Secular trends of atopic dermatitis and its comorbidities in United States children between 1997 and 2018.

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Background: Previous studies found increased prevalence of childhood atopic dermatitis (AD) in the United States over the past few decades. It is unknown whether the prevalence of AD has plateaued. Further, it is unknown whether AD comorbidities have changed over time.

Objective: To assess the prevalence and secular trends of AD and its comorbidities.

Methods: We analyzed data on 259,818 children ages 0-17 years from the National Health Interview Survey 1997-2018 using logistic regression models.

Results: The prevalence [95% confidence interval] of childhood AD steadily increased from 2000 (7.3% [6.8-7.9%]) to 2011 (12.8% [12.1-13.5%]) and remained consistent until 2018 (12.6% [11.6-13.5%]) with a peak in 2017 (13.5% [12.6-14.4%]). In logistic regression models, the odds of AD were significantly increased in all years from 2003 to 2018 compared to 1997. However, the increased odds of AD over time were attenuated when adjusting for socio-demographic factors. AD prevalence increased in virtually all socio-demographic groups. The distribution of socio-demographics numerically shifted over time, especially with race/ethnicity, insurance, and region. There were significant trends of AD comorbidities over time, with increasing prevalence of attention deficit (hyperactivity) disorder, and decreasing prevalence of hay fever and depression/sadness.

Conclusion: There was a 59% increase of US AD prevalence between 1997 and 2018, with an estimated 9,221,298 children having AD in 2018. While AD prevalence increased in most socio-demographic groups, there were subsets that appeared to have greater increases. Finally, prevalence of comorbid hay fever and sadness/depression decreased, while ADD/ADHD increased over time in children with and without AD.