OVERVIEW
When an external fixator is in place, it is very important to take care of the pin sites and watch for signs of infection.

PIN CARE
It is important to keep the external fixator and your skin clean. This is best done with a normal shower or quick bath, letting the water wash over the skin and external fixator. Gentle cleaning with soap and water are also valuable.

After the shower or quick bath, the external fixator should be patted dry and each pin site should be checked. Dry pin sites should be left alone and can be left uncovered. Some pins will have some dry crusting. This can be left for several days, but should be cleaned off at least once a week. Pins with moisture, drainage, or bleeding should be cleaned gently. The pins and the adjacent skin are cleaned with a cotton tipped swab and diluted hydrogen peroxide. Pour a small cup of hydrogen peroxide and add a little water. Use a clean cotton swab and gently rub around each pin. The hydrogen peroxide may foam a little. If the pin site is dry, leave it open to the air. If there is some moisture or drainage, make a slit into one of the sponges or a small piece of gauze and use a clip on the pin or some tape to hold it against the skin.

PIN SITE INFECTIONS
The most common and even expected problem with external fixation treatment is pin site infection. Pin site infection begins superficially and if untreated will progress deeper, and eventually to the bone. It is important to identify pin site infection and treat it early. We would rather you over-diagnose and over-treat pin site infection than delay the treatment and run into bigger problems.

The first sign of pin site infection is usually redness with tenderness around the pin in an area that was previously not tender. Some redness around the pin sites is normal. However, if there is new redness, especially with new tenderness, it is probably the beginning of infection. Another sign of infection is pus draining from the pin site. Some drainage, especially a thin watery clear yellowish fluid is normal. Bleeding at the pin site is not common, but may occur occasionally if the skin is stretched far enough during activity or therapy. Pus is thick and white or green. It may be reddish if there is some bleeding, and it may smell foul. A combination of new redness, new tenderness, and pus drainage are clear signs of infection.
Fever and not feeling well are systemic signs of infection. These are uncommon early with a pin site infection, but will occur if the pin site infection is not treated or it progresses deep to the bone. If a fever develops by itself, it can relate to other causes such as the flu, an ear infection, other upper respiratory infection, urinary infection, etc. Treat these as you normally would, but if fever persists, call the office during the day.

When pin sites become infected, the pin site needs to be cleaned carefully twice per day as described above. Antibiotic medicine should be started as well. You should receive a prescription for oral antibiotics before you leave the hospital after the initial surgery or in the clinic. These are not to be taken unless you develop a pin site infection. If you see signs of a pin site infection, call the office during the day and speak to the nurse. You do not need to call the office the moment you diagnose the pin site infection. That can often lead to delay in treatment while you wait for a return phone call. Delaying treatment by 1 or 2 days can lead to advanced pin site infection that is more difficult to treat.

Occasionally, either because of late treatment or despite early treatment, a pin site infection requires removal of the pin and/or surgical treatment. This can sometimes be done in the clinic without going to the operating room. Admission to the hospital for treatment of pin site infection is rare, and the need for the intravenous administration of antibiotics at home is also uncommon.

OTHER PROBLEMS
Contact the office during the day for other problems as well. These problems include …
1) worsening pin site infection despite cleaning and taking antibiotics
2) increasing pain or persistent fevers over 101.5 degree Fahrenheit
3) broken wires, loose nuts, or inability to advance the distractors
4) persistent feeling of “pins and needles”

MORE INFORMATION
Further information can be obtained on the internet. Your local public library can help you explore these sources if you are interested. Two good sites for expert and peer reviewed information are the American Academy of Orthopedic Surgeons at www.aaos.org and www.emedicine.com.

FEEDBACK
If you have questions or comments, please contact the office or submit them to the web site at www.pedortho.com.