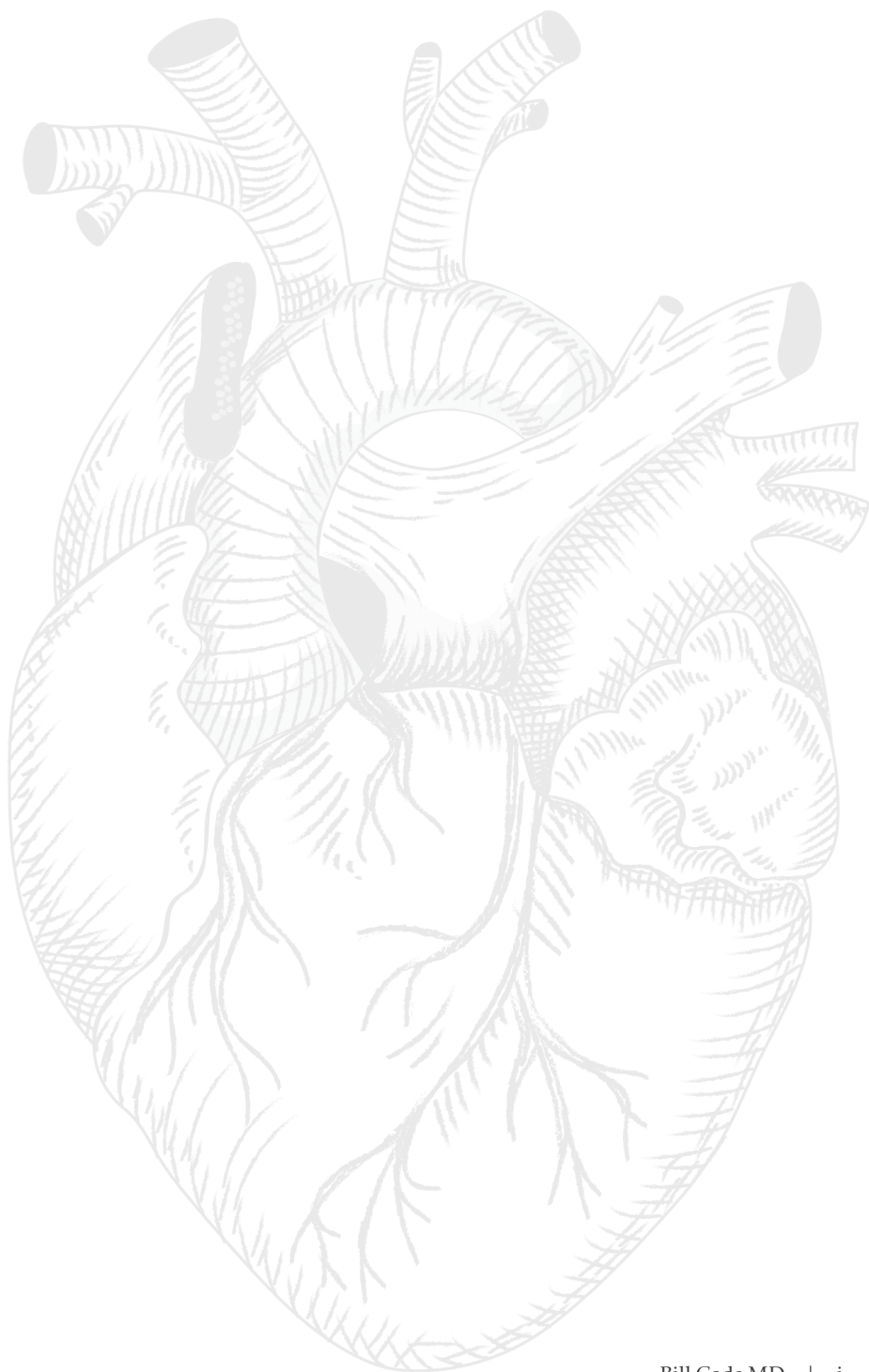




Solving the Heart Puzzle

An MD's Journey Through Oxygen, Omega-3s,
and the Science of Healing

— Bill Code MD —

Copyright © 2026 by Bill Code MD
All rights reserved.

No part of this publication may be reproduced in any form, or by any means, electronic or mechanical, including photocopying, recording, or any information browsing, storage, or retrieval system, without permission in writing from Words of Wisdom Press.

