

# 4LIFE TRANSFER FACTOR® IS CLINICALLY PROVEN TO ACTIVATE IMMUNE FUNCTION WITHIN TWO HOURS\*<sup>2</sup>

Technical White Paper

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## OBJECTIVE

The aim of this study was to determine the effects of a single dose of 4Life Transfer Factor on the immune health of healthy human subjects.\*

## BACKGROUND

Properly functioning immune health requires constant surveillance, communication, and activation of various immune function cells and signaling proteins. 4Life has a long history of demonstrating immune health benefits of 4Life Transfer Factor. Across different study types (i.e., in vitro, preclinical, and human clinical) and immune function cell types (e.g., natural killer cells, macrophages, T cells, and B cells), 4Life Transfer Factor has been shown to significantly improve immune function.<sup>1</sup> One attribute that had not been investigated until this study, however, was how quickly 4Life Transfer Factor could activate immune health. This is an important question to answer for those who are proactively seeking fast-moving support for their immune health. This study set out to observe how quickly 4Life Transfer Factor affects the immune function.\*

## EXPERIMENTAL METHODS

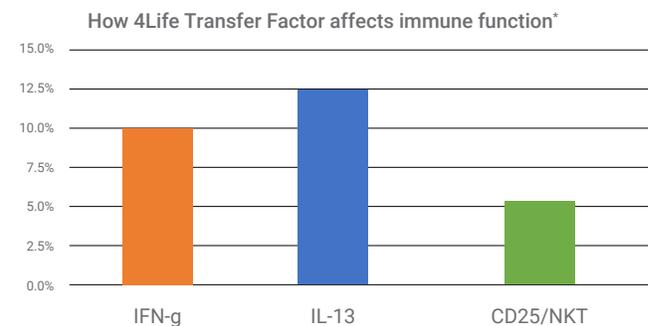
Healthy participants were tested in a placebo-controlled, randomized, double-blind, cross-over study. On each clinic day, participants consumed one dose of either a placebo or 600 mg of 4Life Transfer Factor® Tri-Factor® Formula followed by a one-week washout period. Blood samples were taken just prior to consumption, and then 1, 2, and 24 hours after consumption.

Serum cytokine profiles were simultaneously determined from the collected blood samples via a Luminex, which is a machine that analyzes blood samples. Immune function cell numbers and activation were determined by staining different markers for each immune function cell type (i.e., natural killer cell, T cell, natural killer T cell, and monocyte) and analyzed using flow cytometry.<sup>2</sup>

## RESULTS

Consuming a single dose (600 mg) of 4Life Transfer Factor resulted in rapid changes in serum cytokine levels, reflecting increased activation and communication within the immune function. Specific to this study, IFN-γ and IL-13 changed significantly at two hours compared to the placebo.\*

Changes in numbers and activation of different immune function cell types within two hours of ingesting 4Life Transfer Factor suggests that there was a signal transmission to immune function cells to enhance the surveillance for health threats. The CD25 marker on natural killer T cells increased significantly after one hour compared to the placebo.\*



## CONCLUSION

A single dose (600 mg) of 4Life Transfer Factor is clinically proven to activate immune function within two hours.\* This level of immune health activation can be reached with 600 mg of 4Life Transfer Factor from one product or a combination of products.\*<sup>2</sup>

## REFERENCES

1 <https://www.4life.com/corp/Page/47/studies-and-publications>

2 Clinical study on the rapid immune modulating effects of 600 mg of 4Life Transfer Factor Blend compared to placebo. G. Jensen, NIS Labs Report 058-006.