



Bulletin No. 11

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## Day Care Centers and the Spread of Enteric Disease

Day care centers bring together large groups of pre-school children in a setting that provides a fertile environment for the spread of communicable diseases and especially enterically transmitted infections. Outbreaks of hepatitis A, shigellosis, salmonellosis, giardiasis, and viral gastroenteritis have been increasingly reported to have occurred in day care centers in recent years. In addition to the morbidity to the children affected in these outbreaks, infection has often spread to the adults who take care of these children both within the center and at home.

Within the past six months numerous outbreaks of enteric disease have occurred in Alaska in day care centers or in baby sitting co-ops and have affected large numbers of children and adults. Day care center or baby sitting co-op outbreaks of giardia have occurred in Juneau and Anchorage; outbreaks of salmonella have occurred in Anchorage; and an outbreak of shigella occurred in a day care center in Fairbanks. Characteristically, in all of these outbreaks disease spread from the children attending the day care center to day care center employees and to the parents and guardians of the children. Of great concern is the often seen occurrence of asymptomatic illness in children attending the day care center which results in prolonged periods of disease spread before epidemics are recognized.

Several factors have been shown to be associated with increased risk of outbreaks of enteric disease associated with day care:

1. Centers accepting infants less than three years of age.
2. Centers open for longer than 15 hours a day.
3. Centers accepting more than an enrollment of 50 children.
4. Centers that operate for a profit.
5. Centers accepting drop-ins.

It is obvious that enteric transmission is related to spread by the fecal-oral route among young, non-toilet trained children who have not yet learned good personal hygiene. Transmission is facilitated by the close contact these children have with one another and with the staff of the day care center. Organisms can be spread on the hands of children and personnel, and hand washing after toilet activities and diaper changing has been recommended to prevent spread of enteric infections in day care centers. Recently a study published in the American Journal of Epidemiology\* proved the effectiveness of compulsive hand washing in preventing diarrhea and enteric spread of disease in day care centers.

Essential to an effective program to interrupt enteric disease transmission is an adequate handwashing program. Employees must wash their hands before handling food, after arriving at the center, and after helping the child use the toilet or using the toilet themselves. Employees need to wash the hands of children after the child uses the toilet, after diapering, and before the child eats. In addition, children using the toilet should be supervised by the staff to ensure that the children do not put their hands in their mouths until after the washing of hands takes place. Meticulous handwashing is the most effective means of reducing the risk of epidemic enteric transmission in the day care center setting.

Physicians and other health care providers should routinely question all adults who develop hepatitis A, giardia, salmonella, and shigella about the presence of children in the household; and if children are present, whether or not they attend day care centers. Report all such patients to the Section of Communicable Disease Control, 272-7534, Zenith 1700.

\*Black, Robert E. et al Handwashing to prevent diarrhea in day care centers, Am. J. Epidemiol., 113:445-451. 1981.