

**ENSURING CHILDREN'S HEALTH THROUGH FOOD SAFETY SANITATION
REGULATIONS AND SOME DISEASES INCURRED IN NON-COMPLIANT
CONDITIONS**

G. A. Toshmatova

Tashkent Medical Academy

Senior teacher of the "Environmental hygiene" department

Gadayeva Mashhura Shuhrat qizi

Student of Toshket Medical Academy

Annotation: This article highlights the importance of sanitation and hygiene regulations in children's nutrition, as well as in the food provided to them and employees, along with certain significant diseases that may arise in situations where these regulations are not followed.

Keywords: Microorganisms, HACCP system, bacterial hazard zone, salmonellosis, *Staphylococcus aureus*, *C. perfringens*.

Parents and caregivers should be well-informed about how quickly diseases spread among children through food. Foodborne illnesses pose a widespread risk in child nutrition. Even food products with low quality can contribute to an increase in illnesses among children.

Typically, we tend to think of food quality as something to be concerned about only during certain seasons, but food-related illnesses can occur at any time of the year. Harmful viruses and bacteria that cause illness can spread quickly among children through shared toys, food, household items, or contact with sick or recently sick children. Microorganisms, including bacteria, viruses, fungi, and parasites, can contaminate both raw and cooked food products.

Due to the invisibility of microorganisms (organisms too small to be seen with the naked eye), all food products should be handled with caution. Some microorganisms can lead to food spoilage and even to the extent of being inedible. We usually identify this from the appearance or smell of the product. However, we can't always detect it. Many microorganisms that cause foodborne illnesses (pathogens) do not change the taste or appearance of the food. Therefore, the responsibility for food safety in childcare facilities falls not only on food service staff but also on everyone involved. Even educators should be aware of food safety storage practices.

To protect children from illnesses transmitted through food, the HACCP system has been developed. HACCP is a management system that analyzes and controls biological, chemical, and physical hazards from production, procurement, and preparation to the distribution and consumption of finished products.

The bacterial hazard zone, known to aid bacterial growth, has been identified by scientists to be between 40-140 degrees Fahrenheit. If food is kept within this critical temperature range, it creates favorable conditions for bacteria and microbes. The table below provides temperature guidelines for certain products:

<u>Boiling Point</u>	212°
<u>Dishwasher Rinse</u>	180°
<u>Serve Hot Food</u>	140° - 180°
<u>Minimum for Hot Foods</u>	140°
<u>Dry Storage</u>	50° - 75°
<u>Maximum for Cold Foods</u>	40°
<u>Freezer Temperature</u>	0°

Food safety and quality depend on the correct storage, preparation, and staff hygiene. Here are some guidelines for preparing and storing products:

- All products to be used must be thoroughly checked and washed before use.
- Frozen food should be delivered and stored at temperatures of 0°F or below.
- All equipment used for raw or cooked meat, fish, or poultry should be thoroughly sanitized.
- Products that spoil quickly must be kept in the danger zone (40°F - 140°F) for as little time as possible. Hot foods must be kept hot, and cold foods must be kept cold.
- Use a temperature between 165°F and 170°F when cooking prepared foods.
- Food should be cooled before being put in the refrigerator.
- Food that is likely to be spoiled should never be given to children. If spoiled, it should be discarded immediately.
- During preparation, storage, and service, food products should be protected from cross-contamination.

These rules also apply to preparing staff:

- Hands should be washed with soap and water. Hands must be washed after handling raw meat and poultry, after using the toilet, coughing, sneezing, or using handkerchiefs, and after using the restroom.
- All work surfaces must be kept clean and orderly.
- The workplace must be cleaned, and all used items must be thoroughly sanitized.
- Clean utensils should be used during food preparation.
- Use a clean spoon to taste food.
- Nails should be trimmed and kept clean.
- Sick staff should not prepare food or come into contact with food.

In addition, parents, responsible staff, also need to educate children about sanitation and hygiene rules. It is essential always to pay attention to the cleanliness of their clothes, hands, and even their toys should not be overlooked in terms of cleanliness.

