

Sleep Challenges in Alaska: Winter Versus Summer

By Kevin Asp, CRT, RPSGT

Alaska is a land of extremes, especially when it comes to the unique patterns associated with the cycle of day and night. When summer fades to fall and fall fades to winter, the sunlight fades out as well. With these intriguing patterns of day and night come sleep challenges for those who reside in the state. As a sleep technologist, especially if you live and work in Alaska, it's vital to understand the sleep challenges of those living in "The Last Frontier" and be equipped with a few tips and tricks to getting a full night of sleep — even when the sun is shining bright at 3 a.m.

Why Is the Sun Always Shining During the Summer?

Alaska is closer to the Earth's northernmost axis, bringing it much closer to the sun when the Earth tilts one way on its axis but much farther away when it tilts in the opposite direction. The tilting of the Earth's axis causes what is known as a solstice.

During a solstice, the sun reaches its highest or lowest position in the sky, appearing to stand completely still in the eyes of astronomers. Because of its location on Earth, Alaska experiences both a summer and a winter solstice.

Summer Solstice¹

A summer solstice, commonly referred to as midsummer, occurs each year when one of the Earth's poles experience a maximum tilt in the direction of the sun. This event occurs two times per year: once in the northern hemisphere and once in the southern hemisphere.

Depending on the hemisphere in which you reside, a summer solstice will occur on either June 20 or June 21. Often referred to as the "midnight sun," the summer solstice in Alaska brings about days filled with rays of sunshine and little to no hours of nighttime.

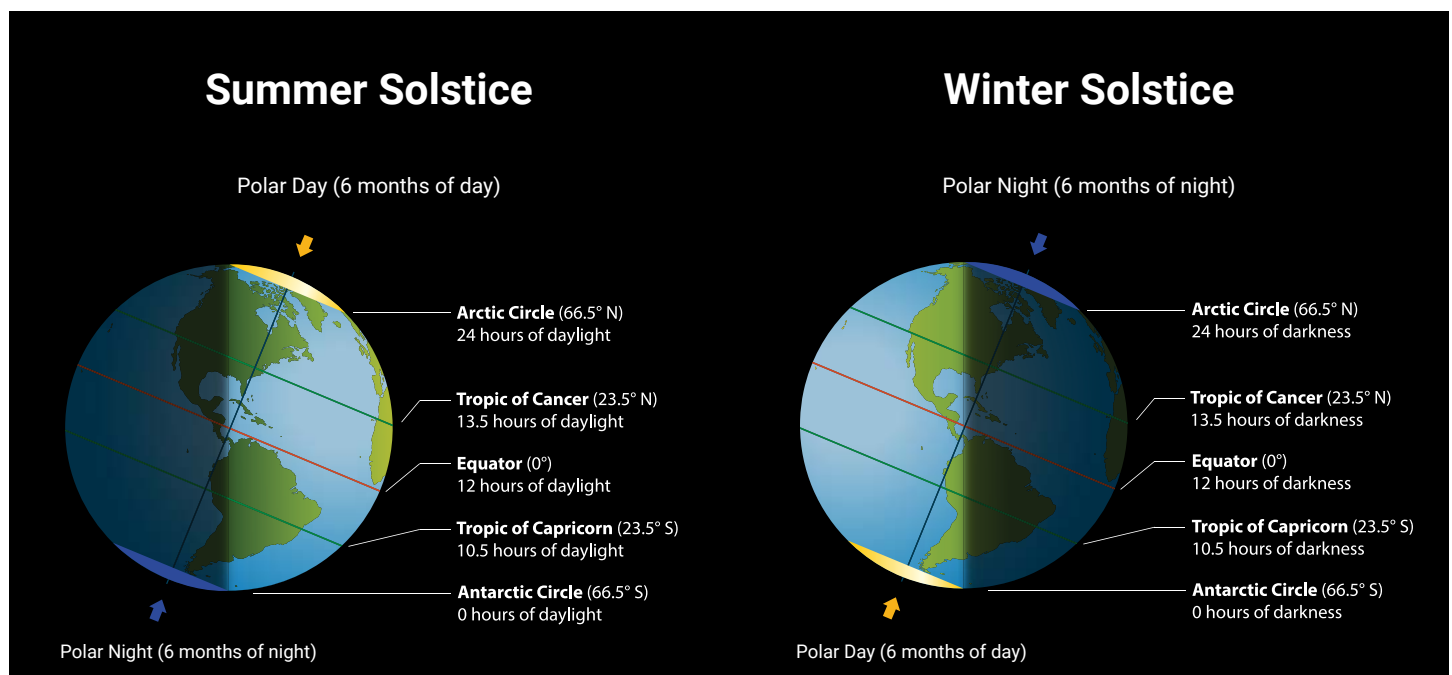
Winter Solstice¹

A winter solstice, also known as a hiemal solstice or hibernal solstice, occurs when one of the Earth's poles reaches a maximum tilt away from the sun. As with the summer solstice, this event occurs twice per year, one time in each hemisphere.

