

This study compares the needles, bark and cone of White Spruce (minhikw) as anti-diabetic medicines. They were compared to see how well they could protect specific parts of the body to the damages from diabetes. When people have diabetes, their blood sugar levels go up and down. This can damage, or even kill, nerves in different parts of the body.

The nerves that are away from the centre of the body, like in the feet and hands can be damaged. When this is happening, a person can suffer chronic pain, tingling sensations, weakness in feet and hands, sharp and sudden pain or paralysis in the face, thigh, or hand.

Too much or too little sugar in the blood can also damage the nerves that keep the internal organs working, such as in the gut or heart. When these are damaged the person can have digestive problems, vomiting, nausea, constipation, dizziness, or fainting. People may also feel hot or cold.

To make matters worse, the diabetes can damage nerves in certain parts of the eye and this can lead to blindness.

Canada's Aboriginal populations are particularly devastated by these kinds of complications from diabetes. In Iiyiyiu Aschii, about one adult in five is thought to be suffering from diabetes or pre-diabetes.

In 2003, plant scientists carried out a study with Iiyiyiu Elders to identify Cree medicinal plants used to treat the symptoms of diabetes.

White Spruce was one of the plants identified as having potential to protect against diabetes.

In the laboratory, we showed that most of the protection from White Spruce is in the needles and not in the cone or bark. We showed that this protects against both too much and too little sugar in the blood.

These studies provide new insight into the power of Iiyiyiu medicine plants to protect against the damages caused to nerves by diabetes.