# THE EFFECTS OF LAMININE OMEGA+++ AND LAMININE ON CHOLESTEROL PROFILES AND BLOOD PRESSURE 

By Dr. Edward Andujar, M.D.

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## SUMMARY

The study was designed to test the effects of the nutritional supplement, Laminine OMEGA+++, independently and in combination with Laminine, on cholesterol, low density lipoproteins (LDL), high density lipoproteins (HDL), triglycerides and blood pressure. There were 15 individuals in the study, broken into three groups of five. This was a double-blind placebo-controlled study that took place over a total period of 12 weeks.

The study took place during two phases. The first lasted eight weeks and included Groups A, B, and C. Cholesterol serum profiles and blood pressure were taken from participants in each group at the start of week one and at the conclusion of week eight.
During this phase of the study, participants took a total of four supplements a day - two in the morning and two in the evening. The second phase of the study only included participants from Group A and lasted an additional four weeks, after which time cholesterol serum profiles were measured again. During phase II, participants in Group A consumed eight supplements a dayfour in the morning and four in the evening.
During the first phase of the study, results showed that the average cholesterol down-regulation in Group B was about 9.8 percent, compared to 11.5 percent in Group C. Meanwhile, cholesterol levels in Group A actually increased by 1.0 percent over the first eight weeks but normalized by 12 percent between weeks eight and 12 . Results for LDL and triglycerides generally followed a similar pattern.

## METHODS AND MATERIALS

Laminine is a proprietary blend of Fertilized Avian Egg Extract, phyto proteins and marine proteins. Together, this combination contains the full chain of 22 amino acids.

Laminine OMEGA+++ is a blend of Omega 3s (Omega 3, 6, 9), CoEnzyme Q10 Extended Release, Vitamin K2 and Fertilized Avian Egg Extract.

## Phase I:

Group A took two placebos in the morning and two in the evening.

Group B took one placebo and one Laminine OMEGA ${ }^{+++}$ supplement in the morning, and one of each in the evening.

Group C took one Laminine supplement and one Laminine OMEGA ${ }^{+++}$supplement in the morning and one of each in the evening.

Cholesterol serum profiles for each participant were measured at the start of the study and again after the conclusion of week eight.

## Phase II:

After the initial eight weeks, Group A was given Laminine and Laminine OMEGA+++ to take for four weeks. Group A was given double the number of supplements to take each day than participants during the initial eight-week period. This part of the study was not blind. Participants were given actual botlles of both supplements.
Group A took two Laminine capsules in the morning with two Laminine OMEGA ${ }^{+++}$soffgels and two of each again at night, for a total of eight supplements per day.
Cholesterol serum profiles for each participant in Group A were measured again at the conclusion of week 12 .

Participants were selected based on concerns for at least one of the following: cholesterol (greater than $200 \mathrm{mg} / \mathrm{dll}$ ), LDL (greater than $130 \mathrm{mg} / \mathrm{d}$ l), triglycerides (greater than $150 \mathrm{mg} / \mathrm{dl}$ ) or high blood pressure (greater than 140/90). Out of the 15 participants in the study, only four (one from Group A, one from Group B and two from Group C) had blood pressure concerns and thus blood pressure was only tested at the beginning and at the conclusion of the study for these individuals.
Participants did not take any medications for cholesterol or blood pressure. Individuals were assigned numbers and randomly selected for one of three groups: Group A, Group B and Group C. Two bottles were administered to participants every four weeks with instructions to take two from each per day during the first phase of the study and four of each per day during the second phase of the study (only Group A).
Subjects in Group A were also given a subjective survey at the conclusion of Phase II, when they were asked to rate improvement in their joints, memory, skin, sexual drive, muscle tone and strength, stress levels, sleep and emotional well-being. Of the five subjects in Group A, only four chose to be a part of the survey.

