

## Fifth Disease (Human Parvovirus B19)

### What is fifth disease?

Common viral infection with rash occurring 1 to 3 weeks after infection

### What are the signs or symptoms?

- Fever.
- Muscle aches.
- May cause joint pain (uncommon in children, but more common in adults).
- Headache.
- Red “slapped-cheek” rash 1 to 3 weeks after these signs or symptoms. This characteristic rash is followed shortly by a lace-like appearing rash proceeding from trunk to arms, buttocks, and thighs.
  - ~ Rash may disappear and reappear after exposure to heat for weeks; once rash appears, the child no longer feels ill.
- Individuals can be infected and infectious without ever having any signs or symptoms.
- Disease can be severe in people with sickle cell disease or certain blood disorders as well as those with compromised immune systems.

### What are the incubation and contagious periods?

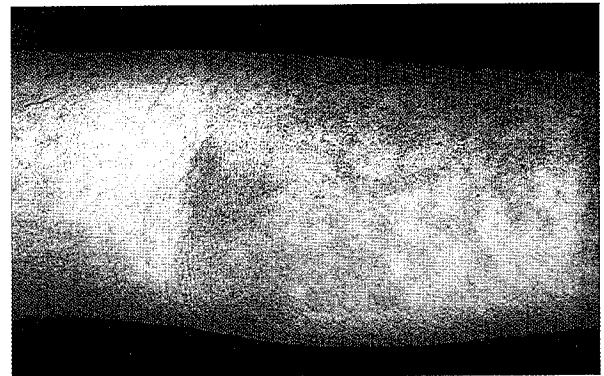
- Incubation period: 4 to 14 days, but can be as long as 21 days
- Contagious period: Until the rash appears

### How is it spread?

- Direct contact with respiratory secretions from infected persons before the rash appears. (Outbreaks occur in late winter and early spring.)
- Exposure to blood or blood products (very rare).
- A baby can be infected before birth from infection of a pregnant mother (rare).

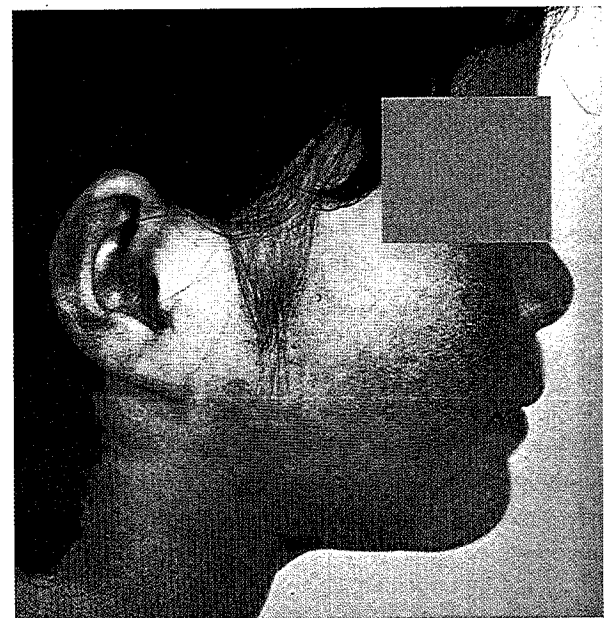
### How do you control it?

- Use good hand-washing technique at all the times listed in “When to Wash Hands” on page 25.
- Sanitation of contaminated items.
- Disposal of tissues containing nose and throat secretions.



Child's arm with lace-like appearing rash

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Parvovirus B19 infection (erythema infectiosum, fifth disease) with typical facial erythema, commonly referred to as the “slapped cheek sign”

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### What are the roles of the caregiver/teacher and the family?

- Report the infection to staff designated by the child care program or school for decision making and action related to care of ill children. That person, in turn, alerts possibly exposed family members and staff to watch for symptoms.
- Susceptible pregnant caregivers/teachers and pregnant mothers of children in child care and school settings should carefully wash their hands to reduce their risk of this infection and infection from other viruses that could harm a fetus.

► *continued*

### **Fifth Disease (Human Parvovirus B19), continued**

- Teach children and caregivers/teachers to cover their noses and mouths with a disposable facial tissue when sneezing or coughing, if possible, or a shoulder if no facial tissue is available in time (“give your cough or sneeze a cold shoulder”). Teach everyone to remove any soil, change or cover contaminated clothing, and wash hands right after using facial tissues or having contact with mucus to prevent the spread of disease by contaminated hands.
- Dispose of facial tissues that contain nasal secretions after each use.

#### **Exclude from group setting?**

##### **No, unless**

- The child has an underlying blood disorder, such as sickle cell disease, or a compromised immune system. Children with these conditions may shed large amounts of virus and may appear ill.
- The child is unable to participate and staff determine that they cannot care for the child without compromising their ability to care for the health and safety of the other children in the group.
- The child meets other exclusion criteria, such as fever with behavior change (see “Conditions Requiring Temporary Exclusion” on page 41).

#### **Readmit to group setting?**

When exclusion criteria are resolved, the child is able to participate, and staff determine that they can care for the child without compromising their ability to care for the health and safety of the other children in the group

#### **Comments**

Pregnant family members and caregivers/teachers who expect to have contact with children in group care settings should consult with their health professionals about their immune status and risk of infection. Women who are, or may become, pregnant and who work with children in group care settings can have a blood test to see if they are already immune to this virus. A positive test result may alleviate concern about the risk to their fetuses. Following is a sample note that staff who are of childbearing age might take to their health care professionals:

Dear Health Care Professional:

Your patient works in a setting where she has contact with children in groups. Human parvovirus B19 and cytomegalovirus (CMV) occur commonly and are often asymptomatic among young children. Exposure of women who lack immunity to human parvovirus B19 and cytomegalovirus during pregnancy poses some risk to their fetuses. Please discuss with your patient her childbearing intentions and whether serologic testing is appropriate to determine her immune status to these 2 viruses.