#### What is Clostridium perfringens?

It is a toxin-producing bacteria frequently found in raw meat (beef, pork, poultry and fish). Some toxic spores survive the initial cooking process and are not completely destroyed. Foods prepared or held under improper conditions permit toxin-producing spores to multiply and, once eaten, the toxins make us sick.

#### What are the symptoms of *Clostridium perfringens*?

The food poisoning is characterized by sudden onset of moderate-to-severe cramping, gassy pain and watery diarrhea. Vomiting and fever are uncommon. It is generally a mild gastrointestinal disease of short duration, 1 day or less, and rarely fatal in healthy people.

#### How soon do symptoms appear?

The symptoms appear from 6 - 24 hours after having eaten the implicated food. On the average the symptoms appear within 10 - 12 hours.

# How is *Clostridium perfringens* spread?

The toxin comes from contaminated foods that are not adequately cooked, improperly reheated, or improperly cooled or stored, and then eaten. Almost all *Clostridium perfringens* outbreaks are associated with inadequately cooled or heated/reheated meats (usually stews, ground meats, meat pies, and gravies made of beef, turkey, or chicken).

## Who gets Clostridium perfringens?

Anyone can get this illness from foods that have not been properly cooked, cooled, or reheated.

## For how long is a person infectious?

Since this illness is caused by a toxin and is not transmitted person-to-person, ill people are not infectious.

#### What is the treatment for this illness?

Drinking more fluids for rehydration or occasionally, intravenous fluid and electrolyte replacement may be indicated for persons with severe dehydration. Antibiotics are not indicated.

# Do infected people need to be excluded from school, work, or child care? No.

#### What can be done to help prevent the spread of *Clostridium perfringens*?

Educate all food handlers (home cooks, community meal preparation cooks, and commercial restaurant cooks) on the risks of heating, cooling, and reheating large-scale cooking projects, especially meat dishes. Serve hot foods while still hot from initial cooking. Foods should never be held at room temperature to cool, but should be refrigerated after removal from warming devices or serving tables. Serve meat dishes hot, as soon as they are cooked, or cool them rapidly in properly designed chiller and refrigerate until serving time; reheat rapidly if necessary (to an internal temperature of at least  $70^{\circ}\text{C}/158^{\circ}\text{F}$ , preferably  $\geq 75^{\circ}\text{C}/167^{\circ}\text{F}$ ). Do not partially cook meat and poultry one day and reheat the next, unless it can be stored at a safe temperature. To chill quickly, divide large batches or cuts of meat or foods into small portions and chill in shallow containers not more than 4-inches deep, and place in a rapid chiller.