

# Optimizing the early years to ensure a lifetime of health

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Recent research has found that a dramatic dance between genes and experience shape the architecture of the developing brain, most profoundly during the first 1,000 days of life.

The Pediatrics for the 21st Century (Peds21) symposium, "Promoting Early Brain and Childhood Development: Building Brains, Forging Futures," on Friday, Oct. 25, at the American Academy of Pediatrics (AAP) National Conference and Exhibition in Orlando, brings together child development experts to discuss the latest research regarding the role of parents and caregivers and [early childhood](#) experiences in shaping future health.

"What's new is the science; we now know that early experiences alter the structure and function of the way your genes and brain work together, not just in childhood but throughout the lifespan," said Andrew Garner, MD, PhD, FAAP. "Unfortunately, today, toxic stress and early childhood adversity are quickly becoming a [public health](#) crisis."

Dr. Garner's presentation, "Toxic Stress and the Public Health Implications," at Peds21 focuses on the well-established associations between early [childhood adversity](#) and poor outcomes in adolescence and adulthood.

By 2030, 90 percent of disease in the U.S. will be due to non-communicable diseases caused by unhealthy lifestyles, including smoking, obesity and substance abuse, Dr. Garner said.

"These are transient ways of coping with stress. In the short term, they make us feel better. In the long term, they cause problems," he said.

"Childhood adversity and stress can be toxic, and they are causing biological maladaptations."

Also discussed during the half-day symposium are the role of parental and caregiver support, skills and stimulation in early [child development](#), including early literacy, and the potential effects of early childhood exposure to electronic media in brain development.

"We're technologizing children in a way that is unprecedented," said Dimitri Christakis, MD, FAAP, who will deliver a presentation on infant media usage. "Fast paced media can over stimulate the developing [brain](#), preconditioning it to expect high levels of input, and this can lead to decreased attentional capacity later in life.

"The typical preschool child today spent about 4.5 hours with screen media which represents 30 percent of his or her waking hours," he said.

"To not focus on what the implications of this are would be a huge disservice to the next generation."

Provided by American Academy of Pediatrics

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