If the conditions mentioned above are not met, children are at risk of contracting the following diseases:

Salmonellosis is a widespread bacterial infection affecting the intestinal tract. Salmonella bacteria typically reside in the intestines of animals and humans and are expelled through feces. People usually get infected through contaminated water or food. Salmonellosis usually occurs as a result of consuming raw or undercooked meat, poultry, eggs, or unpasteurized dairy products. The onset of symptoms can vary from 6 hours to 6 days after exposure. Symptoms of salmonellosis may include diarrhea, abdominal cramps, nausea, vomiting, fever, chills, headache, and blood in the stool. Symptoms typically last for several days to a week.

Toxins produced by Staphylococcus aureus bacteria cause food poisoning. Toxins are found in contaminated foods. Symptoms of food poisoning by Staphylococcus aureus typically start within 30 minutes to 8 hours after consuming contaminated food. Among the symptoms are abdominal cramps, diarrhea, and sometimes nausea and vomiting. Severe dehydration and a sharp drop in electrolyte balance leading to hypotension (shock) are possible. In some cases, it can even be fatal, especially in young children.

C. perfringens food poisoning is usually a mild, self-limiting clostridial infection. C. perfringens is widespread in soil, dust, air, and water. Contaminated meat has caused many outbreaks. C. perfringens spores can survive cooking, and under certain conditions, such as being held at room temperature or even 140°F (60°C) for a specific period, numerous bacteria can grow. The disease typically occurs in commercial kitchens, less frequently in homes.

When C. perfringens enters the intestinal tract, it produces an enterotoxin that affects the small intestine. Only type A of C. perfringens causes food poisoning. Acute gastroenteritis is the most common symptom, typically starting 6-24 hours after consuming contaminated food. The most frequent symptoms are diarrhea and abdominal cramps, sometimes accompanied by nausea and vomiting. Symptoms usually resolve within 24 hours, with severe cases leading to hospitalization and occasionally death.

In conclusion, as the climate undergoes sharp changes from year to year, and as bacteria and infections spread to new locations, young organisms are increasingly susceptible to rapid illness. To prevent this, simple and strict hygiene requirements have been developed. Failure to adhere to them can lead to the proliferation of infections such as Salmonella enteritidis, Staphylococcus aureus, and C. perfringens, resulting in severe illnesses.

List of used references

1. Баранов А.А., Корнеева И.Т., Макарова С.Г. и др. Нутритивная поддержка и лечебно-восстановительные мероприятия в детско-юношеском спорте. — М.: Педиатр; 2015. — 163 с.
2. Гольберг Н.Д., Дондуковская Р.Р. Питание юных спортсменов. — М.: Советский спорт; 2007. — 240 с.
3. Макарова С.Г., Боровик Т.Э., Чумбадзе Т.Р. и др. Питание детей-спортсменов. Взгляд с позиций теории адекватного питания // Физкультура в профилактике, лечении, реабилитации. — 2010. — № 1 — С. 21–25.

4. Макарова С.Г., Боровик Т.Э., Коденцова В.М. и др. Питание детей-спортсменов. Современные подходы / Сб.: Питание основа образа жизни и здоровья в условиях Севера. — Якутск;2012. — С. 165–169.
5. Поляев Б.А., Макарова Г.А., Цедов Р.А. и др. Питание спортсменов: отечественный и зарубежный опыт. — М.: ФМБА;2010. — 98 с.
6. Удалов Ю.Ф. Основы питания спортсменов. — Малаховка:МГАФК; 1997.
7. Шатерников В.А., Волгарев М.Н., Коровников К.А. Физическая активность и потребность человека в энергии и пищевых веществах // Теория и практика физической культуры. — 1982. — № 5 — С. 22–26.
8. Phillips SM. Protein requirements and supplementation instrength sports. Nutrition. 2004;20(7–8):689–695. doi: 10.1016/j.nut.2004.04.009.
9. Tipton KD, Witard OC. Protein requirements and recommendationsfor athletes: relevance of ivory tower arguments forpractical recommendations. Clin Sports Med. 2007;26(1):17–36.doi: 10.1016/j.csm.2006.11.003.