Minimise the Effects of Jet Lag

My next dive trip is taking me across the world. Whenever I cross time zones, I suffer relatively severe jet lag, which affects my ability to dive safely. What might I do to minimize the effects of jet lag?

Long-distance air travel that crosses several time zones causes jet lag syndrome because our circadian rhythms are out of sync with the time at the destination. Symptoms include fatigue, hunger and alertness at the wrong times of day. Fortunately, within a few days our internal clock tends to synchronize with the environment. The more time zones we cross, the greater the expression of the syndrome and the longer it takes to overcome.

To minimise the effects of jet lag, try the following strategies:

- **Prepare:** Before your trip, try to move your bedtime gradually to what it will be at your intended destination. For eastward travel, take one day to go to bed one hour earlier than normal for each time zone you will cross. To make it easier to fall asleep early, avoid caffeine and alcohol, and don't exercise within three or four hours of bedtime. Get up earlier, and try to catch some morning sunshine to help your body adjust. When preparing to travel west, go to bed later and stay in bed longer.
- **Sleep in flight:** Losing sleep during your flight exaggerates the effects of rapid time zone change. During sleep, your body temperature falls, and the activity of some of your hormones changes. With the onset of darkness at night, the pineal gland in the brain starts secreting the hormone melatonin, which helps the body fall and stay asleep. Melatonin, however, is not strong enough to put you asleep on its own. To sleep during the flight, avoid alcohol and caffeine, which keep you alert, and use earplugs and blindfolds to reduce noise and mimic nighttime darkness. If that is not enough, you can use 0.3 to 1 mg of melatonin 30 minutes before bedtime.
- **Adhere to a schedule:** Upon arrival at your destination, try to stay active during daylight hours and go to bed in the evening at your usual time. In the morning, go out into the sunlight to help adjust your circadian rhythm. Of course, if you travel from a geographic area where it is summer to a geographic area where it is winter, this may not be possible; instead, try to start your morning in a gym or swimming pool.

While it is considered nonaddictive and safe for short-term use, too much melatonin can also cause headaches, nausea, dizziness or irritability, and it can interact with various medications, including anticoagulants, immunosuppressants, diabetes medications and birth-control pills. If you have any health conditions, check with your doctor before using melatonin.

Diving on the first day at your destination is probably not a good idea after a long trip. To be well rested for the next day's diving, you may take melatonin at bedtime. It is not advised to engage in activities that require alertness, such as diving or driving, for four to five hours after taking melatonin. This means that if you arrive at your destination late at night and take melatonin after midnight, you should probably abstain from the first morning dive.

The DAN medical staff is here to answer all your dive-related medical questions.