

# Unlocking the Immune System

By Amy Bentley



**Neger Ashouri, M.D.**  
CHOC Pediatric Infectious  
Disease Specialist

Dr. Ashouri completed her residency at CHOC, followed by a year as chief resident. After completing a fellowship in pediatric infectious diseases at Children's Hospital of Los Angeles, she returned to CHOC. She is also a clinical instructor of Pediatrics at the UC Irvine School of Medicine.

Dr. Ashouri is involved in many research projects dealing with bloodstream infections and drug trials. She is also part of the Collaborative Antiviral Study Group. To further her research, Dr. Ashouri maintains an ongoing database of blood cultures and can frequently be found looking back through patient data and charts as she investigates how vaccines impact infections and specific risk factors for high-risk groups.

**EDUCATION:**  
St. George's University School of Medicine,  
Grenada, West Indies

**BOARD CERTIFICATIONS:**  
Pediatric Infectious Disease

## THE IMMUNE SYSTEM

"Our immune system is a series of cells, tissues and organs that, throughout our lifetime, protects us from different invading pathogens and keeps us healthy and able to resist many repeated infections," says Dr. Ashouri, a pediatric infectious disease specialist at CHOC. "When babies are infants, they get immune cells from mom through the placenta and breast milk, if they are breastfeeding. Over time, the baby's system becomes mature and can fight off infections. A healthy lifestyle that includes getting enough rest, low stress and a balanced diet plus exercise helps to strengthen the immune system in people of all ages."

## BOOSTING BABY'S IMMUNE SYSTEM

"Breastfeeding is probably one of the best ways to help support a baby's immune system when it's developing," explains Dr. Ashouri. "Getting babies the recommended vaccines at the scheduled times also helps to protect them from the different infections they are at risk for at that age. We recommend



that parents and children also get a flu shot each year and are up-to-date with their Tdap vaccine to protect kids from pertussis (whooping cough). The more people in the community who are vaccinated, the better it is for everyone. In pockets of areas where vaccine rates have fallen, there have been outbreaks of measles, whooping cough and other preventable diseases."

## KIDS AND COLDS

"Proper hand-washing is important to prevent the spread of colds and the flu virus and other types of infections. When kids can't wash their hands, they should use a hand sanitizer to kill germs. Getting kids vaccinated against the flu also prevents kids from getting the flu," Dr. Ashouri says. She adds, "Over time as the immune system recognizes certain viruses, it will get better at preventing infection, especially if the person has a balanced diet and good lifestyle. Taking vitamins won't hurt either but they don't replace a well-balanced diet."



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[choc.org/emergency](http://choc.org/emergency)



# 10

NUMBER OF INFANTS WHO DIED IN CALIFORNIA'S 2010 PERTUSSIS (WHOOPIING COUGH) OUTBREAK. IT WAS AT THAT TIME THE WORST OUTBREAK IN 60 YEARS. MORE THAN 9,000 CASES WERE REPORTED.

# 5 to 20

PERCENT OF THE U.S. POPULATION THAT GETS THE SEASONAL FLU (INFLUENZA) EACH YEAR



Experts in: Keeping Your Child Healthy [Learn more about using hand sanitizers at choc.org/health.](http://www.choc.org/health)

# 500,000

NUMBER OF CHILDREN HOSPITALIZED IN THE U.S. EACH YEAR WITH RESPIRATORY INFECTIONS