

# Scanning the Literature

Roxanne Thompson, MD

## Dating violence common among adolescents, linked to health risk behaviors.

Silverman JG, Raj A, Mucci LA, et al. Dating violence against adolescent girls and associated substance use, unhealthy weight control, sexual risk behavior, pregnancy, and suicidality.

JAMA 2001;286:572-579.

**Context:** Intimate partner violence against women is a major public health concern. Research among adults has shown that younger age is a consistent risk factor for experiencing and perpetrating intimate partner violence. However, no representative epidemiologic studies of lifetime prevalence of dating violence among adolescents have been conducted. **Objective:** To assess lifetime prevalence of physical and sexual violence from dating partners among adolescent girls and associations of these forms of violence with specific health risks. **Design, Setting, and Participants:** Female 9th through 12th-grade students who participated in the 1997 and 1999 Massachusetts Youth Risk Behavior Surveys (n = 1977 and 2186, respectively). **Main Outcome Measures:** Lifetime prevalence rates of physical and sexual dating violence and whether such violence is independently associated with substance use, unhealthy weight control, sexual risk behavior, pregnancy, and suicidality. **Results:** Approximately 1 in 5 female students (20.2% in 1997 and 18.0% in 1999) reported being physically and/or sexually abused by a dating partner. After controlling for the effects of potentially confounding demographics and risk behaviors, data from both surveys indicate that physical and sexual dating violence against adolescent girls is associated with increased risk of substance use (eg, cocaine use for 1997, odds ratio [OR], 4.7; 95% confidence interval [CI], 2.3-9.6; for 1999, OR, 3.4; 95% CI, 1.7-6.7), unhealthy weight control behaviors (eg, use of laxatives and/or vomiting [for 1997, OR, 3.2; 95% CI, 1.8-5.5; for 1999, OR, 3.7; 95% CI, 2.2-6.5]), sexual risk behaviors (eg,

first intercourse before age 15 years [for 1997, OR, 8.2; 95% CI, 5.1-13.4; for 1999, OR, 2.4; 95% CI, 1.4-4.2]), pregnancy (for 1997, OR, 6.3; 95% CI, 3.4-11.7; for 1999, OR, 3.9; 95% CI, 1.9-7.8), and suicidality (eg, attempted suicide [for 1997, OR, 7.6; 95% CI, 4.7-12.3; for 1999, OR, 8.6; 95% CI, 5.2-14.4]).

**Conclusion:** Dating violence is extremely prevalent among this population, and adolescent girls who report a history of experiencing dating violence are more likely to exhibit other serious health risk behaviors.

**Comments:** The striking aspect of this survey of Massachusetts's high school girls is the very large proportion of girls who reported being victims of dating violence. Although the survey design does not permit much speculation with respect to causation, the association with other health risks seems clear. Hopefully, with further study, sensitive screening tools can be developed that allow identification of and intervention for girls at risk.

## Antibiotic treatment for sinusitis in children.

Garbutt JM, Goldstein M, Gellman E, et al. A Randomized, placebo-controlled trial of antimicrobial treatment for children with clinically diagnosed acute sinusitis.

Pediatrics 2001; 619-625.

**Objective:** Although antimicrobial treatment for children with acute sinusitis is used commonly, it is unclear whether it offers significant clinical benefit. The purpose of this study was to evaluate the effectiveness of antimicrobial treatments for acute sinusitis as they are used in community pediatric practice. **Methods:** We conducted a randomized, placebo-controlled trial in 3 community pediatric practices in St Louis, Missouri. A total of 188 patients who were

between the ages of 1 and 18 years and who had had 10 to 28 days of persistent sinus symptoms and a clinical diagnosis of acute sinusitis were randomized to receive 14 days of amoxicillin (40 mg/kg/d in 3 daily doses), amoxicillin-clavulanate (amoxicillin 45 mg/kg/d in 2 daily doses), or placebo. Change in sinus symptoms was assessed both by a quantitative symptom score (the S5 score) and subjectively by the parent. Secondary outcomes included adverse effects of treatment and recurrence or relapse of sinus symptoms. Outcomes were assessed by telephone interviews over a 2-month period. **Results:** Of the 161 patients who were included in the analysis, 58 received amoxicillin, 48 received amoxicillin-clavulanate, and 55 received placebo. Day 14 improvement rates were 79%, 81%, and 79%, respectively. There were no differences in the 14-day change in S5 score among treatment groups. The rates of adverse events (amoxicillin, 19%; amoxicillin-clavulanate, 11%; placebo, 10%), relapse (amoxicillin, 12%; amoxicillin-clavulanate, 13%; placebo, 13%), and recurrence (amoxicillin, 9%; amoxicillin-clavulanate, 13%; placebo, 13%) of sinus symptoms were similar among treatment groups. **Conclusion:** Neither amoxicillin nor amoxicillin-clavulanate offered any clinical benefit compared with placebo for children with clinically diagnosed acute sinusitis.

