For Kidney Dialysis Patients

Just as chloramines must be removed from water used by fish, hemodialysis patients must eliminate chloramines from the water used by their artificial kidneys.

During hemodialysis, water comes in contact with the patient's blood across a permeable membrane. If this water contained chloramines, those substances would be drawn into the blood where they would seriously damage the ability of the red blood cells to carry oxygen. Eventually, the patient would become dangerously anemic.

Chlorine is similarly toxic to these patients and have always been removed from water used in this kidney treatment.

Two simple methods effectively remove chloramines: the addition of ascorbic acid, or the use of granular-activated carbon (GAC). The switch to chloramines as a disinfectant wasn't a decision made hastily. Metropolitan conducted extensive research. Experts in the field of water treatment considered all factors and concluded that chloramines now provide the best means of treating MWD's water.

And now it appears new revised federal drinking water standards are going to be even tougher. In anticipation, Metropolitan has been studying other ways to treat drinking water - ways that would reduce the levels of potentially harmful disinfection byproducts. The district has looked at granular-activated carbon (GAC) and found the cost to consumers would be extremely high. More importantly, GAC is limited in its ability to prevent THM formation and it presents environmental problems associated with air pollution.

Met's current focus is on a combination of ozone and hydrogen peroxide called PER-OXONE. Up to now, its results in laboratory tests and small-scale treatment studies have been promising. Not only has PEROXONE reduced THM levels lower than GAC filtration, but it's also a lot less expensive.

So regardless of whether PEROXONE is the next step, the protection of public health will remain paramount at Metropolitan.

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