



## **Auum Pilot Study in Children's Mental Health**

### Purpose

Omega-3 supplementation has been identified as a potential therapeutic intervention for children with autism spectrum disorder (ASD) and mental health challenges. Omega-3 fats are essential nutrients that are necessary for the development and normal function of the brain and peripheral nerves. Investigation of omega-3 supplementation for ASD and mental health challenges has been limited to fish oil supplements. Seal oil omega-3s have a different fat structure compared to fish oil that increases the digestibility and bioactivity. The purpose of this study was to examine the effect of 9-weeks of Auum seal oil omega-3 supplementation on behaviour in children with mental health challenges.

### Research Design and Participants

From 2007 to 2009, 42 children with mental health challenges (ADHD, Autism Spectrum Disorder and non-diagnosed conditions) aged 3-19 y from Northern Ontario participated in an open-label pilot study.

### Supplementation

Participants were given two daily doses of 2.5 mL of Auum Sublingual-D (375 mg EPA, 230 mg DPA, 510mg DHA, 1000 IU vitamin D3) in 100 mL bottles. Each bottle lasted 20 days. All participants were instructed to leave the oil under the tongue for at least one minute to allow for sublingual absorption before swallowing.

### Outcome Measures

Changes in mental function including attention, concentration, focus, sleep and speech were measured from interviews with parents. Interviews occurred four times over the course of the study, at baseline, 3-weeks, 6-weeks and 9-weeks and coincided the participant finishing each bottle of supplement.

### Results

Sleep disturbances were present in 14 participants and at 9-weeks compared to 4 participants at 9-weeks (-71%). Language barriers were present in 17 participants at baseline compared to 6 at 9-weeks (-65%). Aggressive behaviour and tantrums were reported in 11 participants at baseline and only 3 at 9-weeks (-73%). Frequent tears and whiny behaviour was present in 18 participants at baseline compared to 8 at 9-weeks (-56%). Moodiness and frustrated behaviour was present in 24 participants and at 9-weeks this was decreased to 7 participants (-71%). A surprise finding was a change in urinary issues that were present in 9 participants at baseline and only 3 at 9-weeks (-67%).

Participants experienced improvements at school and parents reported decrease stress in the household. All participants completed the study and there were no known adverse events, indicating the supplement was well tolerated.

### Conclusion

Findings from this study indicate seal oil omega-3 with vitamin D administered at 5 mL per day is well tolerated by children and can improve ASD symptoms. These findings support further clinical testing to validate these findings and to support the use of seal oil omega-3 supplementation for use in the treatment of ASD.