

THE ATMOSPHERIC RESERVOIR

Examining the Atmosphere and Atmospheric Resource Management

The Sun and the Mood

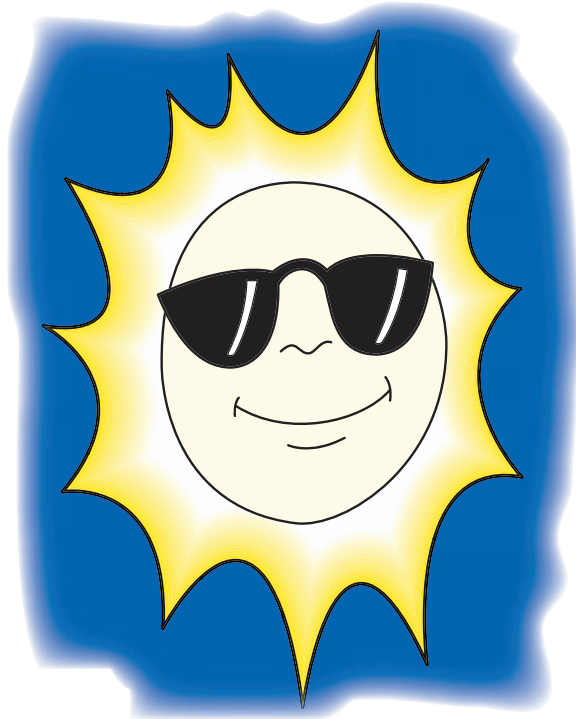
By Mark D. Schneider

If you've noticed that North Dakotans seem a little happier lately, it may not be a coincidence. Now that spring is in full swing and the days are getting longer, we are all experiencing the effects of more sunlight. Most people don't realize just how significant the seasonal variation in sunlight really is.

Let's take a summer and winter day in Bismarck, N.D., and compare the amount of potential minutes of sunlight. Using a sunrise/sunset table the potential sunlight (not including cloud cover) can be calculated. On Dec. 21 in Bismarck there were eight hours and 33 minutes between sunrise and sunset. On June 21 in Bismarck there will be 15 hours and 52 minutes between sunrise and sunset. That's an increase of 7 hours and 19 minutes of possible sunlight—almost twice as much!

Seasonal Affective Disorder or S.A.D. is a condition which is thought to be an effect of seasonal variations in sunlight that can cause symptoms of depression in humans and animals. Seasonal Affective Disorder can also cause sleep problems, lethargy, overeating, social problems, anxiety, and mood changes.

S.A.D. was first documented around 1845 and officially named in the early 1980s. It affects an estimated half a million people every year, so it's not unusual to know someone who suffers from it. Our brains pro-



duce increased levels of a sleep-related hormone called Melatonin during dark periods in the late fall, winter, and early spring months. In addition, North Dakota can experience cloudier days during these months which increase the production of Melatonin. Too much Melatonin can cause oversleeping or disturbed sleep patterns, so it may seem more difficult to get out of bed during the winter than on a sunny, summer day.

Phototherapy or bright light therapy can be used during the winter months to help people with S.A.D.; however, studies have found that an hour's walk in winter sunlight is as effective as two and one-half hours of artificial light therapy.

We can all benefit from sunlight because our bodies use it to produce

Vitamin D. Vitamin D is the only vitamin that we produce naturally and it is notably important for building strong bones and teeth. The foods we eat contain limited quantities of Vitamin D. Fortified Milk was introduced in the 1930s and is still the only major dietary source of Vitamin D. Fish oils and fatty fish such as salmon and sardines have significant amounts of Vitamin D, but aren't enough to give us the supply that our bodies need.

Our immune systems are strengthened by Vitamin D and it may actually help prevent certain types of cancer. In addition, research has shown that cancer patients who have their treatment or recovery during the summer are more likely to survive the disease than patients who receive treatment during the winter. This is all due to the health benefits of increased Vitamin D production during the summer.

Just a few minutes of sunlight a day will help to maintain healthy levels of Melatonin and Vitamin D in our bodies and may just give us a "brighter" outlook on things. It may be worth a walk outside on your lunch break, especially when the sun is high in the sky.

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