Melatonin for sleep problems

Introduction

Sleep disturbances in children with neurological problems, behavioural problems and/or learning difficulties are very common. The types of problem include difficulty getting to sleep, frequent waking during the night, early morning wakening or day-night reversal of sleep pattern. The usual treatment includes behavioural therapy and mild sedatives. Many parents find it difficult to keep up with behavioural therapy, and sedatives may produce side effects. Melatonin is a treatment for these problems when other methods have failed.

What is melatonin?

Melatonin is a naturally occurring hormone. It is made in the pineal (pih-knee-ul) gland which lies at the base of the brain. It is released in response to darkness and suppressed by light. In humans, melatonin is very important in the governing of sleep, mood, puberty and reproductive hormone cycles. The melatonin used for treatment is synthetically made.

How does it work?

The exact way in which it works is still unclear, but it seems to work by altering sleep cycles.

Is there any evidence to show that it works?

Yes. It was first used in blind people who had sleep problems, and has also been studied in adults in treating certain types of insomnia (difficulty in going to sleep) and in jet lag (difficulty in sleeping due to changes in time zone).

It was first used in children in 1991, when it was tried in a blind child with multiple disabilities who suffered from a broken sleep pattern. Despite its limited use so far in children, it is generally agreed that melatonin is beneficial for paediatric sleep disorders. Studies have shown that it is particularly helpful in reducing time taken to fall asleep in children with neurological/behavioural disorders.

When should it be used?

At present it is used in children with multiple disabilities with broken sleep pattern and no other factors contributing to their sleep problem. It is only used if the children do not respond to other more usual treatments such as behavioural therapy. The treatment is usually started by a specialist paediatrician. It is not usually used in children less than one year of age.

Is it safe?

The available literature suggests that it is relatively safe. It has been used in children with multiple disabilities for almost a decade. Apart from headache in some, very few other side effects have been noted. Children do not usually develop tolerance (i.e. the need for larger doses over time to achieve the same effect).

In the case of accidental overdose you should contact your local Accident and Emergency Department for advice as soon as you are aware of the problem.

Is it available through the NHS?

Melatonin is not licensed for children in UK at the moment, and is only available on a named patient basis. It will therefore be prescribed by a specialist. We hope that in the future, you will be able to obtain further supplies from your local pharmacy in arrangement with your GP. However, at present, your paediatrician will need to write the repeat prescriptions and the melatonin will need to be collected from the hospital pharmacy.

Does it interact with other medicines?

Melatonin is not known to have significant interactions, but this still needs further study.

Does it have any other effect apart from improving sleep patterns?

In some children it has improved seizures and mood, while other children have had more seizures while taking melatonin. We are therefore careful to monitor the effects of melatonin on seizure frequency. We are also careful to monitor growth and puberty in children receiving melatonin, although no adverse effects have been reported so far.

How is it given?

It is available in tablet, capsule and liquid forms – and there is also a slow release form. The contents of the capsule can be given via a gastrostomy tube and via naso-gastric tubes, although it is more usual to use the liquid form in these circumstances. Melatonin is usually started in a small dose and slowly increased according to the response.

You should expect to see some benefit after about a week, although occasionally it takes longer to take effect.

It is preferably given at the same time each evening to ensure a consistent response. Sometimes, a second dose may be needed if the child wakes up part way through the night.

Locally we have 3mg tablets of slow release melatonin as well as the liquid. If the response after one week is absent or insufficient, then the dose can be increased to 6mg. Occasionally in a small group of children with severe problems, higher doses may be required.

How long is it usually given for?

If beneficial, it is usually continued for at least 6 months. If it has been successful, it may then be possible to withdraw it gradually over 3-4 weeks. However, for some children long-term melatonin treatment may be necessary.

Where can I find out more?

www.medicinesforchildren.org.uk/melatonin-sleep-disorders
www.nice.org.uk/advice/esuom2/chapter/key-points-from-the-evidence
For more information about the Trust visit our website on www.royalberkshire.nhs.uk

This document can be made available in other languages and formats upon request.

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