Melatonin is an endogenous hormone involved in circadian rhythms. Melatonin activates melatonin (MT) receptors and decreases expression of follicle-stimulating hormone (FSH), luteinizing hormone (LH), and leptin; it exhibits sedative, antioxidative, immunostimulatory, anti-ulcerative, neuroprotective, neuromodulatory, anti-obesity, anticancer, and chemopreventive activities. Melatonin production is increased at night, inducing sleepiness. This compound increases levels of superoxide dismutase, glutathione, and glutathione peroxidase and decreases levels of iNOS and lipoxygenase; it also scavenges ROS. In various models, melatonin increases release of IL-1, IL-2, IL-6, and IL-12. In animal models of obesity, melatonin also decreases body weight, adiposity, leptin levels, and insulin levels. In animal models of Alzheimer’s disease, this compound prevents hyperphosphorylation of tau protein and fibrillogenesis of amyloid-β (Aβ). Melatonin also shows some benefit in the treatment of migraines and cancer as well as the prevention of carcinogenesis. Additionally melatonin may treat gastro-esophageal reflux disease (GERD).

References


Caution: This product is intended for laboratory and research use only. It is not for human or drug use.