Insomnia is a challenging condition that is best treated with lifestyle changes, as medications cannot significantly overcome deficits in that regard. Please see the column on valerian.

Melatonin is a fascinating human hormone, produced in the pineal gland of the brain. It affects the body’s circadian rhythm and sleep patterns, and endocrine (hormone) secretions. Synthesized from the amino acid tryptophan, it becomes serotonin as an intermediate product. Its production is inversely related to the amount of light a person gets, varies with age, and may be increased by meditation or music therapy. It is rapidly inactivated, so that with lower doses (3 mg or less by mouth) one can drive or use machinery 4-5 hours afterward. Use has been reported or studied in 30 conditions, ranging from sleep disorders and disruptions, depression, seizures and other brain conditions, to cancer and sunburn.

Sleep conditions have been studied the most, with varying conclusions. As is often true, methodology, patient selection and product formulation vary, making overall conclusions difficult. Although the measurable marker of sleep efficiency does not seem to improve with melatonin, subjective reports of sleep quality, alertness, daytime sleepiness and fatigue improve with use for jet lag, and the time it take to fall asleep (sleep latency) in general insomnia. Sustained release preparations may be better for sleep maintenance, but have not been sufficiently studied. Unfortunately, melatonin does not seem to yield improvement in measurable markers for those working rotating or graveyard shifts; I found no notation of subjective benefits for this use. Special needs children may have benefits, but parents need to check with the provider for these specialized uses. A prescription, sustained release preparation is being studied in France for the indication of sleep. The only other common self medication situation in which melatonin is likely effective is nicotine withdrawal.

Preliminary studies indicate potential benefits for those with migraine headaches, chronic fatigue syndrome, and fibromyalgia, and insomnia caused by irritable bowel syndrome or the medications propranolol and other beta blockers. A single low dose seems to increase sexual behavior, though repeated high doses are inhibitory.

Melatonin apparently has immune modulatory, antioxidant and oncostatic (keeping cancers from growing) effects; these are being investigated with respect to several cancers, but also could negatively affect people on immune suppressant drugs.

Depression can be aggravated by use of melatonin, so even though there is some evidence it may help sometimes, it is definitely NOT recommended until more is known. People with diabetes, high blood pressure and seizure disorders also should avoid melatonin.

Combining melatonin with ongoing use of anticoagulant and antiplatelet drugs, benzodiazepines (valium family), immunosuppressants, luvox, nifediine and verapamil
should be approached cautiously, with the knowledge of your provider. Do not drink alcohol with melatonin. Those younger than 20 years produce higher amounts of melatonin, and chronic use of melatonin could cause problems; they should not take it regularly.

Side effects in study patients are the same as placebo: daytime drowsiness (20%), headache (8%) and dizziness (4%). The drowsiness is not significant at doses 3 mg and lower. Many other side effects have been reported with a much lower incidence.

Most preparations contain synthesized melatonin; that from animal sources is not recommended, as it may contain contaminants.

For INSOMNIA, doses of 0.3 to 5 mg at bedtime have been used; doses 3 mg or less have minimal side effects of drowsiness the next day. The same size dose, taken at bedtime on the arrival day at the destination seems to help JET LAG; this can be continued 2 to 5 days. This works heading east more than 4 time zones, but not reliably traveling west. For acute NICOTINE WITHDRAWAL, a single dose 0.3 mg orally 3 and a half hours after smoking the last cigarette helped alleviate anxiety, restlessness, irritability and craving for 10 hours; repeated doses have not been tested.

Many products contain a combination of melatonin with various herbs. Theoretically this could help, but none have been well tested, and such combinations could just as easily have more side effects.