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References of Consensus 6 on Melatonin Therapy of Melatonin Deficiency in Adults

I) BENEFICIAL EFFECTS OF MELATONIN

1) Melatonin may reduce senescence-related alterations, which may be triggered by melatonin deficiency

Melatonin, as an antioxidant, reduces oxidative stress

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Melatonin stimulates the immune system

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Melatonin increases the numbers of viable fibroblasts

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2) Melatonin has several significantly beneficial effects on mental and physical health parameters, and against the development of age-related diseases

2-a) Melatonin may improve psychic well-being

Lower quality of life and fatigue: the association with lower melatonin levels

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Memory loss and Alzheimer's disease: the association with lower melatonin levels

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2-b) Melatonin may help prevent or slow down the development of age-related diseases

Hypercholesterolemia: the association with lower melatonin levels

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Osteoporosis: the improvement with melatonin treatment

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Cancer: the association with lower melatonin levels

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Cancer: increased levels of melatonin in certain cancers and its explanations

Higher daytime levels of melatonin in cancer patients (critic: the nighttime and 24-hour levels of melatonin are the ones that matter the most, not the daytime, as melatonin is six times more produced at night)

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Higher daytime melatonin in cancer patients, but patients with the worse prognosis (Lissoni, 1987), low receptor status (Lissoni, 1987), faster tumor proliferation rates (Lissoni, 1990), presence of metastases, disease progression (versus stable disease or remission), etc.) have the lowest level of melatonin

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Cancer: protective effects of melatonin treatment?

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II) Diagnosis of melatonin deficiency:

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24-hour or nocturnal melatonin tests

Urinary 6-sulfatoxy-melatonin

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III) Melatonin treatment

Melatonin medications

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Melatonin treatment: safety, side effects

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IV) Scientific studies in melatonin in humans?

There are more than 10'000 studies on the Medline databank on melatonin. There are over the 100 placebo-controlled studies of the effect of melatonin treatment on sleep in humans in the Medline databank: 101 (last search on 29-1-2006) with 83 % (84/101) of them showing significant beneficial results of melatonin supplementation on sleep, and only one negative report.

101 PLACEBO-CONTROLLED STUDIES ON THE EFFECT OF MELATONIN ON SLEEP

84 placebo-controlled studies where a significant beneficial effect of melatonin on sleep in children and adults was observed: the beneficial effect mainly consists in a shortening of the time to fall asleep (quicker sleep onset) and a profound muscle relaxation, rarely an improvement of the REM or deep sleep

Children

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Adults

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