Big 6 Pathogens

The FDA lists over 40 types of bacteria, viruses, parasites, and fungi that contaminate foods and cause illness, but they have singled out 6 that are the most contagious and cause the most severe symptoms. They are E. coli, Hepatitis A, Nontyphoidal Salmonella, Norovirus, Shigella, and Salmonella Typhi.

How They’re Contracted

- **E. coli**: E. coli is typically spread by eating contaminated foods such as raw vegetables and fruits, unpasteurized dairy products, or undercooked meats. It can also be contracted from touching the fecal matter of another infected person.

- **Hepatitis A**: Hepatitis A is spread through the fecal-oral route either from person to person or through ingesting contaminated food or water.

- **Nontyphoidal Salmonella**: Nontyphoidal Salmonella is typically caused by eating contaminated food of animal origin, such as eggs, meat, poultry, or milk. Raw vegetables may be contaminated if they come into contact with animal feces. Person-to-person transmission is also possible through the fecal-oral route.

- **Norovirus**: Norovirus is highly contagious. It can be spread from contact with an infected person, touching an infected surface, or ingesting contaminated food or water.

- **Shigella**: Shigella is typically spread from person-to-person contact through the fecal-oral route. It is more common in young children.

- **Salmonella Typhi**: Salmonella Typhi is spread from person-to-person through the fecal oral route, as well as drinking infected water.

Symptoms

- **E. coli**: Severe and sometimes bloody diarrhea, abdominal pain, and vomiting.

- **Hepatitis A**: Symptoms and severity vary. They include fever, malaise, diarrhea, and jaundice.

- **Nontyphoidal Salmonella**: Symptoms are typically mild and include acute onset fever, diarrhea, nausea, and occasional vomiting.

- **Norovirus**: Stomach pain, nausea, vomiting. Occasionally fever, muscle pain, or malaise are present.

- **Shigella**: Fever, stomach cramps, and diarrhea, which is often bloody.

- **Salmonella Typhi**: Sudden fever, headache, nausea. Infected persons may also experience splenic enlargement, constipation, or diarrhea.

Prevention

Many of the "Big 6" can be prevented by washing hands frequently and taking care to ensure all food has been thoroughly washed, pasteurized, or cooked to the correct temperature. In the restaurant setting, make sure workers wear gloves when appropriate, avoid cross-contamination, and are excused from food preparation if they have an active infection. The best prevention against Hepatitis A is vaccination.