

Rate of chronic health problems for low-birth-weight children does not increase in adolescence

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In a follow-up of extremely low-birth-weight children, the rates of chronic health conditions overall, and asthma specifically, did not change between the ages of 8 and 14 years, although the rate of obesity did increase, according to a study in the July 27 issue of *JAMA*.

Changes in perinatal care in the 1990s resulted in improved survival among extremely low-birth-weight (ELBW) infants (weight less than 2.2 lbs.). "The school-aged outcomes for these children indicate very high rates of [chronic health conditions](#) and developmental problems compared with normal-birth-weight (NBW) controls. There have been few reports of the outcomes of ELBW children during adolescence, which is a time of enormous social, health, and developmental change," according to background information in the article.

Maureen Hack, M.B., Ch.B., of Case Western Reserve University, Cleveland, and colleagues conducted a study to examine changes in the rates of [chronic conditions](#) of ELBW children between the ages of 8 and 14 years. In a previous study, the authors reported that compared with NBW controls, ELBW children at 8 years of age had significantly higher rates of chronic conditions, [functional limitations](#), and [special health care](#) needs. The current study, conducted from 2004 through 2009, included 181 ELBW children from the previous study and 115 NBW controls of similar sociodemographic status, born from 1992 through 1995.

Within the ELBW group, the overall rates of chronic conditions did not change between the ages of 8 and 14 years (75 percent and 74 percent, respectively) but there was a significant decrease in the average number of chronic conditions per child. On measures of functional limitation, the rates decreased significantly from 56 percent to 46 percent. In a comparison of the groups, the significantly higher rates and numbers of chronic conditions among the ELBW children at age 8 years persisted at age 14 years (74 percent for ELBW children vs. 47 percent for NBW controls). "At age 14 years, 46 percent of ELBW children had functional limitations compared with 16 percent of NBW controls, including mental or emotional delay, trouble understanding simple instructions, and speaking and communicating," the authors write.

The rate of ELBW children with [asthma](#) requiring medication did not change between the ages of 8 and 14 years (23 percent at both ages), while for the NBW controls, the rate of asthma increased significantly between the ages of 8 and 14 years, from 8 percent to 17 percent, respectively. Differences in rates of asthma between ELBW and NBW children were no longer significant at the age of 14 years (23 percent vs. 17 percent, respectively).

The rate of obesity in ELBW children increased from 12 percent at age 8 years to 19 percent at age 14 years. This rate did not change among the NBW controls; at age 14 years, the rate of obesity did not differ significantly between the ELBW children and NBW controls.

"Our results may have relevance to current survivors. The ELBW status may be considered a marker for the risk of multiple chronic conditions that warrant closer than average health surveillance during adolescence. In addition to therapy for neurodevelopmental disorders, ELBW [children](#) with asthma or [obesity](#) should receive interventions such as smoking prevention and exercise encouragement to reduce the consequences of these conditions and to possibly enhance their long-term adult

outcomes," the authors conclude.

More information: *JAMA*. 2011;306[4]394-401.

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