This book contains advice and information relating to healthcare. It is not intended to replace medical advice and should be used to supplement rather than replace regular care by your doctor. It is recommended that you seek your physician's advice before embarking on any medical program for treatment. All efforts have been made to assure the accuracy of the information contained in this book as of the date of publication. The publisher and the author disclaim liability for any medical outcomes that may occur as a result of applying the methods suggested in this book.

For bulk purchases by groups or educational facilities, or for audiobook and other languages, contact info@solvingtheheartpuzzle.com.

ISBN:

978-0-9787463-2-2 (paperback)

978-0-9787463-3-9 (ebook)

Illustration and book design by lauratimmermans.ca

1. Medical, Alternative Medicine

Words of Wisdom Press

5816 Menzies Rd, Duncan, BC, Canada, V9L 6J9

email: info@solvingtheheartpuzzle.com

website: solvingtheheartpuzzle.com

Table of Contents

Chapter 1: Why I Wrote This Book	1
Chapter 2: Omega-6s and Omega-3s	7
Chapter 3: Shedding Light on Omega-3s	13
Chapter 4: Why a Fish Oil/Olive Oil Blend?	25
Chapter 5: New Options for Cardiovascular Disease	29
Chapter 6: Reversing Atherosclerosis – Plaques	41
Chapter 7: Concussion and The Omega-3 Protocol	49
Chapter 8: Concussion and the role of Extra Oxygen	57
Chapter 9: Oxygen: the God Molecule	65
Chapter 10: Microcirculation	73
Chapter 11: Oxygen Myths	81
Chapter 12: Oxygen Facts	89
Chapter 13: Stroke	95
Chapter 14: Headaches and Migraines	103
Chapter 15: Spike Protein	111
Chapter 16: Peripheral Neuropathy	115

Chapter 17: Multiple Sclerosis: My Journey 129

Chapter 18: Synergy Between Omega-3s and Microcirculation.....141

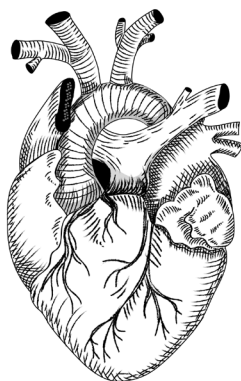
Chapter 19: Adjuncts for Heart Health147

Chapter 20: Epilogue.....151

Appendix: Bill Code’s Daily Health Regimen..... 153

Glossary 155

Acknowledgements.....178



CHAPTER 6

Reversing Atherosclerosis – Plaques

For decades we have been told that cholesterol—especially LDL cholesterol—is the central villain in heart disease. In this chapter I want to offer a different lens, inspired by Dr. Malcolm Kendrick’s work in his book: “The Clot Thickens: The Enduring Mystery of Heart Disease”. In his view, atherosclerosis is primarily a **clotting and repair disorder**, centred on damage to the vessel lining, a tendency to form small clots, and imperfect healing. Cholesterol is still present in the story, but as a supporting actor rather than the main villain.

1. Rethinking Plaque: Healed Clots, Not Grease in Pipes

We usually picture plaque as greasy cholesterol sticking to the artery wall like limescale in a pipe. Kendrick suggests a more dynamic picture: **repeated tiny injuries** to the inner lining of the artery (the endothelium) followed by **small clots** that form to patch those injuries. Most of the time, the body cleans up the clot and restores a smooth surface. But if clots form **too often**, or if they are **not fully removed**, the remnants get built into the wall as scar-like tissue. Layer upon layer, this process thickens the wall and narrows the vessel.

In this model:

- Atherosclerotic plaque is essentially **scar tissue from healed clots**, mixed with lipids and inflammatory cells.

The key questions become:

- What is **damaging the endothelium** in the first place?
- Why is the blood **so ready** to clot there?
- Why is the **cleanup and repair** process incomplete?

If we want to reverse or at least stabilise atherosclerosis, we must address these three elements, not just chase cholesterol numbers.

2. Three Pillars: Endothelium, Clotting, and Repair

We can organise this clot-first model into three intertwined pillars.

