

**Dr. Shobana Shanmugam, Sr. Scientist –Foods Research,
Madras Diabetic Research Foundation (MDRF), India**

*This is a transcript of the exclusive interview of Dr. Shobana Shanmugam,
Sr. Scientist –Foods Research, Madras Diabetic Research Foundation (MDRF), India
taken on the occasion of World Cashew Convention & Exhibition 2018*

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Brief about Madras Diabetic Research Foundation (MDRF)

Madras Diabetic Research Foundation is headed by Dr. V. Mohan, Chairman and Professor who has dedicated his life towards diabetes research and his contribution is not only in the clinical aspects but also he gives a lot of emphasis on food and nutrition research because both the clinical research as well as food and nutrition research can aid in prevention as well as management of diabetes and its complications.

Mention the health benefits of consuming cashews?

Cashews along with its deliciousness, packed up with lot of health benefits and handful of cashews can offer a good quality nutrients such as protein. 5 grams of fiber can be obtained from handful of cashews and it can cover around 10 to 12 percent of daily recommended dietary allowance of iron and zinc, 30 percent of the RDA of copper and magnesium. Apart from this, it has good fat, out of 50 percent fat it contains almost 60 percent is of mono unsaturated fatty acids, which is good in terms of protecting our heart and health.

There is a misconception in India and across the world that the nut consumption is supposed to aid in weight increase, but we have conducted the study by Madras Diabetic Research Foundation in type-2 diabetes patient, we have found that consuming cashew nuts for a periods of three months with a level of 30 grams of cashew nuts in the daily diets did not increase the body weight and waist circumference. In addition to this, some of the important things to share are: we observed decrease in blood pressure and increased in energy derived mono

unsaturated fatty acids because our Indians diets are generally deficient in mono unsaturated fatty acids and loaded with PUFA (n=6) and we consume lot of refined grains which renders more susceptible to diabetes. Generally, good quality low glycemic index whole grains and mono unsaturated fatty acids are recommended and cashew nuts can be the very good source of the mono unsaturated fatty acids. From the trial, we also found that it can cause substantial increase in energy derived from the MUFA because the oleic acid is pre-dominant mono unsaturated fatty acids from the cashews and found that the increase in the energy derive from the MUFA component of cashews from the study.

We also found that this increases the good cholesterol because HDL (High-density lipoproteins) cholesterol is known as good cholesterol which is cardio-protector as we Asian Indians have naturally low level of HDLs and it's very hard to get an increase in the HDL cholesterol. Through dietary means and cashew nuts can be the very good source of the ingredient, which can increase the HDL cholesterol.

As you have explained the study of consuming cashews by diabetic which was funded by CEPCI. Could you elaborate the study?

The clinical research trial was conducted by Madras Diabetic Research Foundation, Chennai and I am happy to tell that the research findings have been published in *Journal of Nutrition*, which is available online and it is the recent research from India and one of its unique kind which has covered almost 150 subjects and total of 300 participants were recommended for the study, who were type-2 diabetic patients. We had 150 in cashew arm and 150 in the control arm who consume no nuts throughout the study. While the cashew nut arm, consumed 30 grams of nuts for the duration of three months as we found no gain in body weight, waist circumference, an increase in HDL cholesterol, a decrease in the systolic blood pressure and also observed that substantial increase in the energy derive from the MUFA and also did not find any adverse changes in the glycemic parameters of the study participants. This was the interesting findings which can support recommending nuts to diabetic patient's and also for normal people to incorporate cashew nuts in their daily diet.

The important point to notice is that should not increase the portion size, we can knock out 200 kilo calories of energy derived from the carbohydrates and incorporate nuts in the place of carbohydrates which is very good replacement of carbohydrates.

What are the future plans for cashew research?

This was the study on type-2 diabetic's subjects but I feel that a lot of research required for the population who are at the risk. We Asian-Indians are more prone to diabetics and cardio-vascular disease because we are genetically rendered with more features which are susceptible to diabetics and effect of supplementation of

cashews nuts can be conducted on the people whom are at risk to evaluate the preventive role of cashews nuts in diabetes and cardio-vascular complications. So that would be the welcome research in the cashew nut aspects and also we should explore more on the carbohydrate-cashew matrix because Indians diets are rich in carbohydrates and high in glycemic load and tend to increase in type-2 diabetes and cardio-vascular problems. We are getting a lot of recommendations even from the American Diabetic Association to replace some of the carbohydrates with nuts effectively. So nuts will be one of the ingredients that can reduce the glycemic load and lot of research are required to incorporate the nuts in the cereals and this kind of study is welcomed and also more value-added products from the cashews nuts should be developed and health professionals should work together with food technologist to evolve more food products such as savory crackers, pasta products etc., and also both should work together to bring more evidence products from cashews and try to increase more consumption of nuts in our daily diets.

Your views about WCCE

It was a very good with well-planned convention and lot of expertise have taken part by exchanging views from each of us which has given a new dimension on cashews and also should try to disseminate the health benefits of cashews and induce more people to work on cashews and incorporate cashews in the daily life.