

## Medicine, Science and Health: Melatonin – a remedy for jetlag?

In a previous article we considered the use of melatonin as an aid in helping with disturbances to sleep patterns including jet lag. Melatonin is a hormone that plays an important role in the maintenance of the body's circadian rhythm. This rhythm is geared towards making us sleepy and inactive at night, with arousal and heightened activation occurring during the day. Circadian rhythms peak during late afternoon and reach a nadir in the pre-dawn period. Melatonin levels are inversely related to alertness and are at their lowest at 2 pm., peaking at 4am.

A significant body of research exists (see Arendt *et al.* (1995)), which indicates that the appropriate use of melatonin can improve circadian adjustment to new timezones. In addition, melatonin can induce weak hypnotic or soporific tendencies that may encourage out-of-phase sleep. However, a team from the University of Alberta has now published a study in the British Medical Journal, in which it is suggested that there is little evidence to support this.

In this latest study, the researchers reviewed data from 16 trials involving over 500 people. For those people troubled by disturbed or restricted sleep patterns such as shift

workers or those suffering from jetlag, the use of melatonin was found to have no significant effect. Melatonin did help those with secondary sleep problems, often caused by medical or psychological conditions or substance misuse, but the effect was very limited – less than 10 minutes extra sleep in an eight hour period spent in bed. As this change was so small, the researchers did not consider it to be clinically important.

The results of this study do appear to directly contradict previous research. However, despite this conflicting and somewhat surprising piece of research, a number of sleep experts still stand by the view that melatonin is an effective drug for combating jet lag and promoting sleep at the “wrong time”. For example, Dr Derk-Jan Dijk, a sleep expert at the University of Surrey, comments that several studies exist backing the use of melatonin as a treatment for jetlag and Dr Adrian Williams director of the Sleep Disorders Centre, at St Thomas' Hospital, London, agreed that research backed the use of melatonin to treat jet lag.

### Reference:-

No evidence jetlag remedy works. BBC Health 10.02.06