2.1 Endothelial Health – Protecting the Teflon

The endothelium is a single-cell-thick layer lining every blood vessel. When healthy, it behaves like **Teflon** – blood glides past smoothly. When injured, it becomes more like **Velcro** – platelets and proteins stick, and clots form.

Major insults to the endothelium include:

- **Smoking and air pollution** – toxic particles and oxidants directly damage endothelial cells.
- **High blood pressure** – increased mechanical shear stresses the lining, especially at branch points.
- **High blood sugar and insulin resistance** – glucose and advanced glycation end products (AGEs) injure proteins and promote inflammation.
- **Systemic inflammation** – infections, autoimmune diseases, chronic inflammatory conditions.
- **Spike protein exposure** – from COVID-19 infection and, in some individuals, from vaccination, spike can injure the endothelium and promote microclots.

When these acts of injury occur occasionally, the system copes. When they occur day after day, little repair jobs never quite finish before the next insult arrives.

2.2 Coagulability – How “Clot-Prone” Is Your Blood?

Kendrick focuses strongly on how **ready the blood is to clot**. You can think of this as the “stickiness” or “thickness” of your clotting system, quite separate from cholesterol.

Factors that increase coagulability include:

- High fibrinogen and other clotting factors.
- Elevated Lp(a), Lipoprotein a, and sometimes high homocysteine.
- Chronic stress and high adrenaline/cortisol levels.
- Dehydration and stasis (sitting, long flights, immobility).
- Low oxygen tension (sleep apnoea, high-altitude flights, lung disease).
- Estrogen, pregnancy, and certain hormonal therapies in susceptible individuals.

In this picture, a person with “normal” cholesterol but very **clot-prone blood** can be at high risk, while someone with higher LDL but calm (not readily clottable) blood and robust endothelial health may be safer than we once thought.

2.3 Repair and Fibrinolysis – Clearing the Scars

Finally, we must consider how well the body **dissolves clots** and repairs the wall.

- The fibrinolytic system (plasmin and its allies) normally dissolves clots once a wound is sealed.
- Chronic inflammation and metabolic syndrome can blunt this system.
- Instead of being fully cleared, clots may be partly organised into the vessel wall as fibrous tissue and lipid-laden foam cells, forming the classic plaque structure.

So “reversal” is not only about pulling lipids out of plaques; it is about **reducing new clots, improving clot resolution**, and allowing smoother, more stable healing.

3. What Actually Reverses or Stabilises Plaque in This Model?

When we re-read the reversal literature through Kendrick’s lens, many of the classic interventions (Ornish, Mediterranean diet, exercise) still work – but for **different reasons** than simply lowering LDL.

3.1 Lifestyle Heart and Plant-Forward Programs

Intensive programs like the Ornish Lifestyle Trial showed modest regression of coronary narrowing and fewer angina symptoms. Rather than viewing this as LDL reduction alone, we can see:

- **Very low-fat, plant-based diets:** reduce post-prandial circulating fats (lipaemia), improve insulin sensitivity, provide antioxidants and anti-inflammatory compounds = less endothelial injury and lower coagulability.
- **Exercise:** improves endothelial function, increases nitric oxide, promotes collateral vessels, reduces blood viscosity (thickness), and enhances fibrinolysis (clot breakdown).
- **Stress management:** lowers adrenaline (catecholamine) surges that can trigger plaque rupture and acute thrombosis (clot formation).
- **Smoking cessation:** reduces direct endothelial injury and platelet activation.

Even where LDL falls, the primary benefit of these programmes in a clot-first model is that they reduce the triggers of endothelial damage and clot formation.

3.2 Mediterranean and “Anti-Inflammatory” Patterns

Mediterranean-style diets rich in vegetables, fruits, nuts, legumes, whole grains, fish, and extra virgin olive oil consistently show:

- Reduced cardiovascular events.
- Improved endothelial function.
- Lower markers of inflammation and thrombosis.

In clot-first terms, this pattern:

- Supplies **polyphenols** (e.g., hydroxytyrosol) that protect the endothelium and LDL from oxidative damage.
- Provides **Omega-3s** that make platelets less sticky and alter the balance of clotting mediators (initiators).
- Improves metabolic health, reducing insulin resistance and blood sugar swings.

Regression or stabilisation of plaque here is not magic: it is the natural result of **fewer injuries and calmer (less clottable) blood**, week after week.

