

# Medications Affecting Nutritional Status in Pediatrics: A Clinical Review

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**Introduction:** Maintaining adequate nutrition in children is vital to growth and development. The most commonly treated health conditions in the pediatric population include attention deficit hyperactivity disorder, infections, seizures, asthma, dermatologic conditions, and type 2 diabetes. The medications used to treat these conditions include amphetamines, antibiotics, antiepileptic drugs, corticosteroids and metformin – all medications with potential effects on nutritional status. Clinicians should be aware of how these medications may affect nutritional status of children through appetite (suppressing or stimulating appetite), gastrointestinal motility (nausea, vomiting, or diarrhea), alteration of taste, and depletion of vitamins and nutrients.

**Purpose:** The purpose of this clinical review is to optimize patient care by informing clinicians of the various evidence-based nutritional assessment tools and summarizing how commonly prescribed medications can affect a child’s nutritional status.

**Evidence-Based Approach to Manuscript Development:** Relevant articles were obtained from MEDLINE, CINAHL, and Cochrane Library databases. Searches included only articles published from January 2000 to February 2014. Search terms included combinations of “nutrition” with the previously stated drug classes and adverse effects.

**Summary:** Amphetamines decrease appetite in 30% of children, but dosing amphetamines after meals or with protein-rich meals, using drug holidays, and giving multivitamins may prevent nutritional deficiencies. Early life exposure before 6 months of age to antibiotics is associated with obesity; therefore, antibiotics should be prescribed only when necessary and should not be used to treat self-limiting or viral conditions. Antiepileptic drugs can cause weight gain, constipation, and vitamin D deficiency. Choosing antiepileptic’s with fewer effects on weight, ensuring a well-balanced fiber-rich diet and vitamin D supplementation can reduce side effects. Chronic oral corticosteroids can cause growth suppression, reduced bone density, dyslipidemia, hyperglycemia, and central redistribution of fat. Carefully selecting when, what dose, and for how long to use corticosteroids as well as monitoring bone density, increasing dietary calcium, and increasing exercise are beneficial. Metformin, a commonly used diabetes medication, causes abdominal pain, diarrhea, and vitamin B12 and folic acid deficiency. Slow dosage titration decreases gastrointestinal side effects and B12 and folic acid supplementation will prevent vitamin deficiencies. Awareness of these medication complications in the pediatric population, as well as knowledge regarding evidence-based nutritional assessment tools, monitoring, and strategies to avoid these complications, will help the clinician and other members of the healthcare team identify and prevent nutrition-related adverse effects of these commonly prescribed medications.