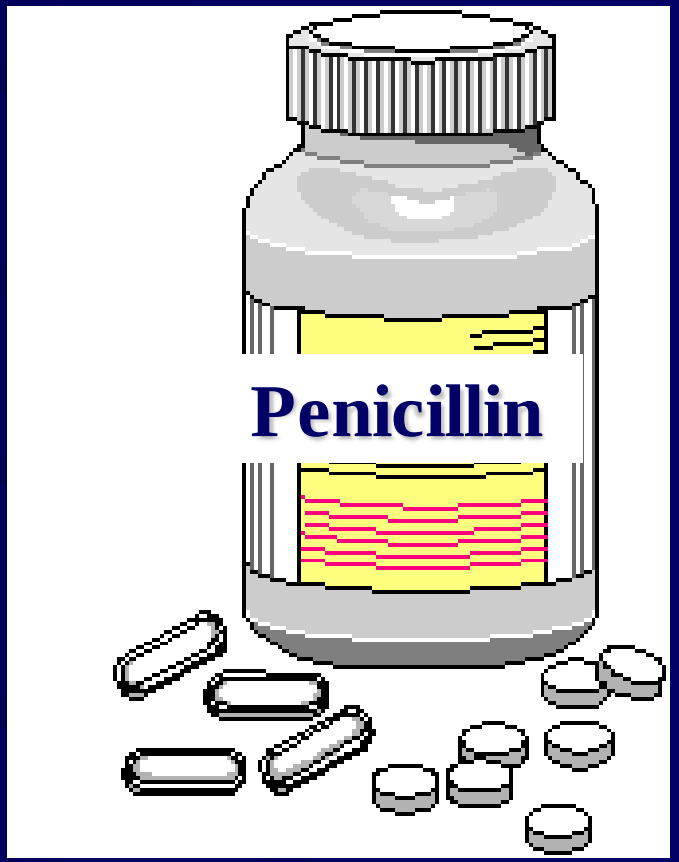
M - Medications - Medical care





M - Medications - Penicillin

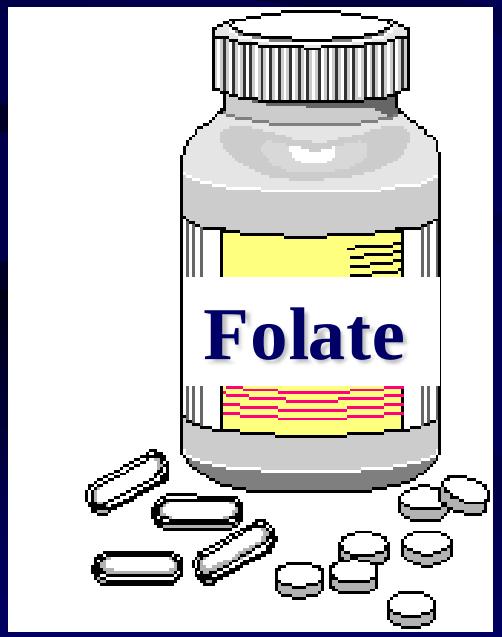
Penicillin has been proven to prevent serious infections that cause pneumonia and sepsis. The penicillin must be given twice daily, EVERY DAY to be effective from birth until age 6. After a child turns 6 years old, you and your health care provider should discuss whether to continue the penicillin . The dose is 125 mg. twice a day from birth until 2 years old then the dose is increased to 250mg. twice a day. Penicillin comes in pills or liquid and sometimes a shot every 3 to 4 weeks.

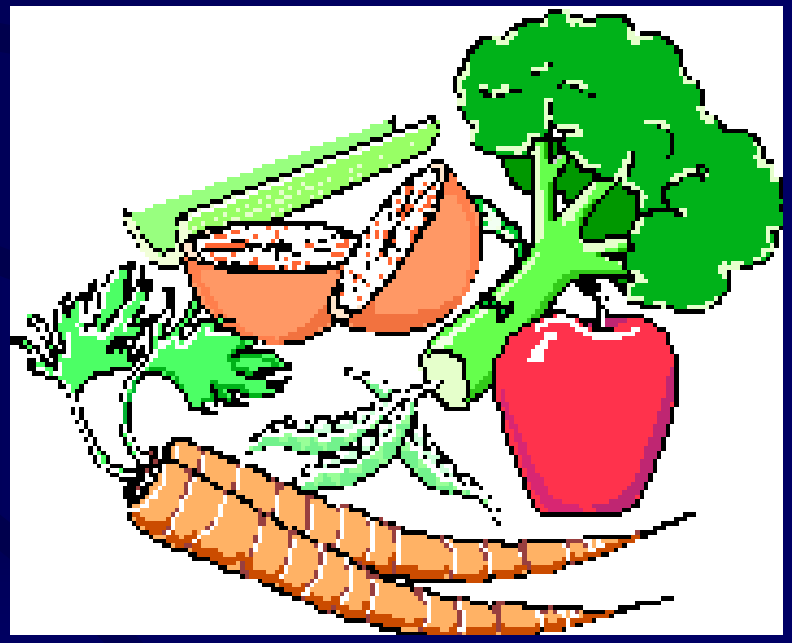


M - Medications Folate

Folic Acid or Folate is a vitamin the body uses to make new red blood cells. It is found in green leafy vegetables, but is destroyed by cooking them. Taking folate in a 1 mg. pill will help the body not to run low and stop making red cells.

