

## Home Infusion ...

improves quality of  
life for individuals  
requiring extended  
infusion therapy

but caregivers must  
take some precautions  
to minimize risk



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# Home Medical Devices

## Home Infusion:

### *A Safety Guide for Patients and Caregivers*



## What You Need To Know About Home Infusion

Home infusion can allow an individual who requires extended infusion therapy to maintain a more normal lifestyle. This brochure covers the risks and safety practices for treatments including antibiotics, chemotherapy, pain management, and parenteral nutrition. Typical patients are those with infections that are resistant to oral antibiotics, cancer, congestive heart failure, and gastrointestinal disorders. Enteral (nutrition) feeding, home insulin pumps, and elastomeric pain pumps are not covered by this brochure, but may have many of the same risks.

### What's Involved in Home Infusion?

Home infusion therapy requires the use of an electronic infusion pump for delivering medication or fluids from a reservoir to the patient. This is typically done through a vascular access device like an intravenous catheter (although home infusion can also refer to subcutaneous and epidural—within the spinal column—delivery). Most infusions are delivered with small, “ambulatory” pumps that have extended battery



capacity to permit patient mobility. Seriously ill patients who cannot walk may have a traditional “pole-mounted” pump that can also run on battery, but is intended to be plugged in most of the time. Both styles of pump have audible and visual alarms to alert the patient or caregivers to certain problems with the device. Pumps typically do not have monitoring capabilities (such as, for heart rate), so a separate monitoring device may be necessary in some circumstances. Patients requiring narcotic pain medication usually have a special pain pump (sometimes called a patient-controlled analgesic, or PCA, pump) that allows the patient to request medication when the pain is severe. PCA pumps have special safety features that are designed to prevent oversedation.

### What Are The Risks?

The most serious risk in home infusion is over-infusion, whether from mechanical problems that permit unrestricted flow or from misprogramming the pump. Overinfusion can be life-threatening depending on the medication being delivered. Newer ambulatory infusion pumps have safety software that helps prevent overinfusions due to misprogramming the pump, but problems can still occur. Under-infusion, which can occur if the device stops working or the tubing to the patient becomes blocked (such as by kinking), is generally less serious since it is less likely to cause immediate harm to the patient (but a delay in therapy can be serious in some circumstances). Other concerns, both for the patient and caregiver, include infection and contamination (such as from toxic chemotherapy medications).

### How Can I Stay Safe?

Here are some steps that you can take to help ensure your own safety or the safety of your loved one.

- Make sure you have read and understand the instructions for using the pump. If you weren't given these instructions, ask for them. Meet with a clinician to review pump operation and any special precautions you should consider.
- Keep clinical support contact information readily available in case you have questions or there is an emergency.
- As with any medication taken in the home, be aware of dangerous side effects. Specifically, be familiar with the signs of oversedation if narcotic pain medications are being used.
- Do not change pump settings (for example, infusion rate) unless instructed to do so. Most changes are performed by a clinician (this usually involves a nurse traveling to the home).
- In order to help minimize the risk of infection, clean your hands with soap and water or an alcohol-based cleaner. Also, wear gloves before connecting the infusion set to the catheter, when changing medication containers, and when handling blood or other bodily fluids or accessories used for chemotherapy. If interacting with needles or other sharp objects, be sure to dispose of them safely.
- Keep a supply of fresh backup batteries for the pump.