

What is *Kingella kingae*?

Kingella kingae is a type of bacteria that can cause infection in children and adults. Outbreaks of illness caused by *Kingella kingae* infections are rare but can occur in child care settings.¹ *Kingella kingae* is the primary cause of skeletal infections in children age three and younger.

Who is at risk for *Kingella kingae*?

People can carry *Kingella kingae* in their respiratory secretions and not be infected, this is called colonization. Invasive infection is rare and usually affects children less than four years.² Invasive means the infection is more serious and in a place in the body that is normally sterile, such as blood, spinal fluid, bone, or joint fluid. Rarely, older children and adults, especially those who have certain chronic conditions that make them more susceptible to infection, may experience illness due to *Kingella kingae* infection.²

What are the symptoms of *Kingella kingae*?

Most people do not have symptoms or have mild illness. People with mild illness may have a runny nose, sore throat, or a sore mouth. Invasive *Kingella kingae* infections can result in bacteremia (blood infection), septic arthritis (infection of the joints), osteomyelitis (infection of the bone), endocarditis (infection of the lining of the heart), or meningitis (inflammation of the membranes surrounding the brain or spinal cord).³

How soon do symptoms appear?

It is not known how long it takes for symptoms to develop after someone is exposed to *Kingella kingae*. During outbreaks in child care centers, invasive illness in children usually develops within a one-month time period.¹

How is *Kingella kingae* spread?

Kingella kingae is spread person-to-person through respiratory secretions and saliva. Transmission is more likely in child care settings because young children are more likely to harbor the bacteria.

When and for how long is a person able to spread the disease?

People can spread *Kingella kingae* if the bacteria are present in their respiratory secretions. Children younger than four years are more likely to carry the bacteria without symptoms (colonized) and have higher numbers of bacteria than older children and adults.² Older children and adults are usually colonized for only a short period of time.

How is a person diagnosed?

Laboratory tests can be used to diagnose infections. Consult with your health care professional.

What is the treatment?

Your healthcare provider can prescribe antibiotic medications to treat the infection. During outbreaks in child care centers, antibiotics may be recommended to reduce the number of children who have the bacteria in their throats but do not have any illness. Studies have shown that this can stop subsequent invasive infections.³

Does past infection make a person immune?

Most older children and adults will have a good immune response when exposed to the bacteria, and won't develop infection or will only have short periods of colonization.²

Should children or others be excluded from child care, school, work or other activities if they have *Kingella kingae*?

Children with *Kingella kingae* invasive infection will likely be too sick to attend child care. Children can return once they are treated and are well enough to participate in regular activities. Children and adults who are colonized do not need to be excluded.

What can be done to prevent the spread of *Kingella kingae*?

Good hand washing and respiratory etiquette are important. Cleaning of toys, tables, and other surfaces that could be contaminated with respiratory secretions can help prevent the spread of *Kingella kingae* and other germs. During outbreaks in child care centers, antibiotics can be used to reduce the number of children who are colonized with *Kingella kingae* and prevent additional infections.¹ If prescribed antibiotics, take them as directed.

Additional Information:

Additional information is available at www.ndhealth.gov/disease or by calling the North Dakota Department of Health at 800-472-2180.

Resources:

¹Yagupsky, P (2014). Emerging Infectious Diseases. Outbreaks of *Kingella kingae* Infections in Daycare Facilities. 2014; 20:5 746-753.

²Yagupsky P (2015). *Kingella kingae*: Carriage, Transmission, and Disease. Clinical Microbiology Reviews. 2015;28(1):54-79. doi:10.1128/CMR.00028-14.

³Yagupsky, P, et. Al (2016). The Journal of Pediatrics. Outbreaks of Invasive *Kingella kingae* Infections in Daycare Facilities: Approach to Investigation and Management. 2015; 128: 14-20.

American Academy of Pediatrics. [*Kingella kingae* Infections]. In: Kimberlin DW, Brady MT, Jackson MA, Long SS, eds. *Red Book: 2018 Report of the Committee on Infectious Diseases*. 31st ed. Itasca, IL: American Academy of Pediatrics; 2018: [497 - 498].