# Complementary and Alternative Medicine Treatments for Children with Autism Spectrum Disorders



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#### **KEYWORDS**

- Autism Autism spectrum Complementary and alternative treatments
- Evidence based

#### **KEY POINTS**

- Families of children with autism spectrum disorders (ASD) commonly use complementary and alternative medical (CAM) treatments.
- CAM treatments are selected to promote wellness, treat specific symptoms, avoid side
  effects of conventional medicine, or promote resolution of core symptoms of ASD.
- Commonly used categories of CAM are natural products, mind and body therapies and other biomedical treatments.
- Conventional studies document that some CAM treatments are ineffective, whereas others require further study.

#### **OVERVIEW**

Autism spectrum disorders (ASD) are common neurodevelopmental disorders (affecting 1 in 68 children)<sup>1</sup> with a significant impact on the quality of life of child and family, owing to the constellation of core and associated symptoms. ASDs

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Abbreviations	
ASD CAM	Autism spectrum disorders  Complementary and alternative medical (treatments)
NCCAM NHIS	National Center for Complementary and Alternative Medicine National Health Interview Survey

have characteristic core deficits in communication-socialization and behavior, with a wide range of severity of symptoms.<sup>2</sup> Many treatments are recommended through collaborative medical, behavioral, and educational practice, but selection of treatment strategies is complicated by the impact of core deficits and frequently associated comorbid psychopathology.<sup>3</sup> Current scientific evidence strongly supports multifactorial genetic etiology,<sup>4,5</sup> with environmental factors also having an etiologic impact.<sup>6</sup> Thus for many children the specific causes are often not known. Furthermore, symptoms are behaviorally defined and heterogeneous, and will change over time with acquisition of developmental skills. As a result, families of children with autism and related disorders may find that the clinicians who diagnose their child's autism may sound vague about both cause and prognosis. This vagueness may turn families to therapies not based on conventional medical or psychological practice, proponents of which may present the treatment options as more concrete, definitive in etiology, and optimistic in outcome.<sup>7</sup>

This article provides an overview of commonly used complementary, alternative, or integrative health treatments that families of children with ASD may pursue. Many of these health care approaches are conceptualized outside of mainstream Western or conventional medicine<sup>8</sup> either to replace standard medical care or to supplement it. The combination of conventional practice and complementary techniques is often called integrative medicine. For ease of discussion, this article uses the term complementary and alternative medicine (CAM) to encompass all treatments that would fall under this integrative medicine rubric (not just biologically based medical treatments). This review discusses the reasons why families seek CAM, review the commonly used CAM therapies for ASD, and describes how conventional practitioners might work with patients who use CAM treatments.

The National Center for Complementary and Alternative Medicine (NCCAM) was established in 1991 as part of the National Institutes of Health to promote scientific study of CAM treatments, which it has promoted through education and direct support of research (www.nccam.nih.gov). NCCAM groups CAM therapies into 2 domains: Natural Products and Mind and Body Practices. Not included in these categories is the use of biological or biomedical treatments, which would also refer to psychopharmacologic or other pharmacologic agents used off-label to address a nonstandard hypothesis.

The use of CAM treatments by adults in the United States remains high. Analysis of data from the 2002 and 2007 National Health Interview Survey (NHIS) revealed rates of 36% and 38%, respectively, of any type of CAM treatment (excluding prayer) by United States adults. <sup>9,10</sup> Population-based data on the use of CAM treatments in children were available for the first time from the 2007 NHIS, reporting that 11.8% of children used CAM therapy in the 12 months before the survey. <sup>9</sup> This figure is likely to be an underestimate. Other reviews have reported a wide range of CAM use (2%–50%) in children, but these data are derived from selected groups and are not population based (as in the NHIS survey) <sup>11</sup>

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