

Curry leaves and diabetes

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Abstract

Murraya koenigii (L) /Kadi-Patta/Mitho Limdo/curry leaf plant is well known by many names worldwide. Its leaves are also used as herb in Ayurveda and Siddha medicine in which they are believed to possess antidiabetic properties, but there are no high quality of scientific evidences for such effects. We can consume raw leaves as they are very beneficial to mankind with no harmful side effects. Curry leaves, popularly known as kadi Patta, have long been used to add a distinct flavour to curries and rice-dishes. The wonderfully fragrant, tangerine-like flavour of the curry leaf is commonly used in south Indian delicacies. Curry leaf is also a standard remedy in Ayurveda, the traditional medicine of India. While it is known to manage health conditions like heart diseases, infections and inflammation, it is said to manage diabetes too. Loaded with antioxidants like beta-carotene and vitamin C, curry leaves have the ability to keep most diseases at bay, especially type-2 diabetes and heart diseases.

Diabetes, is metabolic diseases and chronic diseases that increase blood glucose levels over a long period. If proper treatment are not provide to diabetes client suffer from complications like chronic, foot ulcers heart disease, stroke, and eyes, diabetic, Serious long-term complications. Diabetes mellitus is a chronic disease caused lack production of insulin to the pancreas or unsuccessfulness of the insulin produced, That's why increase blood sugar level in the body is harm many of the body's systems like in particular the nerves blood vessels. Globally, an estimated 108 million in 1980 compared to 422 million adults were living with diabetes in 2014. The global prevalence (age-standardized) of adult diabetes population increasing from 4.7% to 8.5% has nearly doubled since 1980, from this effect increase overweight. All diabetes is planned to rise from diabetes client is 171 million in 2000 to 366 million in 2030. Developing countries are higher in men than women is prevalence of diabetes in urban people to between 2000 and 2030. A Study found that 50.8 million diabetes in the country were suffering and Present-day estimates depict the number of diabetics in the country about 62 million increase of over 10 million from 2011. According to the data of International Diabetes Federation Atlas in India of estimated 69.2 million are diabetic clients, as per the WHO suggested that 63 million in the year 2013. The past 15 year's growth are 100% in prevalence of diabetes.

Keywords: diabetes curry leaves *Murraya koenigii*

Introduction

What are Curry Leaves?

As its name suggests, curry leaves are the leaves from the curry tree, *Murraya koenigii*. The tropical and subtropical curry tree which belongs to family Rutaceae originated from India and Sri Lanka. The leaves are widely cultivated in several other Nations, such as Nigeria, Sri Lanka, Australia, China and Thailand. The plant especially its roots, bark and leaves are common in Ayurveda treatment.

How Do Curry Leaves Help in Diabetes and Blood Sugar Control?

First of all, the curry leaves contain several different types of antioxidants. These antioxidants help treat bloated stomach, diarrhea, stomach acid, peptic ulcer and diabetes. They are also known to help fight cancer and keep the liver healthy. There are lots of nutrients that can be found in curry leaves, which greatly benefit diabetes patients. These nutrients include fiber, phosphorus, calcium, magnesium, iron, copper, vitamins such as vitamins A, B, C and E. Moreover, curry leaves are rich in amino acids and antioxidants that can help in fighting diseases. Particularly, curry leaves contain flavonoids an anti-diabetic agent which help in blood sugar control by preventing the metabolism of starch into glucose.

The other chemical constituents present in curry leaves are

carbazole alkaloids. A research study published in the Journal of Agricultural and Food Chemistry showed that the alkaloids found in the leaves possess antioxidant properties. Carbazole alkaloids include mahanimbine, murrayanol, mahanineoenimbine, O-methyl murrayamine A, O-methylmahanine, isomahanine, bismahanine and bispyrayafoline. Further studies conducted by Dr. Russel Ramsewak at the Department of Horticulture at Michigan State University suggested that these chemicals have insecticidal and antimicrobial properties as well, specifically mosquitocidal properties.

In Ayurvedic treatment, the leaves contain several useful benefits. These include anti-inflammation, anti-microbes, anti-oxidant, and especially diabetes prevention. The roots are also being used in relieving the body of aches and pains, while the bark is used in treating snakebite. Curry leaves are decently rich in fibres. Fibre slows down the digestion and does not metabolism quickly, which helps keep your blood sugars in check. Curry leaves is also known to naturally boost your insulin activity. When your body is able to respond to insulin well, your blood sugar levels would also be under control.

According to a study published in *Die Pharmazie - an International Journal of Pharmaceutical Sciences* - the anti-hyperglycaemic properties of the leaves were shown to be effective in controlling blood glucose level in diabetic rats.