A winter solstice occurs on Dec. 21 or Dec. 22, bringing about shorter days and increased darkness. Individuals living in Alaska are thought to act as bears throughout the year, as they are on the go all summer long but tend to "hibernate" during the winter months.

Sleep Disorders in Alaska

The solstices have much more of an effect than just that on the environment surrounding Alaskans. They affect overall mood and health, impacting things like the ability to fall asleep and stay asleep throughout the night.



Sleep cycles are commonly affected by an environmental agent that provides the stimulus setting or resetting of a biological clock of an organism known as a zeitgeber. The environmental agent associated with the sleep cycle is the occurrence of light and dark.² The extremes of light and dark environments that come with living in Alaska can disrupt the body's natural ability to produce or stop producing the hormone melatonin, which helps regulate sleep.

Residents living in Alaska experience sleep disturbances due to the exposure to days that seem to be filled with either light or dark for most of or all 24 hours in the day. Among these disturbances, the most common are insomnia and circadian rhythm disorders.

Insomnia³

Insomnia is a very common medical condition affecting up to 70 million Americans each year. While there is no known cure for this sleep disorder, there are treatment options.

Insomnia may be associated with depression, anxiety, chronic illness or, for those living in Alaska, irregular patterns of day versus night. Symptoms of insomnia include difficulty falling asleep, difficulty staying asleep and waking without feeling well-rested.

Treatment options for those suffering from insomnia include improving sleep habits, behavioral therapy, identifying and treating underlying causes and, in some cases, sleeping pills may be prescribed by a licensed physician.

Circadian Rhythm Sleep Disorders⁴

A circadian rhythm is your body's biological alarm clock. Your circadian rhythm is controlled and housed within the superchiasmatic nucleus of the hypothalamus in the brain. Life in Alaska is associated with extreme exposure to both light and dark, which is commonly the root of a circadian rhythm disorder.

Circadian rhythm disorders pose quite the health risk to an individual. Not only does this condition leave you feeling exhausted and unable to fall asleep, but it also may lead to anxiety, depression, heart conditions and hypertension.

Treatment options for circadian rhythm disorders in Alaska include bright light therapy, improved regular sleep hygiene and blackout shades.

Combatting the External Factors of Alaskan Living

A full night of sleep is underrated by many, but it plays a vital role in your overall health and well-being. Poor sleep habits can lead to medical conditions, such as heart disease, hypertension and obesity. The following tips and tricks have been proven to help one fall asleep and stay asleep, even throughout those long summer days and dark winter months.

It may seem impossible to combat the extremes of light and darkness that come with living in Alaska, as the rotation of the Earth can't be changed, but there are things you can do to achieve a better night's rest, whether it is summer or winter in Alaska.



Keep bedrooms dark and cool. Keeping your sleep environment dark and cool can aid in allowing you to experience a full night of restful sleep. Experts recommend keeping your sleeping environment between 60 and 67 degrees Fahrenheit to help you fall asleep faster and stay asleep throughout the night.⁵



Use blackout curtains. The summer months in Alaska come with more hours of light than darkness, making it harder to fall asleep. Blackout curtains, when appropriately sized, are designed to block the sunlight out of your bedroom, providing you with a dark space to fall asleep. They also help to reflect heat in the summer months, as areas such as Fairbanks, Alaska, can reach the mid to upper 90s.



Get outside and be active. It is reported that approximately 10% of Alaskans suffer from seasonal affective disorder (SAD) during the winter months.⁶ The prolonged exposure to days filled with darkness play a significant role in this disorder. You must get out and keep up with an active routine during the winter months to combat SAD.



Reach out for support. Reach out to friends, indulge in self-care and do not be afraid to ask for professional help if you find yourself slipping into depression.



Take advantage of light therapy. The use of light therapy is another way to combat the effects of seasonal affective disorder. A SAD lamp has been proven to improve the overall mood of the individual using it. It is recommended to use a lamp with a 10,000-lux bulb for approximately 30 minutes per day to receive the full effect.



Utilize seasons advantageously. Most importantly, embrace the changes in the environment around you. Each season is unique; therefore, it should be enjoyed to the fullest. Consider taking your family out for a picnic in the summertime and enjoy a cozy fire with s'mores during the winter months.

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By understanding the sleep challenges of those who live in Alaska and arming themselves with tips to manage them, sleep technologists can provide support and education to their patients in this unique sleep environment. 🌙



KEVIN ASP, CRT, RPSGT, is the president and CEO of inboundMed and enjoys helping sleep centers across the globe grow their business through his unique vision and experience of over 27 years in sleep medicine.

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