

What You Should Know About Dialyzer Reuse

A Guide for
**Hemodialysis
Patients
and their
Families**



NKF National Kidney
Foundation®
Making Lives Better

What is reuse of a hemodialyzer?

During hemodialysis, a hemodialyzer, or artificial kidney, is used to filter fluids and wastes from a dialysis patient's blood. Reuse of a hemodialyzer means that the **same hemodialyzer (filter) is used more than once for the same patient**. When dialyzers are reused, they are cleaned and disinfected after each treatment. They must also be tested to make sure they are still working well before they are used again. The practice of reuse has been done safely in the United States for more than 30 years.

Why do you reuse a dialyzer?

Dialyzer reuse can **reduce or eliminate the physical reaction** some patients have to certain dialyzer membranes. In addition, dialyzer reuse allows the dialysis center to use high-flux dialyzers, which are more costly. High-flux dialyzers are more porous and clear larger toxins from your blood.

How is a dialyzer prepared for reuse?

Before a dialyzer can be reused, the following steps must be done:

1. The dialyzer **is rinsed and cleaned, either by hand or with a machine**. Doing this by machine is generally safer. Ask your dialysis care team which method they use.
2. The dialyzer is tested to make sure there are no broken fibers and it is still working.



3. The dialyzer is filled with a **germicide (chemical solution used to kill germs)**.
4. When the dialyzer is ready for use, the **germicide is rinsed out**.
5. The dialyzer is tested to make sure **no germicide is left**, and the dialyzer can be used safely.

What kind of germicides are used in dialyzer reuse?

The most common germicides are formaldehyde and peracetic acid.

Is reuse safe?

Reuse is generally considered **safe when it is done properly**. All the dialysis centers that reuse dialyzers follow the guidelines developed by the Association for the Advancement of Medical Instrumentation (AAMI). These guidelines were developed with the help of patients, scientists, doctors and other health professionals, government officials and industry.

What do the reuse guidelines say?

Some of the important things the guidelines say are:

- ❖ Dialyzers should be **labeled carefully** and always **used for the same patient**.
- ❖ Dialyzers should be **tested after rinsing** to make sure all disinfectants have been removed.
- ❖ Patients **should be checked for any bad reactions** caused by reuse.
- ❖ Dialyzers that are reused should be **well-tested after each use** to make sure they are still working well.

How do I know that my dialyzer is working well?

According to the clinical practice guidelines by the National Kidney Foundation's Kidney Disease Outcomes Quality Initiative (K/DOQI)[™], your dialyzer to be reused should be tested in a special way before its first use and again every time it is reused to make sure it is working effectively. A dialyzer that is not working well may be one of the possible causes of:

- ❖ loss of appetite
- ❖ loss of body weight
- ❖ nausea and vomiting
- ❖ changes in your monthly lab tests such as BUN, creatinine and albumin



Ask your dialysis care team about the following tests. A poor result may mean your dialyzer is not working well.

Total cell volume (TCV) is a test to see how well your dialyzer is working. According to the National Kidney Foundation's Kidney Disease Outcomes Quality Initiative (NKF's K/DOQI), TCV should always be at least 80 percent of what it was at first.

Urea Reduction Ratio (URR) and Kt/V (pronounced kay tee over vee) are two tests that tell if you are getting enough dialysis. If the right amount of dialysis is delivered to you, your URR should be at least 65 percent or your Kt/V should be at least 1.2. A dialyzer that is not working well is one possible reason why your

numbers may be too low. Keep track of your numbers, and speak to your dialysis care team if they are too low.

How many times can I safely reuse my dialyzer?

There is no set number of times that is considered safe for dialyzer reuse. As long as the TCV test shows that the dialyzer is working well, and the dialyzer looks clean, it should be safe for you to reuse your dialyzer. Ask your dialysis care team if they have tested your dialyzer and if it still works well.

How should my dialyzer look before treatment?

Your dialyzer **should look clean**.

If your dialyzer looks clotted or dirty, speak to your dialysis care team before starting your treatment. Always check the appearance of your dialyzer before each treatment.

Make sure the dialyzer:

- ❖ looks clean
- ❖ has no more than a few clotted fibers
- ❖ has clean tops and bottoms that are free of all but small clots
- ❖ is not leaking
- ❖ is capped on all openings or ports
- ❖ is clearly labeled with your name.



How can I be sure that I am not using someone else's dialyzer?

Before each treatment, it is important that you and your nurse or technician **check the label on your dialyzer**. The label should be clearly marked with your name.

How can I be sure I am getting the right amount of treatment from my reused dialyzer?

To help ensure that you are getting the most from your dialysis treatment, ask your dialysis care team about the following:

Your monthly Kt/V

or URR. If your numbers are too low, you may not be getting enough dialysis. A dialyzer that is not working well is one reason why this may occur.



You should also ask your dialysis care team if your center uses AAMI quality water and germicides approved for dialyzer reuse. Proper supplies and procedures are critical for safe and effective dialyzer reuse.

What if I do not want to reuse my dialyzer?

Many dialysis centers will provide you with a new dialyzer for each treatment if you ask for one. However, the dialyzer may not

be a high-flux dialyzer, and you may have to spend extra time on the machine to get enough treatment. **Ask your dialysis care team about your center's policy on reuse.**

What if I have more questions?

If you have additional questions, you should **speak to the dialysis care team at your dialysis center.** The head nurse or your primary care nurse should be a good source of information about treatment choices. You can speak to the social worker at your center about insurance and payment issues.

You may also be interested in the following resources from the National Kidney Foundation:

- ❖ *Keeping Bones Healthy in Chronic Kidney Disease*
- ❖ *Coping Effectively: A Guide for Patients and their Families*
- ❖ *Dining Out With Confidence: A Guide for Kidney Patients*
- ❖ *Fitness After Kidney Failure: Building Strength Through Exercise*
- ❖ *Nutrition and Hemodialysis*
- ❖ *Sexuality and Chronic Kidney Disease*
- ❖ *What You Need to Know About Hemodialysis*
- ❖ *Working With Kidney Disease: Rehabilitation and Employment*
- ❖ *People Like Us* (a seven-part video series)
- ❖ *NKF Family Focus* (a quarterly newspaper for patients and families)

You may also be interested in joining NKF's Patient and Family Council. For information about the benefits of membership and to receive a membership application, call (800) 622-9010 or write to the National Kidney Foundation at the address on the back of this booklet.

More than 20 million Americans—one in nine adults—have chronic kidney disease, and most don't even know it. More than 20 million others are at increased risk. The National Kidney Foundation, a major voluntary health organization, seeks to prevent kidney and urinary tract diseases, improve the health and well-being of individuals and families affected by these diseases, and increase the availability of all organs for transplantation. Through its 51 affiliates nationwide, the foundation conducts programs in research, professional education, patient and community services, public education and organ donation. The work of the National Kidney Foundation is funded by public donations.

This brochure was made possible in part by an educational grant from Minntech Renal Systems.



**National Kidney
Foundation®**

Making Lives Better

© 1999 National Kidney Foundation, Inc.
2002 Edition

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the National Kidney Foundation. Permission requests should be written and addressed to the publications department of the National Kidney Foundation.

National Kidney Foundation
30 East 33rd Street
New York, NY 10016
1-800-622-9010
www.kidney.org

03-135
K/DOQI Learning System (KLS)™