

# BLUE LIGHT

A O T E A R O A

Our increasing exposure to artificial blue light is causing problems

HOW DOES **BLUE LIGHT** AFFECT US?

## HĪNĀTORE What is blue light?



All living things on Earth have evolved to respond to the environment, including the daily cycle of light and dark from the sun rising and setting. We have special cells in our eyes that respond to light, particularly the blue wavelengths. When these cells perceive blue light in the morning, it resets our body clock. For good health and wellbeing, we need to be exposed to light in the morning and experience darkness at night.

## AO HURIHURI What has changed?



From the invention of fire to the electric lightbulb, our innovations have enabled us to override the natural daily cycle of light and dark. Lighting our homes and streets enable us to extend our activities into the night. We are also spending a lot of time looking at digital screens that emit blue light.

## HAUORA Our health



When we're exposed to artificial sources of blue light outside normal daylight hours, it can disrupt our body clock. This can make it hard to sleep and function well. It can also cause negative flow-on effects to our health such as increased risk of obesity, depression and potentially some types of cancer.

## TAIAO The environment



Like humans, plants and animals possess a body clock that regulates rhythms of activity throughout the day and across different seasons. Artificial light not only disrupts the body clocks of wildlife, it can also affect plant growth, pollination and reproduction, and animal migration, predation, and communication.

## MĀTAI ARORANGI Astronomy



Astronomers study the night sky to learn about the universe but the increase in outside lighting makes this difficult. To respond to this problem, many areas around the world are being set aside as Dark Sky sanctuaries, with strict controls around outdoor lighting.

## PUTANGA IHO Solutions



There are many things we can do to protect ourselves and the environment from the harmful effects of exposure to artificial blue light. We can use improved outside lighting and change bluer 'cool' light bulbs to bulbs that emit more yellow 'warm' light inside our homes. We can use software that reduces bright blue light from screens at night and turn our devices off.

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