

## Vitamin D, sunshine, and autism

AUTISM is one of a group of conditions referred to as autism spectrum disorder (ASD). These are developmental disabilities that affect both the brain and body of young children. These children are afflicted with abnormal development

in socialisation, communication, and behaviour. Unusual social development usually becomes apparent very early in childhood. Autistic infants show less attention to social stimuli, smile and look at others less often, and respond less frequently even to their own name. Up to a half of children with autism fail to develop adequate natural speech and display repetitive or restricted types of behaviour. Autism is more common in boys than in girls, and children with autism are more likely to be overweight and obese and have less muscle tone and motor skills than kids without autism. Currently, up to 1.5 per cent of all children are classified as having an ASD. What causes autism? Proposed causative risk factors for autism include a genetic predisposition, environmental exposure to toxic chemicals like heavy metals, and possibly vaccines. However, Dr John Cannell from the United States-based Vitamin D Council has suggested that the main trigger for autism is not toxins or vaccinations, but a deficiency in vitamin D during pregnancy and early childhood. A recent article in the journal *Scientific American* has actually posed the question, 'What if vitamin D deficiency is a cause of autism?' Environmental risk factors may cause genetic damage and increased risk for autism, but vitamin D protects against DNA damage and also repairs the damage if it occurs. Every cell in the brain has vitamin D receptors and the receptors control how genes behave. Thus, Vitamin D may have many beneficial effects for the brain. Vitamin D may affect social behaviour associated with ASD. Research shows that the brain hormones serotonin, oxytocin, and vasopressin, which influence social behaviour, are all activated by vitamin D. Research suggests that low vitamin D levels in mothers during pregnancy and in infants may increase the risk of autism. Increased seafood consumption by mothers during pregnancy may lower the baby's risk of autism. Ocean fish are a good source of vitamin D and omega-3 fatty acids, and both are important for brain health. The theory that vitamin D reduces the risk of autism is so strong that Dr Cannell states, "The possibility deserves immediate attempts to disprove it." Autism and colour Does skin colour modify the risk of autism? Dark skin is a risk factor for the development of autism and people with dark skin produce less vitamin D from sunlight. Black children are at greater risk of autism than white children. Three recent US studies documented a higher incidence of autism in black children. Autism and class Another of the mysteries of autism is the apparent increased incidence of autism in the children of richer, educated women. This is in keeping with the vitamin D theory as richer, well-educated mothers were found more likely than other mothers to practise sun avoidance, use sunblock, and have low vitamin D levels. Autism and location Researchers also show a twofold higher incidence of autism in urban- versus rural-dwelling children. City life affords less vitamin D, with greater indoor occupation and increased urban air pollution, all of which block ultraviolet B light from penetrating the atmosphere. Yet another recent paper reported that the prevalence of autism in some US states was higher in areas of increased cloudiness and precipitation. Autism prevention The risk of autism could be lowered significantly by women supplementing with vitamin D before conception, during pregnancy, and after birth. Research suggests that pregnant, and nursing women require 6,000 IU/day of vitamin D3 during pregnancy and lactation for best pregnancy outcomes and in order to give the infant sufficient vitamin D3 during nursing. Autism treatment If this theory were true, effective treatment would involve adequate doses of vitamin D. This approach is so simple and safe, so easy, so inexpensive, and so very readily available that I see no downside. Seventeen vitamin D experts recently stated, "In our opinion, children with chronic illnesses such as autism, diabetes, and/or frequent infections should be supplemented with higher doses of sunshine or vitamin D3." There is no peer-reviewed research on the use of vitamin D to treat children with autism, but Dr Cannell reports improvement in up to 75 per cent of autistic children after increasing their vitamin D blood levels to optimal. You may email Dr Tony Vendryes at [tonyvendryes@gmail.com](mailto:tonyvendryes@gmail.com) or listen to 'An Ounce of Prevention' on POWER 106FM on Fridays at 8 p.m. Source: Jamaica Gleaner