



Dr. Cody van Dijk. Photo by Darcy Finley

BEWARE THE BLUES

BY JENNIFER MCFEE

If you want to be out like a light at bedtime, consider protecting yourself from blue light before you say goodnight.

Doctor of Ooptometry Cody van Dijk, a member of the Manitoba Association of Optometrists, explains that the sun's white light is made up of all colours of the spectrum, just like you would see on the cover of Pink Floyd's *Dark Side of the Moon* album.

"The biggest source of blue light is the sun. Of course, the sun has always been there and that's not changing. But what is changing is the increasing popularity of smartphones, tablets, and LED lights," he says.

"Not only do they have a high amount of blue light but we're using those devices later in the day after the sun has gone down."

As a result, this later exposure to blue light is impacting our sleep cycle or circadian rhythm.

"Blue light has been shown to increase alertness, vigilance and wakefulness, which makes sense because we want to have all those qualities during the day when the sun is up and we're being productive. But if we're using sources of blue light into the evening, those sources of blue light are telling our brain to stay awake even though we're trying to fall asleep," van Dijk says.

opposition to the process. "You can think of blue light as working against melatonin. Our body naturally goes through a sleep-wake cycle. Blue light activates the wake part, while melatonin activates the sleep part. They do opposite things," van Dijk says.

"The big picture is that if you're trying to fall asleep by looking at a screen, you're walking in circles because your phone or tablet or TV is telling your brain to stay awake."

To protect yourself from the effects of blue light, van Dijk offers several suggestions.

"If you're trying to limit your blue light exposure from smartphones or other devices, the best thing is to not use them for about an hour before you plan to go to sleep," he says.

"In addition, you can avoid using LED or bright white bulbs in your bedroom. Instead, you can use lights that have a yellower or softer colour. There are also smartphone apps that can shift the screen colour to a more yellow palette."

Another option is to purchase a pair of glasses with a blue light filter.

"You can obtain these from your optometrist or wherever you normally get

"Blue light has been shown to increase alertness, vigilance and wakefulness, which makes sense because we want to have all those qualities during the day when the sun is up and we're being productive. But if we're using sources of blue light into the evening, those sources of blue light are telling our brain to stay awake even though we're trying to fall asleep," van Dijk says.

"So exposing yourself to blue light later in the day can cause reduced sleep length, reduced sleep quality, increased fatigue and overall decreased productivity the next day."

Ongoing research is currently looking at whether or not blue light is harmful to the health of the eyes.


"There are no strong direct links at this point," van Dijk says. "That is in contrast to UV light, which also comes from the sun and is known to cause macular degeneration, cataracts and melanomas."

And for people who take melatonin to help them fall asleep, blue light works in

your glasses," van Dijk says. "People are familiar with scratch-resistant coatings or anti-reflection coatings. This is a similar coating that would go over top of the surface of the lens and specifically block out blue light wavelengths associated with the sleep cycle."

If you have questions about blue light or other eye-related issues, it's worth seeking advice from the experts, he adds.

"The best way to figure out what would work best for you would be to get an eye exam from your local optometrist."



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