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## RESULTS

Phase I:

|  | Average Cholesterol Levels in mg/dl |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | WEEK 1 | WEEK 8 | PT CHANGE | \% CHANGE |
| GROUP A | 211 | 213.2 | $\uparrow 2.2$ | $\uparrow 1.0 \%$ |
| GROUP B | 183.6 | 165.6 | $\downarrow 18$ | $\downarrow 9.8 \%$ |
| GROUP C | 216.8 | 191.8 | $\downarrow \mathbf{2 5}$ | $\downarrow 11.5 \%$ |

TABLE 1 A
This table indicates that over the initial eight weeks, the normalization in cholesterol levels was most significant in Group C, with an average down-regulation of $25 \mathrm{mg} / \mathrm{dl}$ or 11.5 percent. The average change in cholesterol for Group A was actually an increase of 1 percent.

|  | Average LDL Levels in mg/dl |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | WEEK 1 | WEEK 8 | PT CHANGE | \% CHANGE |
| GROUP A | 134 | 121 | $\downarrow 13$ | $\downarrow 9.7 \%$ |
| GROUP B | 96.8 | 77.8 | $\downarrow 19$ | $\downarrow \mathbf{1 9 . 6 \%}$ |
| GROUP C | 119.5 | 94.5 | $\downarrow \mathbf{2 5}$ | $\downarrow \mathbf{2 0 . 9 \%}$ |

TABLE 2A

Table 2A shows that Group A experienced an average downregulation of 9.7 percent in LDL during the eight-week period, but still substantially below the 19.6 percent change observed in Group B and 20.9 change in Group C.

AVERAGE CHOLESTEROL DROP (The effects of Laminine and Laminine OMEGA ${ }^{+++}$after 8 weeks)


CHART 1A

AVERAGE LDL DROP
(The effects of Laminine and Laminine OMEGA ${ }^{+++}$after 8 weeks)


CHART 2A
LEGEND
Group A8: Placebo/Placebo after 8 weeks
Group B8: Laminine OMEGA+++/Placebo after 8 weeks
Group C8: Laminine/Laminine OMEGA ${ }^{++}$after 8 weeks

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|  | Average Triglyceride Levels in mg/dl |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | WEEK 1 | WEEK 8 | PT CHANGE | \% CHANGE |
| GROUP A | 191 | 459 | $\uparrow \mathbf{2 6 8}$ | $\uparrow \mathbf{1 4 0 . 3 \%}$ |
| GROUP B | 177.4 | 120.2 | $\downarrow 57.2$ | $\downarrow \mathbf{3 2 . 2 \%}$ |
| GROUP C | 432.2 | 360 | $\downarrow 72.2$ | $\downarrow 16.7 \%$ |
| TABLE 3A |  |  |  |  |

Triglyceride levels varied more drastically among groups during the initial eight weeks: triglyceride levels in Group A surged 140.3 percent, but down-regulated 32.2 percent for Group B and dropped 16.7 percent in participants in

## AVERAGE TRIGLYCERIDES DROP

(The effects of Laminine and Laminine OMEGA ${ }^{+++}$after 8 weeks)


CHART 3A
LEGEND
Group A8: Placebo/Placebo after 8 weeks
Group B8: Laminine OMEGA ${ }^{+++}$/Placebo after 8 weeks
Group C8: Laminine/Laminine OMEGA ${ }^{+++}$after 8 weeks

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Group C.


TABLE 1B
Phase II:
Cholesterol levels in Group A from week nine to week 12 down-regulated by $23.4 \mathrm{mg} / \mathrm{dl}$ or 11 percent after participants consumed four Laminine and four Laminine OMEGA ${ }^{+++}$ supplements per day, a significant drop for only four weeks, but below the 11.5 percent decrease in Group $C$ taking four supplements a day for the eight weeks in Phase I.

|  | Average LDL Levels in mg/dl |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | WEEK 9 | WEEK 12 | PT CHANGE | \% CHANGE |
| GROUP A | 121 | 118.5 | $\downarrow \mathbf{2 . 5}$ | $\downarrow \mathbf{2 . 6 \%}$ |

TABLE 2B
LDL levels in Group A actually changed more significantly during Phase I of the study (Placebo/Placebo), but still normalized by an additional 2.6 percent during Phase II.

