Evaluating Possible Infections in Early Infancy

The schedule recommended by the US Centers for Disease Control and Prevention for most childhood immunizations begins when infants are 6 to 8 weeks old. Infants younger than 2 months are considered at high risk of developing serious infections from various bacteria and many viruses. Because their immune systems are immature, infants may not appear very ill even when they have a serious bacterial infection, and missing such an infection could have severe consequences. Infants have a poor ability to develop fever in response to infection. Therefore, when an infant younger than 2 months develops any fever (rectal temperature of 100.4°F or higher), physicians conduct a thorough evaluation to look for any bacterial infections.

**EVALUATION**

- A complete physical examination is performed.
- The physician likely will also obtain samples of blood, urine, and **cerebrospinal fluid** (CSF; spinal fluid that surrounds the brain and spinal cord) because a fever in a young infant can be a sign of an infection in the blood or urinary tract or **meningitis** (infection of tissue surrounding the brain). These samples are studied for the number of **white blood cells** (infection-fighting cells) and other markers of infection.
- The samples are also sent to the microbiology laboratory where they are tested for growth of any bacteria.
- The infant’s nostrils may also be swabbed to find out if a viral infection is the cause of the fever.
- It is very important to inform the physician if the child has been given any medication to reduce fever, if anyone else at home has developed similar symptoms, or if the infant has been in recent contact with any travelers.

**TREATMENT**

While the physician awaits results, the infant may be admitted to the hospital and treated with antibiotics that target the bacteria most likely to cause an infection in infants. Commonly used antibiotics include ampicillin and ceftriaxone or cefotaxime. Sometimes an injection of antibiotics is given in the muscle and the child is sent home for close observation. The cultures from blood, urine, or CSF are monitored for 48 hours; if they remain free of any bacterial growth, the antibiotics are stopped and if the infant was hospitalized, he or she is sent home. However, if the cultures grow any bacteria, the antibiotic regimen may be changed to one that targets the specific bacteria identified. The length of the treatment will vary depending on the severity of the infection.

**FURTHER EVALUATION**

If an infection is confirmed, physicians may recommend future studies to find out whether the infant is more likely to get infections such as urinary tract and kidney infections more often.

*FOR MORE INFORMATION*

- American Academy of Pediatrics
  Healthy Children
  www.healthychildren.org

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