

# Standard Process® 21-Day Purification Program Supports Cardiovascular Health

# Study Finds Standard Process Purification Program Supports Cardiovascular Health

Open-label, prospective outcomes study

Six weeks (three week control/21-day purification)

40 subjects: 18-65 years of age (22 men, 18 women)

Four with BMI < 25, 16 with BMI 25-29.9, 20 with BMI ≥ than 30



Decrease in blood pressure

Improvement in lipid measures

Modest weight and BMI reduction

In this study, healthy adults were recruited from the campus of Logan College of Chiropractic and included based on weight and a total cholesterol level equal to or greater than 180 mg/dl.

During the first three weeks, participants didn't change their diet, and their food intake was logged in a diet journal (collected by the researchers each week). Data collected include height, weight, blood pressure, and heart-rate variability data, as well as a 12-hour fasting **blood sample** when participants entered the study (baseline) and at week 3.

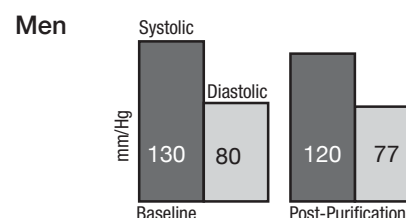
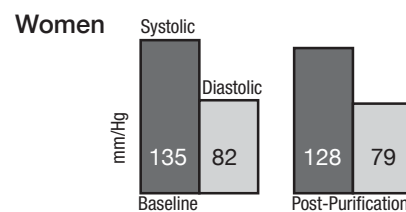
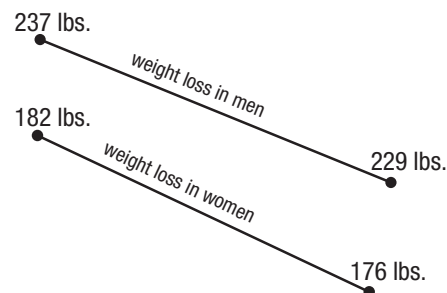
At the beginning of week 4, participants received their purification program instructions and supplements, and a final blood sample was collected on day 42.

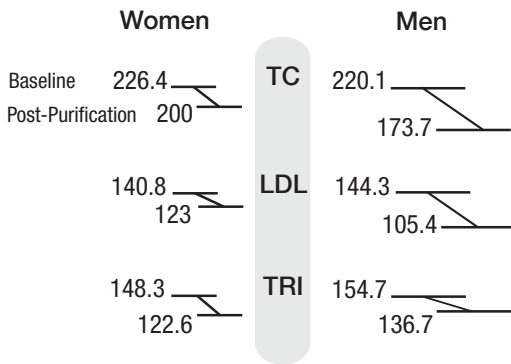
## Blood samples examined for:

- › Total cholesterol (**TC**)
- › High-density lipoprotein (**HDL**) cholesterol
- › Triglycerides (**TRI**)
- › Low-density lipoprotein (**LDL**) cholesterol
- › Homocysteine
- › High-sensitivity C-reactive protein (**CRP**)

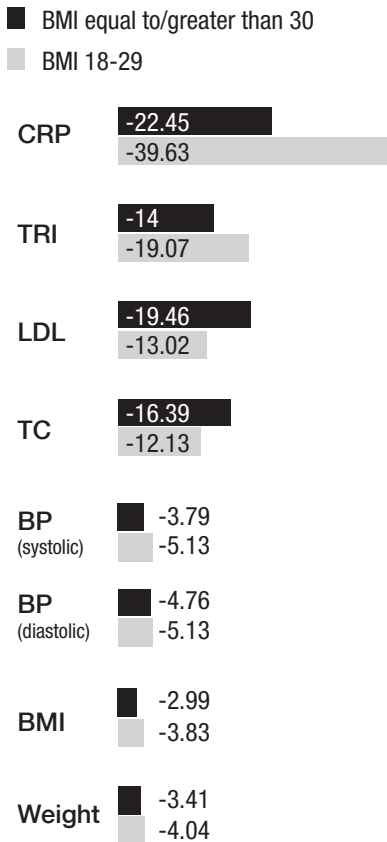
## Results

- › For the group as a whole, statistically significant **weight loss** (8 lbs. for men, 6 lbs. for women) occurred from baseline to post-purification ( $p = <0.0001$ ). This led to a statistically significant decline in BMI for the group ( $p = <0.0001$ ).
- › A statistically significant reduction in both systolic and diastolic **blood pressure** was seen for both the group as a whole ( $p = <0.0001$ ,  $p = 0.008$  respectively) as well as men and women ( $p = <0.0001$  for both).





### Percent Change at Completion of the 21-Day Purification Program



- › A statistically significant reduction in **total cholesterol** ( $p = <0.0001$ ), and **LDL cholesterol** ( $p = <0.0001$ ) **triglycerides** ( $p = 0.069$ ), was found for all subjects, as well as a reduction in HDL cholesterol ( $p = 0.019$ ).

*In men, the decrease in total cholesterol and LDL from baseline to post-purification was statistically significant ( $p = 0.0001$  and  $p = 0.0003$  respectively).*

*In women statistically significant drops in total cholesterol and LDL were reported ( $p = 0.0052$  and  $p = 0.0141$ ), and a strong trend was found for decrease in triglycerides ( $p = 0.0585$ ).*

- › A statistically significant reduction in **C-reactive protein** was reported in the group as a whole ( $p = 0.0009$ ), as well as in both women ( $p = 0.0224$ ) and men ( $p = 0.0160$ ).
- › The subjects of greater than normal weight had similar changes (reported as a **percent change**) from week 3 to the end of the study. While both groups experienced similar results in general, the overweight group changed more in regard to C-reactive protein, triglycerides, and systolic blood pressure; while the group with a BMI equal to or greater than 30 saw a greater reduction in total cholesterol and LDL cholesterol.
- › Statistically non-significant findings: The heart-rate variability (measurement of difference between heartbeats and the difference between a series of consecutive heart rates) was not statistically significant for the group as a whole. Likewise, in the group as a whole, homocysteine levels did not show a statistically significant change.

**Expanding on the results reported by Powell and Leonard,<sup>1</sup> the Logan study supports the finding of improved lipid profiles in patients who have completed the purification program and provides more information on how the purification program can impact blood pressure and C-reactive protein as well.**

**This study shows that the 21-day Standard Process Purification Program can support cardiovascular health.\***

### More study is needed to examine:

- › Decrease in high-density lipoprotein
- › Mixed findings for heart-rate-variability parameters
- › Compliance
- › Generalizability to populations with BMI less than 25
- › Effect of exercise on intervention

1. *J Chiropr Med.* 2008. Sep;7(3):94-100.  
Retrospective study: 26 subjects  
Reported reduction in weight, total cholesterol, triglycerides, low-density lipoprotein, very low-density lipoprotein

\*These statements have not been evaluated by the Food & Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.