Iron is usually not needed for sickle cell patients, and it should be taken only if your clinician has advised it because the iron in the blood has been measured and it is low.

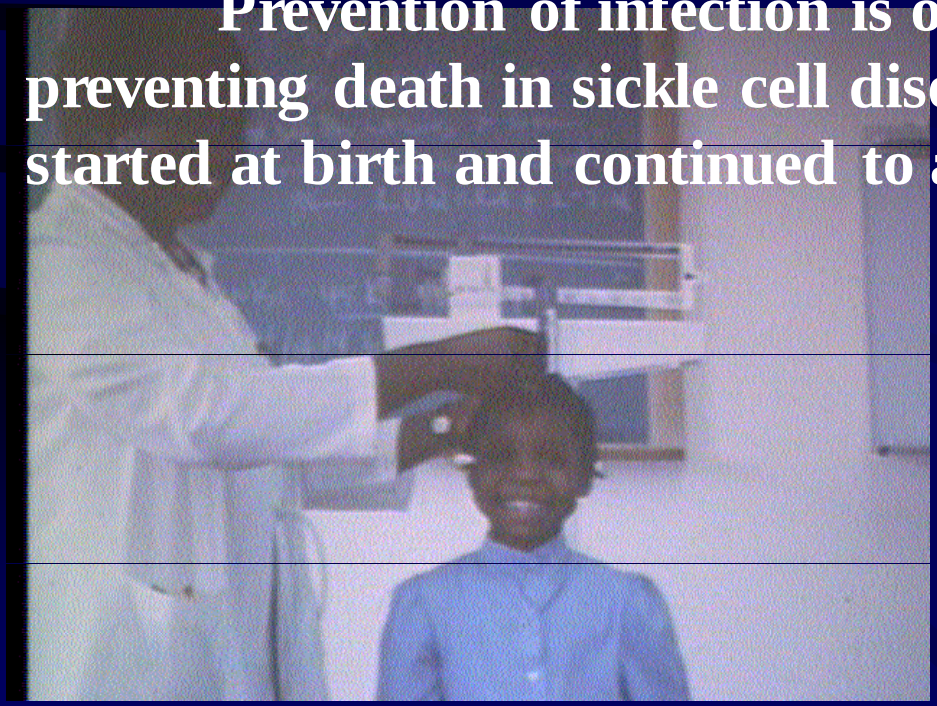




M - Medical Care

Those with sickle cell disease should be evaluated periodically by clinicians skilled in sickle cell care. This is to establish a normal baseline for the patient, identify impending problems, to update immunizations and maintain nutrition support, and to provide patient and parent education and support.

Prevention of infection is one of the major methods of preventing death in sickle cell disease. Penicillin should be started at birth and continued to age six.



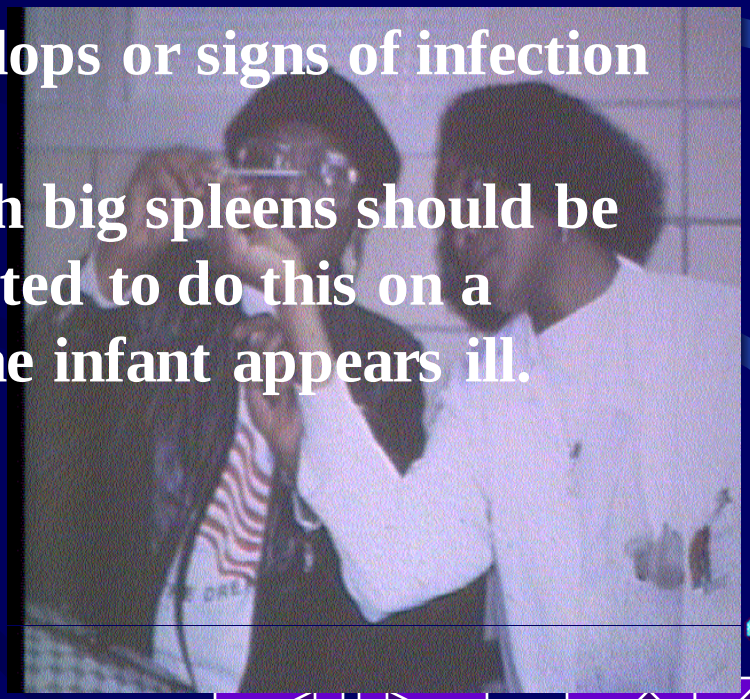
M - Medical Care

Individual immunization schedules will need to be developed based on the child's past immunization record, reactions to vaccination, presence of febrile illness, and local school requirements. The parent should be provided a permanent record of immunizations that also records the hemoglobin diagnosis, allergies, medication, other medical problems, and the phone number of the primary care provider. Parents should always present this during follow-up care.

