

These proposed changes would go into effect July 22, 1992. Antiseptic handwashes and chlorhexidine gluconate (marketed for professional or hospital use as a first aid solution) were not addressed in this monograph, as the FDA felt they were not OTC topical first aid products. They will be the topics of future monographs.

Diseases Storm Through Iraq

As a result of the Gulf War, Iraq water purification plants, sewage disposal plants, and power systems sustained heavy bombing, and infectious diseases are increasing because of water system contamination, according to Michael Viola, MD, from State University of New York, Stony Brook, New York.

"Children seem to be suffering the most," said Viola, who also is the codirector of Medicine for Peace.

A Medicine for Peace team, which included Lewis Marshall, MD, from Washington, D.C., William Lipera, from Stony Brook, New York, Viola, and a Medicine for Peace film crew returned from Iraq on June 18, 1991.

"The diseases we saw most frequently and that are in epidemic proportions are chronic diarrhea in children, typhoid fever, meningitis, and viral hepatitis. Cholera cases also are more frequent than in the past. We're starting to see cases of polio, measles, and mumps in a group of children who were not vaccinated because of the war and because there are no vaccines in Iraq right now," Viola said.

These diseases were better controlled a year ago, he added.

The crippled state of the healthcare system is ailing as rapidly as the people it serves. Because of the medical embargo by UN sanctions, hospitals are running out of antibiotics. They already have run out of vaccines and most other medicines.

To make matters worse, most of the equipment in hospitals is now in disrepair because spare parts also are embargoed. "The problem is we have all this infectious disease, and there is no way to take care of it because the hospitals are barely functional," Viola said.

"Individual care is being seriously jeopardized. There are physicians who do not have antibiotics or syringes. There are people using syringes over again; they have all been boycotted. When we were there it was 120° in the afternoon. In the wards, it was 110° because freon (used in air conditioners) has been embargoed.

"We witnessed the closing of the major pediatric hospital of Baghdad University. The whole system is collapsing. The medical care system there, which at

one time was very good, is completely incapable of taking care of the present medical crisis," said Viola.

A lack of infant formula also is leading to diseases from malnutrition.

"There has been no formula that has come into the country since August 2, 1990, with the exception of a very small amount that was sent by humanitarian organizations," said Viola.

Not only is the shortage of infant formula a problem, but the children are suffering with chronic diarrhea and cannot tolerate breast milk.

"They become lactose intolerant," Viola explained, "so they need a modified formula, which you could get in any drug store in this country but that has been embargoed in Iraq, so the kids are starving to death there."

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Dental Amalgam Fillings May Increase Antibiotic Resistance

The release of mercury from dental amalgam fillings increases the incidence of mercury resistance and antibiotic resistance among the common bacteria that inhabit the mouth and intestine, according to Anne O. Summers, MD, from The University of Georgia, Athens, Georgia.

"Within two weeks after the installation of amalgam fillings in each of four monkeys, a large proportion of their oral and intestinal bacteria had become resistant to mercury, and 80% of these bacteria were also resistant to one or more antibiotics," said Summers.

"These are controlled, laboratory experiments," Summers cautioned, "and further investigation is needed to determine whether amalgam fillings cause the high incidence of mercury-resistant bacteria that can occur among the intestinal bacteria of humans."

It was once believed that mercury was not released from dental amalgam, she noted, "but it is now well documented that these fillings are the major source of mercury exposure for humans, amounting typically to 10 µg per day."

For comparison, only about 0.6 µg is available from the food people consume daily, she said.

In the initial study reported, bacterial samples were obtained from two monkeys during the ten days before and for 30 days after the installation of the amalgam fillings. The monkeys excreted about 300 µg per day of mercury in their feces and were found to have high levels of mercury in their kidneys, liver, and pituitary glands.

In the subsequent five-month study with a second

pair of monkeys, samples were taken prior to amalgam installation, during the two months in which the amalgams were in place and for two months after the amalgams had been replaced with composite resin fillings. In both studies, mercury-resistant bacteria increased when amalgam fillings were installed; in the second study the proportion of mercury-resistant bacteria declined after the amalgam fillings were removed.

The mercury-resistant bacteria recovered from the monkeys also were resistant to antibiotics such as ampicillin, chloramphenicol, tetracycline, streptomycin, erythromycin, and kanamycin.

"Since distinct genes for mercury resistance and for antibiotic resistance are often carried by movable genetic agents called plasmids," Summers said, "it was not surprising to find that 30% of the multi-resistant bacteria examined could transfer their resistance genes to antibiotic-sensitive bacteria.

"In order to discover whether dental amalgams foster the same changes in the common bacteria of humans, a simple epidemiologic survey of antibiotic resistance in people with amalgam fillings would not be adequate, since many people also might have

recently taken an antibiotic," she said. "A preferable way to do the study would be to examine the changes in the common bacteria of people who receive their first amalgam fillings."

From *Infectious Diseases in Children*. August 1991;4:21.

Polio Vaccine Choices

There currently are two different types of polio vaccines that are recommended for use under different circumstances. Most children receive the oral polio vaccine (live virus) as recommended by the American Academy of Pediatrics and the US Public Health Service's Advisory Committee on Immunization Practices. There are many children, however, for whom an enhanced, inactivated polio vaccine (E-IPV) is recommended. The following are indications for receiving E-IPV: the child is immunocompromised; the child has had a recent blood transfusion; the child has received radiation or chemotherapy for cancer; or the child has received a transplant.