

ABSTRACT:

BONE MINERAL DENSITY IN CHILDREN WITH AUTISM SPECTRUM DISORDER. Bone cortical thickness is decreased in children with autism and other developmental disabilities. However we do not yet know whether bone mineral density (BMD) of these children is lower. Whether or not there is a correlation between BMD and the child's diet or between BMD and vitamin D levels is also unclear. We aim to determine whether 20 boys with autism have lower bone mineral density (BMD) than age matched controls and to explore specific additional risk factors for low BMD such as restricted diets. This pilot study will examine bone density and markers of bone. This study will also examine any relationship between bone density and each of the following potential factors: (i) dietary intake of calcium, vitamin D and total calories, and (ii) serum levels of IGF-1, sex steroids and salivary cortisol. We hypothesize that (i) children with autism will have lower bone density associated with lower levels of bone formation markers than healthy children of comparable age, and (ii) important predictors of lower bone density will be lower vitamin D status, lower levels of IGF-1, higher levels of cortisol, and higher incidence of gastrointestinal symptoms.