

NeuroSPECT findings in children with chronic fatigue syndrome.

Goldberg MD, Mena I, Darcourt J. Journal of Chronic Fatigue Syndrome 1997; 3(1): 61-67.

Abstract: **BACKGROUND.** NeuroSPECT studies have described specific abnormalities in cerebral perfusion in adults with criteria for Chronic Fatigue Syndrome. This reports findings in 13 children with criteria for Chronic Fatigue Syndrome. **OBJECTIVE.** NeuroSPECT findings in 13 CFS/CFIDS children. **METHODS.** Thirteen children meeting CDC criteria for CFS/CFIDS were evaluated using NeuroSPECT imaging utilizing Xenon 133 and Tc-99m-HMPAO (1). **RESULTS.** In 13 children, hypoperfusion was observed at 42 ± 10 ml/min/100g, $p < 0.0001$ in the left temporal lobe and at 45 ± 11 , $p < .001$ in right temporal lobe. Statistically significant hypoperfusion was also observed in both parietal lobes and at 50 and 53 ml/min/100g, $p < 0.05$ in the frontal lobe of the right hemisphere. Quantitated HMPAO demonstrated bilateral orbitofrontal and anterior temporal hypoperfusion. There was also hypoperfusion in the dorsal aspects of both frontal lobes and both parietooccipital lobes. **CONCLUSION.** NeuroSPECT is presented as a quantifiable, reproducible tool that can allow us to document a cohort of children defined as CFS/CFIDS.