Home Hemodialysis...

Is a life saving treatment...

that can offer significant advantages for certain patients...

but it can have serious risks that patients and their caregivers must understand in order to be as safe as possible.
What You Need To Know About Home Hemodialysis Safety

If you have been told by your physician that you can have your hemodialysis treatments in your home, this can be very good news. You will no longer have to travel to a dialysis clinic to undergo your treatments, and this can give you more control over how treatments affect your life. But undergoing hemodialysis in the home does have some risks. It is important to understand these risks to help you and your caregivers operate your equipment as safely as possible.

How Does Home Hemodialysis Treatment Work?

Machines used for home dialysis function similar to those in the dialysis clinic. Most patients will have either an internal fistula or graft that provides access to their blood. Home hemodialysis machines connect to these access points and draw blood from your veins and pump it through a blood filter called a dialyzer, where it is exposed to a fluid called dialysate. The dialysate removes metabolic waste from your blood. The machine then returns the cleansed blood to your body.

What Are The Risks?

The most serious risks of hemodialysis are blood loss or the leaking of air into the blood stream (air embolism). These are primarily caused by complete or partial disconnection of the hemodialysis machine’s blood lines. Depending on how or where a disconnection occurs, blood can be pumped or leak out of the tubing or air can be drawn into your blood.

Hemodialysis machines are designed to detect disconnections by monitoring the pressure in the blood lines, but these monitors have limitations. Your safety requires vigilance by you and your caregivers or assistants to minimize risk. Information about these and other risks is typically described in the user manual for your equipment and supplies.

What Can I Do To Keep Myself Safe?

While blood loss, air embolism, and other risks can be serious, there are things you can do to help ensure your safety.

- During training, pay particular attention to instructions about connecting and disconnecting blood lines. Read and understand the user manual for the equipment and the supplies you will be using.
- Make sure you use only supplies that are recommended by your health care provider or equipment manufacturer.
- Have a caregiver or assistant who has been trained in how to conduct home hemodialysis be present throughout every one of your treatments.
- Be sure that blood line connections are securely connected before beginning treatment.
- Make sure that blood line connections are always visible for inspection, and are not covered by sheets, blankets, or tape.
- Make sure that the machine’s alarm volumes are never turned down to inaudible levels, and never adjust alarm pressure limits out of the proper range in an attempt to reduce the number of alarms.
- You and your caregiver or assistant should respond to alarms promptly and try to determine their cause.
- Most hemodialysis machines have monitors that will clamp the line and stop pumping if air is detected, since air in the line can quickly lead to a dangerous air embolism. If this happens, stop treatment and immediately contact your dialysis professional or physician for guidance.
- Post the phone numbers and other contact information for your dialysis professional and physician in a readily accessible location. Contact them with any questions or concerns about your treatment.
The HTF is currently looking for additional distribution channels for this brochure. If you are aware of any organization that might use this brochure at a meeting or would like to place it on their website, please contact James Wear at james.wear@gmail.com.

This is the third brochure in the home medical device patient safety series from the HTF and the second safety brochure collaboration with ECRI Institute. The two previous are “Fire Safety & Oxygen: A Patient Guide” and “Can I bring my own medical device with me to the hospitals?” These are available from the HTF website at http://thehtf.org/publications.asp as free tri-foldable downloads in both English and Spanish. Limited numbers of printed copies remain available. Co-branding opportunities are also available with prior permission. Please remember these resources if these issues come up in your organization. Suggestions for additional brochure topics are welcome and should be sent to james.wear@gmail.com.

The Healthcare Technology Foundation was established in 2002 on the principle that achieving improvement in the safe use of healthcare technology requires diverse stakeholders to come together in order to utilize their collective knowledge on the design, use, integration and servicing of healthcare technology, systems and devices. In addition to industry, regulators, clinicians and clinical engineers, the public must be included as one of the stakeholders such that they are provided with the means to participate in and gain access to guidance on best practices and the safe use of healthcare technology both in clinical settings and at home. The Foundation supports the promotion of excellence in clinical engineering leadership through research, education and certification; funding of related research and programs; effective collaborations between medical device producers, regulators, users and clinical engineers; and the creation of safety-related education material that is useful to members of the public.

ECRI Institute (www.ecri.org), a nonprofit organization, dedicates itself to bringing the discipline of applied scientific research to healthcare to discover which medical procedures, devices, drugs, and processes are best to enable improved patient care. As pioneers in this science for more than 40 years, ECRI Institute marries experience and independence with the objectivity of evidence-based research. ECRI Institute is designated a Collaborating Center of the World Health Organization and an Evidence-based Practice Center by the U.S. Agency for Healthcare Research and Quality. The ECRI Institute PSO, listed as a federally certified Patient Safety Organization by the U.S. Department of Health and Human Services, strives to achieve the highest levels of safety and quality in healthcare by collecting and analyzing patient safety information and sharing lessons learned and best practices.