

Long-Term Care Survey Alert

NURSING PRACTICE: Inject Some Best Practices Into Your Z-Track Technique For Iron Replacement Rx

Skin staining, abscesses can result if you don't follow the right procedure.

Picture this: Surveyors note what appears to be bruising on a resident's buttocks. But it's not really a bruise--it's skin staining caused by nurses injecting iron incorrectly.

That scenario actually occurred in a state-run group home where staff rather than surveyors suspected abuse when a resident had blue discolored areas on both buttocks. Some staff were even surreptitiously taking pictures of the "bruises" until they figured out the areas weren't healing over time, reported **Daniel Sheridan, RN**, who showed pictures of the discolored areas in a presentation at the most recent **American Association of Nurse Assessment Coordinators** conference in Las Vegas.

Sheridan tells **Eli** that the pictures he showed of the resident's iron-stained buttocks suggests "the iron wasn't administered deeply enough. Either the nurse didn't use a long enough needle"--or the nurse didn't place the needle deep enough, he says.

It could happen in your facility: The physician may order IM iron injections for residents who have difficulty taking oral medications. "If trying to get a person with dementia or profound developmental disabilities to take an oral medication becomes a behavioral challenge, then a Z-track injection might be the preferred alternative," he says. "IV administration is another option if the resident requires IV access for other purposes."

Z-track iron injection might be a "cost effective alternative" to IV iron for residents who become iron deficient on Procrit or Aranesp, which stimulate blood cell growth and deplete iron stores in the process, says **Richard Marasco**, a clinical pharmacist in Valdosta, GA. Marasco consults with nursing homes about anemia in geriatrics.

The bottom line: Nurses in nursing homes may be required to give a Z-track injection, says Sheridan. "And since it's not a common procedure, nurses should review the correct procedure," he adds. "If you administer a big glob of iron ... [via] a straight IM injection, you create the risk" that the resident will develop an abscess.

"The theory behind giving iron by Z-track is that the technique helps ensure you administer the medication deep into the muscle and spread the medication over a larger cellular area, which improves absorption," says Sheridan.

Follow These Best Practice Steps

Cecelia Grindel, PhD, RN, advises using these steps to administer iron using the Z-track method:

1. Use a longer needle of two to three inches when injecting normal-sized or heavier patients. A 1.5 inch needle may be satisfactory for a small patient with little subcutaneous tissue. If the patient is obese, you may need to use a longer needle. (Use your nursing judgment and consult with the ordering clinician to select an appropriate needle size.)
2. When drawing up iron for injection, change the needle before injecting it. This prevents tissue irritation and skin discoloration.
3. Select the ventrogluteal site for injection.
4. Pull the tissue to the side or down, insert the needle, and aspirate for blood.

5. Continue to hold onto the skin as you inject the medication slowly. You want to give the medicine time to disperse in the muscle.

6. Wait several seconds (some sources recommend 10 seconds) after injecting the medication before pulling the needle out and letting go of the skin. The skin folds back over the site, providing a seal.

Key point: Rotate the injection sites, advises Grindel, a nursing professor at **Georgia State University** in Atlanta.