M - Medical Care

Parents and patients should be taught how to read a thermometer. It is very important to provide these for parents or patients that do not have them available. Inexpensive digital thermometers are now available that are accurate and easy to use. The patient and parent need specific guidelines on how and when to seek immediate medical attention when a fever develops or signs of infection appear.

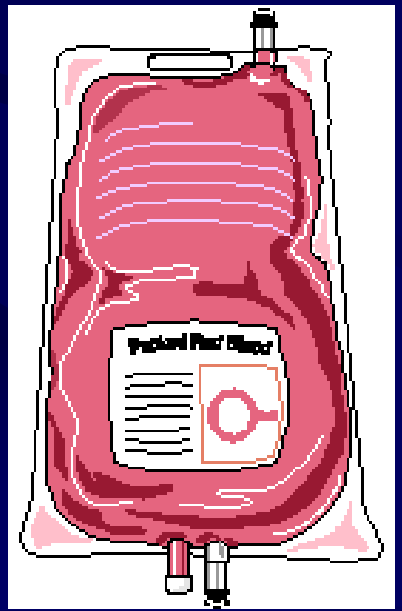
Parents of small children with big spleens should be taught to feel the spleen and instructed to do this on a regular basis and at any time that the infant appears ill.



M - Transfusions

Blood Transfusions

At times, blood transfusions may be needed to prevent or treat complications such as stroke, sequestration, priapism, and severe anemia. Transfusions are also needed in acute chest syndrome and in aplastic anemia when the bone marrow factory shuts down. Blood transfusions over time can load the body with too much iron. This may need to removed by a special medication.



S - Situations

Situations of too hot or too cold should be avoided by dressing in warm clothing on cool days and with loose clothing on hot days. Situations that are known to cause a pain event should be avoided like:

Swimming in a non heated pool

Getting upset

Becoming over heated or exhausted from too much physical activity

Drinking alcohol or using drugs like cocaine.

S - Support

Support from family members, but not special attention, is important. Sickle cell patients need to be encouraged to attend school, seek out careers that will not interfere with their sickle cell disease and plan for a long life. Family love and support can help ease the painful episode and keep the patient looking ahead to a career and a family of their own.

Pain Management

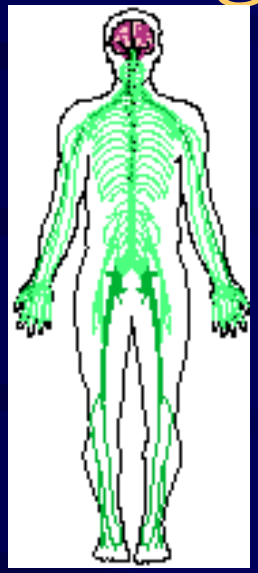
At the beginning of a pain episode, you must increase fluids by mouth, take recommended pain medication like acetaminophen (Tylenol), Ibuprofen (Motrin, Advil) or acetaminophen with a narcotic (Tylenol #3, Vicodin). Try warm baths, bed rest or mild distractions like music, play, work, or an enjoyable activity to take the mind off of the pain. Relaxation methods to relax the body can help lessen the pain greatly.

Danger signs that should be seen by your clinician include:

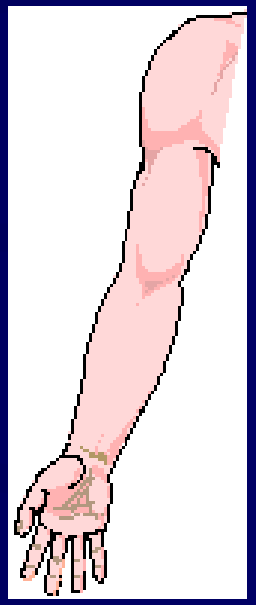
Fever
Chest Pain
Abdominal Pain
Severe Headache
Weakness, Numbness or difficulty talking
Difficulty Breathing
Pain that is not a typical pain episode.

Pain Management

BRAIN - Narcotics, anti-depressants and endorphins block pain here. Narcotics may cause drowsiness, and slow breathing. Biofeedback, and relaxation also work here



SPINAL PAIN GATE - Transcutaneous Electric Nerve Stimulation TENS works here



TISSUE Level - Aspirin, acetaminophen, ibuprofen, heat, rest, all block pain here

Pain Assessment

Pain assessment should be a routine vital sign for any patient with pain. Pain is subjective and dependant on the patient's perceptions. The visual analog scale is a simple, objective, and reproducible method of quantifying pain. A ten centimeter line is presented to the patient and they are asked to make a mark on the line where their pain level is. The beginning of the line represents no pain and the end of the line represents maximum pain. This should be done at the initial assessment and during treatment to monitor the effectiveness of the intervention. Click on the animate button to demonstrate the use of the VAS.

Animate