

Sleep and Melatonin

Research Update

By Dr. Leila Masson, Paediatrician



DR. LEILA MASSON

MD, MPH, DTMH, IBCLC

www.leilamasson.com

Many children on the autistic spectrum have trouble falling asleep or sleeping through the night. Humans normally produce and store melatonin during the day when we are exposed to natural sun light, and our brain secretes the melatonin into the blood stream when it gets dark. Research has shown that children on the autistic spectrum have low levels of melatonin, and that their sleep problems are related to this low level of melatonin.

It has also been shown that Melatonin given in the evening – half an hour before bedtime – helps about 80% of children with autism to sleep better, and that this improved some of their behaviour and emotional problems.

We all know how important sleep is for our well-being – the children's AND the parents'! If your child has sleep problems it may be a good idea to have him or her checked out by a doctor and start him or her on a small dose (1mg) of melatonin given in the evening. Melatonin is a prescription medicine in New Zealand.

Melatonin has a very good safety record, it has been studied and used for many years as a jet-lag pill and no serious short or long term side effects have been found. If you take too much of it you will feel drowsy the next day, but you would probably have to take 10-20mg (the dose usually prescribed is 1mg). Even larger doses have been used experimentally in cancer patients with a remarkable improvement in their wellbeing and survival. Melatonin is a potent antioxidant – and we know that autistic children have increased oxidative stress. Therefore this may be another good reason to give melatonin if they experience sleep problems. A one week trial will show whether it is helpful or not – and about 80% of children on the autistic spectrum respond well, with improved sleep and behaviour.

5 Chamberlain RS, Herman BH. A novel biochemical model linking dysfunctions in brain melatonin, proopiomelanocortin peptides, and serotonin in autism. *Bio Psychiatry* 1990;28(9):773-93.

6 Jan JE, O'Donnell ME. Use of melatonin in the treatment of paediatric sleep disorders. *J Pineal Res* 1996;21(4):193-9.

7 Ishizaki A, Sugama M, Takeuchi N. Usefulness of melatonin for developmental sleep and emotional/behavior disorders studies of melatonin trial on 50 patients with developmental disorders. [Japanese] *No To Hattatsu* 1999;31(5):428-37.