The study conducted by Indian-based researchers read, "Oral administration of ethanolic extract of *M. koenigii* at a dose of 200 mg/kg/b.w./day for a period of 30 days significantly decreased the levels of blood glucose, glycosylated haemoglobin, urea, uric acid and creatinine in diabetic treated group of animals

It is packed with a bunch of nutrients like calcium, phosphorous, iron, magnesium and copper. It is also decently rich in fibres and good for weight loss, digestion, skin and hair problems too. They are excellent for detox and are also famous to regulate cholesterol too. They are particularly famous for their anti-diabetic properties.

How to Use Curry Leaves for Diabetes and Blood Sugar Control?

The best way to consume curry leaves for diabetes is to eat it in its natural, unprocessed, raw form. Cooking the leaves can damage the flavonoids and other nutrients in it. To enjoy the benefits of curry leaves for blood sugar control, consume a minimum of 10 leaves a day. You can sneak them into your salad. Try it for at least 3 months to see if it works for you.

Here's how these wonder leaves could help manage diabetes.

A study published in *Chemico-Biological Interactions* states that due to its rich mineral reserves like those of iron, zinc and copper, curry leaves are important in maintaining normal glucose levels in blood. These minerals activate beta cells of pancreas that are responsible for the production of insulin hormone. Curry leaves also influence metabolism of carbohydrates favorably. They can restore liver and kidney enzymes responsible for breaking down carbohydrates back to their normal levels thus treating diabetes. As diabetic patients have decreased levels of antioxidants, their body cells may die at a faster rate.

Not only does kadi patta help lower the blood sugar levels, but also keeps in check for a few days after the administration of curry leaves. Curry leaves help your blood sugar levels by affecting the insulin activity of the body and reduces ones blood sugar levels. Also the type and amount of fiber contained within the leaves play a significant role in lowering blood sugar levels. So, if you suffer from diabetes, kadi patta is the best natural method to keeping your blood sugar levels in check.

Lowers cholesterol

Many research shows that curry leaves have properties that can help in lowering one's blood cholesterol levels. Packed with antioxidants, curry leaves prevent the oxidation of cholesterol that forms LDL cholesterol (bad cholesterol). This in turn helps in increasing the amount of good cholesterol (HDL) and protects your body from conditions like heart disease and atherosclerosis.

Prevents greying of hair

Kadi patta has always been known to help in preventing greying of the hair. It is also very effective in treating damaged hair, adding bounce to limp hair, strengthening the shaft of thin hair, hair fall and treats dandruff. The best part about this benefit is that you can either choose to eat the curry leaves to help with your hair woes or apply it to your scalp as a remedy.

How to Eat Curry Leaves?

You can eat 8-10 fresh curry leaves right in the morning. You can also juice these leaves and drink the juice. You can add them to your meals and salads too.

According to the book, 'Healing Spices' by Dr. Bharat B. Aggarwal, researchers at Tang Center for Herbal Medicine Research at the University of Chicago used curry leaf to reduce levels of high blood sugar by 45 percent. Curry leaf may help in improving the management of type-2 diabetes. Here's how it helps stabilize blood glucose and manage diabetes efficiently.

- Curry leaf contains antioxidants like vitamin, beta-carotene and carbazole alkaloids that are said to hinder a range of diseases linked to oxidative damage from free radicals, of which type-2 diabetes tops the list.
- Curry leaf is said to be rich in fibre content. Fibre is responsible for slowing down digestion and does not metabolism quickly, which keeps your blood sugars in check.
- Curry leaf tends to boost your insulin activity and when the body is enabled to use insulin properly, blood sugar levels get stabilized.
- According to the study published in *Die Pharmazie - an International Journal of Pharmaceutical Sciences* - the anti-hyperglycaemic properties of the leaves were shown to be effective controlling blood glucose levels in diabetic rats.
- It has compounds that slow down the rate of starch-to-glucose breakdown in people with diabetes. Curry leaves can control the amount of glucose entering the blood.

Conclusion

It is overall concluded from the above text that curry leaves has a medicinal as well as nutritional value. They are excellent for detox and are also famous to regulate cholesterol too. They are particularly famous for their anti-diabetic properties. It is along with a bunch of nutrients like calcium, phosphorous, iron, magnesium and copper. It is also decently rich in fibres and good for weight loss, digestion, skin and hair problems too. They are excellent for detox and are also famous to regulate cholesterol too. But unfortunately most of the people in India are not fully aware of such information. So the need of the hour is to intervene people about the same. Also more research should be done in order to know about its benefits and that too in detail.

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