## AVERAGE CHOLESTEROL DROP

(The effects of Laminine and Laminine OMEGA ${ }^{+++}$after 4 weeks)


## AVERAGE LDL DROP

(The effects of Laminine and Laminine OMEGA ${ }^{++}$after 4 weeks)


CHART 2B

LEGEND

- Group A8: Placebo/Placebo after 8 weeks
- Group A12: Laminine/Laminine OMEGA+++ (week 9-week 12)


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TABLE 3B

Triglyceride levels in Group A dropped by 267 mg/dl or 58.2 percent during Phase II, substantially higher than the 16.7 percent decrease in Group C during Phase I.

## LEGEND

- Group A8: Placebo/Placebo after 8 weeks
- Group A12: Laminine/Laminine OMEGA ${ }^{+++}$(week 9-week 12)

AVERAGE TRIGLYCERIDES DROP
(The effects of Laminine and Laminine OMEGA ${ }^{+++}$after 4 weeks)


CHART 3B

Phase I and II:

|  | Blood Pressure |  |  |
| :---: | :---: | :---: | :---: |
|  | Systolic/Diastolic (mm Hg) |  |  |
|  | WEEK 1 | WEEK 8 | CHANGE |
| SUBJECT 1 FROM GROUP A | 140/90 | 164/94 | † 24/4 |
| SUBJECT 1 FROM GROUP B | 152/100 | 138/88 | $\downarrow 14 / 12$ |
| SUBJECT 1 FROM GROUP C | 152/94 | 100/80 | $\downarrow 52 / 14$ |
| SUBJECT 2 FROM GROUP C | 180/110 | 140/90 | $\downarrow 40 / 20$ |

TABLE 4A

Of the four participants that had higher blood pressure at the beginning of the study (one from Group A, one from Group B, and two from Group Cl, all experienced positive results, with individuals in Group C experiencing the most notable normalization.


TABLE 4B

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## Survey

After Phase II, the average improvement in all categories was about 5.75 on a scale of 0 -10, with zero representing no change and 10 representing a significant improvement. These are subjective results but nonetheless notable.

|  | AVERAGE MPROVEMENT <br> AT WEER 12 |
| :---: | :---: |
| JOINTS | 5.8 |
| MEMORY | 6 |
| SKIN | 5.8 |
| SEXUAL DRIVE | 5.8 |
| MUSCLE TONE | 5.5 |
| AND STRENGTH | 5 |
| STRESS | 6.2 |
| SLEEP | 6.2 |
| EMOTIONAL WELL-BEING |  |

TABLE 5

## DISCUSSION

Triglyceride levels in Group A normalized by $267 \mathrm{mg} / \mathrm{dl}$ or 58.2 percent during Phase II, the most substantial change throughout the duration of the study. However, participants in Group $C$ experienced the best and most consistent overall results. HDL levels were within normal limits both at the beginning and end of the study for all participants.

Although participants in Group A took double the Laminine and Laminine OMEGA+++ during Phase II, results were not drastic enough to recommend doubling the suggested usage for Laminine OMEGA ${ }^{+++}$for all individuals. The down-regulation in LDL was not significant in Group A during Phase II as compared to Group C during Phase I. Nevertheless, for individuals that do have high triglyceride concerns, doubling the intake of Laminine and Laminine OMEGA+++ can yield a normalization in a short period of time.

From these data, we can conclude that Laminine OMEGA ${ }^{+++}$helps to down-regulate cholesterol, LDL, triglyceride and blood pressure levels (Group B), but when taken with Laminine, the benefits are more significant as a whole (Group C after Phase I and Group A after Phase III.

[^0]
[^0]:    These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease

