

# Drinking camel milk can lead to significant reduction in cholesterol levels among diabetics

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A new study has hailed camel milk for its ability to lower heart disease risk among diabetics and help in the treatment of dyslipidemia.

Dyslipidemia is the imbalance of lipids such as cholesterol, [low-density lipoprotein cholesterol](#), (LDL-C), triglycerides, and [high-density lipoprotein](#) (HDL). This condition can result from diet, tobacco exposure, or genetic and can lead to cardiovascular disease with severe complications

The study, [published](#) in *BMC Complementary Medicine and Therapies*, pursues a systematic review and meta-analysis of randomized controlled trials (RCTs) and finds that consistent consumption of camel [milk](#) can significantly lower cholesterol levels among diabetics, reducing risk of heart disease.

The scientists write, "We searched nine databases from inception until December 31, 2022, to identify relevant RCTs. Effect sizes for total cholesterol (TC), triglycerides (TG), low-density lipoprotein (LDL), very low-density lipoprotein (VLDL), high-density lipoprotein (HDL) were calculated and expressed using mean differences (MD) and confidence intervals (CI)."

In addition to the databases, the scientists say their findings were derived after following hundreds of randomized [clinical trials](#) on [patients](#) with type 1 and type 2 diabetes.

"Consumption of fresh CM (camel milk) by patients with diabetes resulted in significant reductions in TC, TG, and LDL levels, while showing a significant increase in HDL levels. Patients with T1D elicited a more beneficial effect in lowering TC, LDL, and TG levels and in increasing HDL levels than their corresponding partners with T2D," they write.

TC, TG and LDL refer to [effect sizes](#) for total cholesterol, triglycerides, low-density lipoprotein consecutively.

The scientists also calculated low-density lipoprotein (VLDL), and high-density lipoprotein (HDL) using mean differences (MD) and confidence intervals (CI).

The authors aimed to settle the controversy surrounding the effects of camel milk intake on lipid profile among patients with diabetes. They now hope their "[systematic review](#) and meta-analysis of randomized controlled trials (RCTs) aimed to calculate the effect size of camel milk intake on blood lipids among patients with type 1 (T1D) and type 2 (T2D) diabetes" could help shed ample light on the issues that have fueled camel milk debate in the literature.

However, the study emphasizes that more trials and research are needed to put an end to the controversy among scientists on the medicinal benefits of camel milk due to "the high heterogeneity in the included studies suggest[ing] that more RCTs with larger sample sizes and longer intervention durations are required to improve the robustness of the available evidence."

"Our findings suggest that CM could be a beneficial complementary treatment in the context of dyslipidemia management needed for patients with both T1D and T2D, in terms of its ability to decrease blood TC, TG, and LDL, and increase HDL levels.

"Long-term consumption (> 6 months) of CM by patients with diabetes may be a helpful adjuvant therapy alongside the prescribed drugs for improving lipid profile, particularly in patients with T1D," claim the researchers.

University of Sharjah's Associate Professor MoezAlIslam Ezzat Faris and a co-author of the study is upbeat about the findings and their implication, particularly in the countries constituting the Gulf Cooperation Council—Kuwait, Saudi Arabia, United Arab Emirates,

Oman, and Bahrain—where there are sizeable camel populations, and their milk is still a staple food of some people's diet.

"Consumption of camel milk for a long time by patients with diabetes could be a useful adjuvant therapy alongside classical medications, in improving lipid profile and lowering the risk of developing [cardiovascular disease](#)," Dr. Faris says.

He said he and his colleagues have found that diabetes patients who consumed camel milk showed significantly low levels of total cholesterol, triglyceride, and [low-density lipoprotein](#) when compared to patients who didn't drink camel milk.

The results are even more pronounced in patients who consumed fresh camel milk for more than six months, particularly in type 1 diabetes patients, Dr. Faris said.

The study also found that patients showed higher levels of high-density lipoprotein (HDL), which is medically considered "good" cholesterol.

High levels of TC, TG, and LDL are associated with a greater risk of heart disease and stroke, whereas high levels of HDL do the opposite.

Camel milk is available for purchase in most groceries in oil-rich Gulf countries and malls in the region. It is for many a luxury drink, with a price tag more than double that of cow milk, for example.

There are about 1.3 million camels in the Gulf with an estimated half a million of them in the UAE. Arabs, particularly in the Gulf are historically known for their attachment and association with camels.

The animals are paraded as part of royal celebrations, with camel racing an important sports activity in the region.

Dr. Faris hopes the study and its findings will add new value and further attachment to camels with their milk turning into a staple due to its therapeutic benefits.

According to Dr. Faris, regular consumption of camel milk could even lower the risk of developing diabetes among prediabetic patients.

The scientists, in their study, praise camel milk for its low saturated fat content and medicinal value. They maintain that drinking camel milk is a "better alternative to normalize lipid profile among consumers."

If word of the study's spectacular findings spread, camel farmers, whether in the Gulf or elsewhere could cash in on the highly nutritious milk. Camel milk is already being used as an alternative to current treatments for fats or cholesterol abnormalities.

Patients with diabetes often take [insulin injections](#) to regulate the insulin levels in their body. Regular consumption of camel milk can lower the dosage of insulin required by patients, says Dr. Faris.

Diabetic patients are twice as likely to develop heart disease or stroke as compared to people without chronic disease. "This work opens a venue for further investigation to identify the bioactive substances in [camel](#) milk and in developing targeted therapeutics for diabetes," Dr. Faris adds.

**More information:** Narmin Khalid et al, Effect of camel milk on lipid profile among patients with diabetes: a systematic review, meta-analysis, and meta-regression of randomized controlled trials, *BMC Complementary Medicine and Therapies* (2023). [DOI: 10.1186/s12906-023-04257-5](#)

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