

Efficiency of patented fibre complex from *Opuntia ficus indica* on blood lipids parameters considered as risk factors for Metabolic Syndrome (Syndrome X)

Purpose:

The clinical study was aimed at evaluating the efficiency of a patented fibre complex from *Opuntia ficus indica* on blood lipid parameters. The patented complex has a fibre content that is on average eleven times higher than generic extracts from the same plant.

Sixty-eight females with Metabolic Syndrome (Syndrome X) and a BMI (Body Mass Index) between 25 and 40 participated in this mono-centric randomised, placebo-controlled, parallel double-blind study.

Methods:

During 6 weeks, half of the females consumed 1.6g of the patented fibre complex from *Opuntia ficus indica* per meal and the other half consumed a placebo. The entire group followed a well-balanced diet with a controlled lipid input. The placebo and patented fibre complex from *Opuntia ficus indica* were given in the form of capsules.

The efficiency of the tested product was evaluated, on day 14 and on day 42 of the study. Several lipid parameters were measured: changes in LDL cholesterol, HDL cholesterol, serum triglycerides, and at the end of the study, the participants were re-evaluated for metabolic syndrome.

Results:

On and after the 14th day of the study, patented fibre complex from *Opuntia ficus indica* showed a decrease in LDL cholesterol levels by 10%, compared to a 3% decrease in the placebo group. The HDL cholesterol levels in the group, which consumed patented fibre complex from *Opuntia ficus indica*, showed an upward significant trend throughout the course of the study, where else the placebo group showed a downward trend. Overall, patented fibre complex from *Opuntia ficus indica* showed a beneficial effect on good cholesterol, which is generally associated with a reduced cardiovascular risk.

During the first 14 days of the study, the number of volunteers with Metabolic Syndrome decreases in both groups. However, after 42 days of treatment, 39% of the volunteers from the patented fibre complex from *Opuntia ficus indica* group were diagnosed to be free from Metabolic Syndrome, in comparison to 8% in the placebo group.

On a receptive population, near than 60% of women who consumed patented fibre complex from *Opuntia ficus indica* were diagnosed to be free of Metabolic Syndrome.

No particular side effects were observed when taking patented fibre complex from *Opuntia ficus indica*.

Conclusion:

These results suggest that the patented fibre complex from *Opuntia ficus indica* could regulate blood lipid levels and thus participate in reducing cardiovascular risk. Therefore, the patented fibre complex from *Opuntia ficus indica* is efficient in applications related to cardiovascular risks prevention, when associated with overweight problems.