**Comments:** Once again, the utility of antibiotics in the treatment of most children's upper respiratory infections (URIs) is called into question. Identifying the child who may benefit from antibiotics can be difficult. Some guidelines suggest that antibiotic therapy be considered for children with URI symptoms that persist beyond 10-14 days. However, according to this study, even this approach is questionable, since there was no difference in measured outcomes among children given placebo or one of two commonly prescribed antibiotics after 10-28 days of symptoms. Perhaps patience is the key.

## Adult risk factors associated with childhood obesity.

**Freedman DS, Khan LK, Dietz WH, et al. Relationship of childhood obesity to coronary heart disease risk factors in adulthood: The Bogalusa Heart Study. Pediatrics 2001; 108:712-718.**

**Background:** Childhood obesity is related to adult levels of lipids, lipoproteins, blood pressure, and insulin and to morbidity from coronary heart disease (CHD). However, the importance of the age at which obesity develops in these associations remains uncertain. **Objective and Design:** We assessed the longitudinal relationship of childhood body mass index (BMI, kg/m<sup>2</sup>) to adult levels of lipids, insulin, and blood pressure among 2617 participants. All participants were initially examined at ages 2 to 17 years and were reexamined at ages 18 to 37 years; the mean follow-up was 17 years. **Results:** Of the overweight children (BMI  $\geq$  95th percentile), 77% remained obese ( $\geq$  30 kg/m<sup>2</sup>) as adults. Childhood overweight was related to adverse risk factor levels among adults, but associations were weak ( $r \sim 0.1-0.3$ ) and were attributable to the strong persistence of weight status between childhood and adulthood. Although obese adults had adverse levels of lipids, insulin, and blood pressure, levels of these risk factors did not vary with childhood weight status or with the age ( $\leq$  8 years, 12-17 years, or  $\geq$  18 years) of obesity onset. **Conclusions:** Additional data are needed to assess the independent relationship of childhood weight status to CHD morbidity. Because normal-weight children who become obese adults have adverse risk factor levels and probably will be at increased risk for adult morbidity, our results emphasize the need for both primary and secondary prevention. **Key words:** obesity, BMI, childhood, longitudinal, lipids, blood pressure, insulin.

**Comments:** It has long been suspected that children who are obese become obese adults with a higher risk of associated morbidity. This prospective study provides data that seem to support this suspicion. Although a direct effect of childhood obesity on cardiovascular risk factors (other than obesity) was not demonstrated in this study, 77% of obese children became obese young adults. This article underlines the importance of designing effective strategies to combat obesity in children.

## No antibiotics for diarrhea in children.

Wong CS, Jelacic S, Habeeb RL, et al. The risk of the hemolytic–uremic syndrome after antibiotic treatment of *Escherichia coli* O157:H7 infections.

N Engl J Med 2000; 342:1930-1936.

**Background:** Children with gastrointestinal infections caused by *Escherichia coli* O157:H7 are at risk for the hemolytic–uremic syndrome. Whether antibiotics alter this risk is unknown. **Methods:** We conducted a prospective cohort study of 71 children younger than 10 years of age who had diarrhea caused by *E. coli* O157:H7 to assess whether antibiotic treatment in these children affects the risk of the hemolytic–uremic syndrome and to assess the influence of confounding factors on this outcome. Estimates of relative risks were adjusted for possible confounding effects with the use of logistic-regression analysis. **Results:** Among the 71 children, 9 (13 percent) received antibiotics and the hemolytic–uremic syndrome developed in 10 (14 percent). Five of these 10 children had received antibiotics. Factors significantly associated with the hemolytic–uremic syndrome were a higher initial white-cell count (relative risk, 1.3; 95 percent confidence interval, 1.1 to 1.5), evaluation with stool culture soon after the onset of illness (relative risk, 0.3; 95 percent confidence interval, 0.2 to 0.8), and treatment with antibiotics (relative risk, 14.3; 95 percent confidence interval, 2.9 to 70.7). The clinical and laboratory characteristics of the 9 children who received antibiotics and the 62 who did not receive antibiotics were similar. In a multivariate analysis that was adjusted for the initial white-cell count and the day of illness on which stool was obtained for culture, antibiotic administration remained a risk factor for the development of the hemolytic–uremic syndrome (relative risk, 17.3; 95 percent confidence interval, 2.2 to 137). **Conclusions:** Antibiotic treatment of children with *E. coli* O157:H7 infection increases the risk of the hemolytic–uremic syndrome.



*Dr. Thompson is a general pediatrician at Ochsner Clinic Main Campus.*

**Comments:** The Hemolytic Uremic Syndrome is a life threatening condition that is usually seen associated with *E.coli* O157:H7 diarrhea illness in children. There are few indications for antibiotics in otherwise healthy children with diarrhea. This article underscores the importance of withholding antibiotics until *E.coli* O157:H7 infection can be ruled out.