



# Lifestyle Options for LDL-C (and ApoB) Lowering on a Ketogenic Diet

## OBJECTIVE

To provide you with lifestyle options for LDL-C modification, separate from pharmacological options.

## CAVEAT

This document is not a “you should” document. **It is NOT meant to place a value judgement on a given LDL-C level.**

It is meant only to provide educational material for your consideration. What you do with your body is your choice. This is not medical advice.

## COLLABORATION

This document is a collaboration:

- Nicholas Norwitz, PhD
- Simon Hill, MSc, BSc
- Shawn Baker, MD
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## MORE RESOURCES

Resources are [hyper-linked](#) →

## FOR ANYONE

**FIBER** - *SOLUBLE FIBER SOURCES ARE MORE EFFECTIVE THAN INSOLUBLE.*

- Soluble fiber sources, e.g.: Psyllium, Flax, Chia, Leafy Greens
- Certain fibers are particularly potent, such as Arabinoxylan, which can be supplemented and are rich in barley and finger millet, although these higher net carb options will compromise nutritional ketosis

**FATTY ACID** - *PROFILE FOR LDL-C LOWERING, PUFA ARE MOST POTENT, OVER MUFA, WHERE MOST SATURATED FATS TEND TO RAISE LDL-C*

- For cooking, avocado oil is stable (high smoke point, ~520F)
- For keto-friendly PUFA sources, I enjoy sesame/tahini, pecans, walnuts.
- Keto Recipes: Tahini dressing, Muhammara, Chicken Pecan salad
- Nuts are best raw. If toasted, do at home at <130C (265F) for <20 min.

## FOR LEAN MASS HYPER-RESPONDERS #LMHR

*\* Interventions ranked (★-★★★) on efficacy & ordered based on presumed practicality.*

**CARBOHYDRATES** ★★★

Adding ~100g net carbs will *potently* lower LDL-C; this can be in any form (research: case series, interventional trial, OreoVsStatin). But for overall health, it seems sensible to preference low-glycemic fruits, starches over junk food.

**MEAL FREQUENCY AND EATING WINDOWS** ★

All else being equal, eating more frequently and over a larger eating window (e.g. 3 meals a day over 12 hours vs 2 meals a day over 6 hours) will tend to lower LDL-C in #LMHR. Lower potency option.

**WEIGHT GAIN** ★★

Gaining weight will lower LDL-C in #LMHR. Even a 1 kg/m<sup>2</sup> increase in BMI can translate into a 20% drop in LDL-C in some LMHR (anecdotal). For those with very low body fat/BMI or wanting to “bulk,” this can be a plausible option.

**ACTIVITY MODIFICATION** ★★

High energy expenditure in lean persons on a ketogenic diet, all else equal, can increase LDL-C via the lipid energy model. Consider if you may be ‘overtraining.’ Trading cardiovascular activity for weight training may be an option for some.