

DIFFERENT STRATEGIES NEEDED TO PREVENT SUICIDE IN CHILDREN AND ADOLESCENTS**According to this study:**

- There are similarities and differences in the characteristics and precipitating factors associated with suicide in children and early adolescents.
- Both common and developmentally specific suicide prevention strategies are needed for children in these age groups.

Although rare among elementary school-age children, suicide is the 10th most common cause of death in this age group. Because little is known about the factors precipitating suicide in elementary school-age children, researchers compared the characteristics and circumstances of suicide in children in this age group with those among early adolescents. They also examined potential racial differences within the groups. The researchers reviewed National Violent Death Reporting System data from 2003 to 2012 regarding suicide decedents five to 14 years old. A total of 693 suicides in children—those five to 11 years old—and early adolescents—those 12 to 14 years old—were included in the analysis.

Compared with early adolescents, elementary school-age children who died by suicide were more commonly male; black; had experienced problems with family and friends; and died at home by hanging, strangulation, or suffocation. Children were also less likely than adolescents to leave a suicide note, be depressed, or experience boyfriend or girlfriend problems. Twenty-nine percent of both children and adolescent decedents had disclosed suicide intent to another person.

The researchers noted that the suicide rate among black children five to seven years old has increased

in recent years. They found that nearly 37% of elementary school-age children who died were black compared with nearly 12% of early adolescent decedents. The authors note that this supports their previous findings that suicide rates nearly doubled among black children from 1993–2002 to 2003–2012.

Among those with known mental health problems, children were more likely than early adolescents to have attention deficit disorder with or without hyperactivity and less likely to have depression or dysthymia. Black children and adolescents were more likely to die by hanging, strangulation, or suffocation, and black adolescents were less likely to have boyfriend or girlfriend problems or to leave a suicide note.

The findings highlight the need to educate pediatricians, primary care providers, families, school personnel, and peers on how to recognize and respond to the warning signs of suicide in children and adolescents, the authors conclude. They also suggest that suicide prevention strategies be tailored to meet both the collective and differential needs of children in these age groups.

Sheftall AH, et al. *Pediatrics* 2016;138(4): e20160436.

EARLY INTRODUCTION REDUCES RISK OF SOME FOOD ALLERGIES**According to this study:**

- Early introduction of eggs or peanuts to an infant's diet lowers her or his risk of developing allergies to these foods.
- Current infant diet guidelines that do not advise the early introduction of allergenic foods may need to be reconsidered.

Recent evidence suggests that the early introduction of allergenic foods may reduce the risk of developing peanut or other

allergies. Most infant diet guidelines, however, do not advise the early feeding of such foods. To determine whether the timing of the introduction of allergenic foods to the infant diet influences the risk of allergic or autoimmune disease, researchers conducted a systematic review and meta-analysis of 146 studies. They searched MEDLINE and other major databases for intervention trials and observational studies evaluating the relationship between the introduction of eggs, peanuts, fish, and other allergenic foods during the first year of life and the development of allergic or autoimmune disease at any age.

Moderate-certainty evidence from five trials showed that the introduction of eggs at four to six months of age was associated with a lower risk of egg allergy compared with the introduction of eggs later on. For a population with a 5.4% incidence of egg allergy, absolute risk reduction was 24 cases per 1,000 population. Similarly, moderate-certainty evidence from two trials showed that the introduction of peanuts at four to 11 months was associated with a lower risk of peanut allergy. For a population with a 2.5% incidence of peanut allergy, absolute risk reduction was 18 cases per 1,000 population.

The researchers found low-certainty evidence that the introduction of fish before six to 12 months was associated with reduced allergic rhinitis. Very low-certainty evidence showed that fish introduction before six to nine months was associated with reduced allergic sensitization. Interventional studies found no association between the timing of introducing cow's milk or other allergenic foods and the development of a food allergy or allergic sensitization. They also found no consistent evidence to support an association between the timing of gluten introduction and the development of celiac disease or type 1

diabetes, or between the timing of milk introduction and the development of type 1 diabetes.

