



Reprocessing Products Corp (RPC)
Rabrenco Scientific - Division of RPC

WATER TREATMENT FOR HEMODIALYSIS

(Session Outline)

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WATER TREATMENT FOR HEMODIALYSIS

(Session Outline)

I. Importance of Treating Water for Use in Dialysis

- A. Discussion of non-patient water exposure vs. hemodialysis patient water exposure.
 - 1. 500 – 1,000 liters/year vs. 25,000 – 40,000 liters/year
 - 2. gastro-intestinal filtration vs. non-selective dialyzer semi-permeable membrane.
- B. Identifying chemical contaminants in the water and patient reactions or symptoms associated with these chemicals.
 - 1. problems that may result in injury or death to the patient
- C. Determining maximum level of chemical contaminants allowed.
 - 1. AAMI/ANSI Hemodialysis Standard
- D. Discussion of source water (tap water) differences
 - 1. surface vs. ground water
 - 2. seasonal variations
 - 3. contacting water treatment plant

II. Removal of Organic & Inorganic Contaminants

- A. Identify purpose of components within water treatment system.
 - 1. blending valve, softener, carbon tank(s), particulate filters, RO, storage tanks, UV, sub-micron or UF filters, and piping distribution systems
 - 2. deionization

III. Factors Influencing Microbial Contamination in Water Systems

- A. Dealing with excessive bacteria and/or endotoxin units in purified water.
 - 1. disinfecting water treatment systems to minimize bacterial growth and biofilm formation
 - 2. making sure of effective micro-organism kill within the water system
 - a. recognizing the limitations of germicides
 - 3. selecting a laboratory that understands the requirements for testing various dialysis samples