

# Excluding Sick Child-Care Workers



*A 2010 outbreak of E. coli infected 60% of children and staff at a Colorado child-care center. Health authorities insisted on a strict policy of excluding sick individuals, which reduced the spread of disease.*

## Public Health Reasons

The immune system of children under 24 months is not fully developed, making them particularly vulnerable to pathogens that cause gastrointestinal illnesses. In addition, the infectious doses (minimum amount of infectious agent required to cause illness) for some pathogens in a susceptible host are quite low. For example, an infectious dose of human norovirus is estimated to be as low as 10 to 100 viral particles. In addition, pathogens can survive on environmental surfaces or human hands long enough for transmission to other susceptible hosts. The transmission of pathogens to children can happen in many ways, including while they are interacting with child-care workers.

It is necessary to exclude child-care workers who are symptomatic with diarrhea, vomiting, jaundice, or suffering from a disease likely to be transmitted through food or person-to-person contact. Sometimes a child-care worker might experience vomiting or diarrhea symptoms from a non-infectious condition, such as Crohn's disease or “morning sickness” during early stages of a pregnancy. In these instances, the worker may remain working in a full capacity as long as they can prove that the symptom is from a noninfectious condition. The child-care worker can substantiate this by providing medical documentation proving that the symptom is from a noninfectious condition.

Because of the high infectivity (ability to invade and multiply) and/or virulence (ability to produce severe disease) of *Salmonella* Typhi and hepatitis A virus, a child-care worker diagnosed with an active case of an illness caused by either of these two pathogens must be excluded from the child-care center. The exclusion is based on the high infectivity and/or the severe medical consequences to individuals infected with these organisms. A child-care worker diagnosed with an active case of illness caused by noroviruses, *Shigella* spp., *Escherichia coli* O157:H7, other enterohemorrhagic *E. coli* (EHEC), or shiga toxin-producing *E. coli* (STEC) must be excluded if exhibiting symptoms of vomiting and diarrhea, but can be allowed to work as the level of risk of pathogen transmission decreases.

Child-care workers diagnosed with typhoid fever (caused by a *Salmonella* Typhi infection) must always be excluded, even if they have no gastrointestinal symptoms because these symptoms are not typically exhibited with typhoid fever. Outbreaks of foodborne illness involving *Salmonella*

Typhi have been traced to asymptomatic food employees who have transmitted the pathogen to food, causing illness. The high virulence combined with the extremely high infectivity of *S. Typhi* warrant exclusion from the child-care center until the employee has been cleared by a physician or has completed antibiotic therapy.

Child-care workers infected with *E. coli* O157:H7, other EHEC, or STEC must also be excluded. This is because of the documented ease of transmission from person-to-person in a child-care setting and because characteristics of foodborne outbreaks suggest a low infectious dose and the potential for the organism to be transmitted through food contaminated by soiled hands. The severity and consequences of infection, including hemolytic uremic syndrome (HUS), associated with Shiga toxin-producing *E. coli* warrant the institution of rigorous disease interventions.

Asymptomatic shedders are child-care workers who do not exhibit the symptoms of gastrointestinal illness, but who are identified through diagnosis or laboratory confirmation of their stools. The risk that child-care workers who are asymptomatic shedders will transmit a communicable disease varies depending upon the hygienic habits of the worker, if preparing food and how it is prepared, the susceptibility of the population served, and the infectivity of the organism. Asymptomatic child-care workers diagnosed with noroviruses, *Shigella* spp., *E. coli* O157:H7, other EHEC, or STEC may not work with food until they have medical documentation that they are no longer infected with the disease.

## Practices

On a daily basis, the administrator of the facility or head caregiver/teacher must observe staff members, substitutes, and volunteers for obvious signs of illness (such as recent diarrhea, vomiting, or sore throat). They must instruct staff members, substitutes, and volunteers to report immediately to their supervisor any illnesses they experience at the facility or elsewhere, especially those that might affect the health of others in the facility. Finally, staff members, substitutes, and volunteers who are ill must go home.

### Exclusion Of Sick Employees

#### Exclude an employee with:

- vomiting
- diarrhea
- jaundice
- sore throat with fever

#### Exclude an employee who is diagnosed with:

- norovirus
- hepatitis A virus
- *Shigella* spp.
- enterohemorrhagic or shiga toxin-producing *Escherichia coli*
- *Salmonella* Typhi

### When Sick Employees Can Return To Work

- Norovirus – Employees can return after 48 hours without any symptoms or with written medical documentation that the employee is free of the norovirus infection.
- *Shigella* spp. – Employees can return after seven days without any symptoms or with written medical documentation that the employee is free of *Shigella* spp. infection based on test results showing two consecutive negative stool samples no earlier than 48 hours after stopping antibiotic use and at least 24 hours apart.
- Enterohemorrhagic or shiga toxin-producing *E. coli* – Employees can return after seven days without any symptoms or with written medical documentation that the employee is free of infection based on test results that show two consecutive negative stool samples no earlier than 48 hours after stopping antibiotic use and at least 24 hours apart.
- Hepatitis A virus – Employees can return if they have been jaundiced for more than 7 days, have had symptoms other than jaundice for more than 14 days, or with written medical documentation that the employee is free of infection.
- *Salmonella* Typhi – Employees can return with written medical documentation that they are free from *S. Typhi* infection.

# References

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## Authors and Acknowledgements

**AUTHORS:** Cortney Miller, MS, Angela Fraser, PhD, Roman Sturgis, MFA (editor), Xi Chen, MS, Anna Saunders. Department of Food, Nutrition, and Packaging Sciences, Clemson University, Clemson, SC 29634

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