The authors caution that certainty of evidence had to be downgraded because of variation and methodological problems in the studies reviewed. However, they suggest that current infant diet guidelines that do not advise the early introduction of allergenic foods may need to be reconsidered.

Ierodiakonou D, et al. *JAMA* 2016;316(11):1181-92.

FLU VACCINE DURING PREGNANCY DIDN'T INCREASE RISK OF CONGENITAL MALFORMATIONS

According to this study:

- When intrafamilial factors were taken into account, the offspring of mothers who received the 2009–2010 H1N1 influenza vaccine during pregnancy weren't at increased risk for overall congenital malformations.
- Risk increases for specific malformations cannot be completely ruled out.

Because pregnant women were believed to be at high risk during the 2009–2010 H1N1 influenza virus pandemic, many received the H1N1 monovalent influenza vaccine in addition to the regular flu vaccine that year. Studies of the risk of congenital malformations in the offspring of women who received the H1N1 vaccine during pregnancy did not control for confounding by familial factors.

The researchers conducted a large population-based prospective study in Sweden to examine the risk of any congenital malformation—specifically congenital heart disease, oral cleft, and limb deficiency—in offspring exposed in utero to the 2009–2010 H1N1 influenza vaccine. Siblings were used as comparators. During the study period, 40,983 offspring

were exposed prenatally to the H1N1 vaccine and 197,588 were not exposed. Of those exposed, 14,385 were exposed during the first trimester; of these, 7,502 were exposed during the first eight gestational weeks.

A congenital malformation was found in 4.97% of exposed offspring compared with 4.78% of unexposed offspring. Adjusted risks for any congenital malformation were almost identical—4.98% in exposed offspring and 4.96% in unexposed offspring. Risk estimates were similar when siblings were used as controls.

For specific congenital malformations, the proportion of offspring affected by vaccine exposure was similar, although estimates were less precise because the number of offspring with malformations was small.

Ludvigsson JF, et al. *Ann Intern Med* 2016;165(12):848-55.

GREATER TREATMENT FAILURE RATE WITH HIGH-FLOW THERAPY VS. CPAP IN INFANTS

According to this study:

- Nasal high-flow therapy leads to a significantly higher rate of treatment failure than nasal continuous positive airway pressure (CPAP) when used as primary support for preterm infants with respiratory distress.
- Intubation rates within 72 hours didn't differ significantly between the high-flow therapy and CPAP groups, nor did the rate of death before discharge.

Nasal continuous positive airway pressure (CPAP) is the most widely used noninvasive method of primary respiratory support for preterm infants. Yet, treatment with an alternative method—heated, humidified, high-flow therapy via nasal cannula—is believed to have certain advantages, such as less

nasal trauma and lower infant pain scores. An international, multicenter, randomized controlled trial was designed to determine whether high-flow therapy is noninferior to CPAP as a primary respiratory support for preterm infants who have early respiratory distress.

Infants included in the study were born between 28 weeks and zero days and 36 weeks and six days, were less than 24 hours old, and had not received endotracheal ventilation or surfactant treatment. In addition, the attending clinician had to have recommended noninvasive respiratory support for the infant. Eligible infants were randomized to receive either high-flow therapy or CPAP. Those assigned to receive CPAP who experienced treatment failure were intubated and ventilated; those assigned to receive high-flow therapy could receive CPAP as rescue therapy, but were intubated and ventilated if they continued to experience treatment failure.

Trial recruitment was stopped early because there was a highly significant difference between the two groups in the rate of the primary outcome—treatment failure within 72 hours of randomization. The primary outcome occurred in 71 (25.5%) of the 278 infants in the high-flow group compared with 38 (13.3%) of the 286 infants in the CPAP group. Intubation rates within 72 hours didn't differ significantly between infants receiving high-flow therapy versus those receiving CPAP, nor did the rate of death before discharge.

Nasal trauma was significantly more common among infants receiving CPAP. The median duration of respiratory support was one day longer among infants receiving high-flow therapy, and infants in this group were significantly more likely to receive supplemental oxygen during their hospital stay.

Roberts CT, et al. *N Engl J Med* 2016;375(12):1147-51. ▼