4. Practical Levers to Reverse the “Clot–Scar” Process

I have emphasised several tools that fit beautifully into this Kendrick-flavoured framework. We can group them by which pillar they mainly support.

4.1 Protecting the Endothelium

Key actions:

1. Stop smoking and avoid chronic exposure to air pollution such as wood stoves where possible.
2. Manage blood pressure:
 - Daily movement.
 - Salt and alcohol moderation.
 - Medication when lifestyle is not enough.
3. Tame blood sugar and insulin:
 - Low-glycaemic, minimally processed foods.
 - Reducing refined starches and sugars.
 - Maintaining a healthy waist circumference.
4. Eat polyphenol-rich foods:
 - Early-harvest extra virgin olive oil.
 - Berries, grapes, pomegranate.
 - Green tea, herbs, spices.

These steps lessen the “sandblasting” of the endothelial surface and give it breathing room to heal.

4.2 Calming the Clotting System

Here is where some of my core tools shine:

Fish oil/olive oil blends

- EPA and DHA make platelets less sticky and adjust clotting mediators.
- Olive-oil polyphenols preserve Omega-3 integrity and support vasodilation and antioxidant defences.
- Clinical trials show fewer cardiac deaths and probably fewer fatal arrhythmias with adequate Omega-3 intake.

Hydration and movement

- Prevent stasis and haemoconcentration, especially during travel and sedentary work.
- Simple practices: get up and walk every 30–60 minutes; drink water regularly.

Oxygen and avoidance of chronic hypoxia

- Treat sleep apnoea.
- Consider judicious supplemental oxygen (or carefully supervised EWOT) in patients with documented hypoxia, recognising that low tissue oxygen is a potent driver of coagulation.

Nattokinase and fibrinolytic support

- Nattokinase, taken on an empty stomach, may help the body dissolve excess fibrin and microclots.
- It must be used cautiously, especially with other anticoagulants or in easy bleeders, but conceptually it fits the goal of enhanced clot resolution.

These interventions do not primarily change LDL; they change how **ready the blood is to clot** and how effectively it clears clots once they form.

4.3 Supporting Proper Repair

Lastly, we support smooth, stable healing:

- **Adequate vitamin K2 and D** – to guide calcium into bones rather than arterial walls, potentially affecting plaque calcification and stability.
- **Good sleep and stress reduction** – to lower chronic cortisol and adrenalin (catecholamine) load, which otherwise keep the body in a semi-emergency state and interfere with repair.
- **Nutrient sufficiency** (magnesium, B-vitamins, vitamin C) – to support collagen, antioxidant defence, and homocysteine metabolism.

In practice, these are the “boring” basics that make the difference between plaques that are thin-capped and rupture-prone versus thicker-capped and stable.

5. Where Does Cholesterol Fit Now?

In this Kendrick-inspired model, you do not need to deny that cholesterol participates in plaque:

- LDL particles still carry cholesterol and other lipids into the arterial wall.
- Oxidised LDL is still toxic to the endothelium and immune cells.
- Extremely high LDL, especially in familial hypercholesterolaemia, still increases plaque burden.

But LDL is no longer the guiding light. Instead, I present it as:

- A marker that often travels with metabolic and inflammatory dysfunction.
- A substrate used in the repair process when clots are incorporated into the wall.
- A secondary target: lowering it may help in some people, especially high-risk patients already on the brink, but it is not sufficient on its own.

In essence, we are expanding the picture of atherosclerosis, not flipping from one single theory to another.

6. A New Definition of “Reversal”

With this reframing, we can define reversal of atherosclerosis more precisely:

- Fewer new clots laid down on the arterial wall.
- Better dissolution of clots that do form, leaving less debris to be built into the wall.
- More stable scar tissue, with thicker fibrous caps and less inflammation inside plaques.

Imaging might show:

- Slight reductions in plaque volume or stenosis.
- More often, halted progression and features of stability (more calcification at the surface, less lipid “soft” core).

Clinically, reversal looks like:

- Fewer angina episodes.
- Improved exercise tolerance.
- Fewer heart attacks and strokes over time.

My role as author is to help the reader see that this can be achieved not by chasing cholesterol alone, but by softening or calming the blood, soothing the endothelium, and supporting vessel repair.

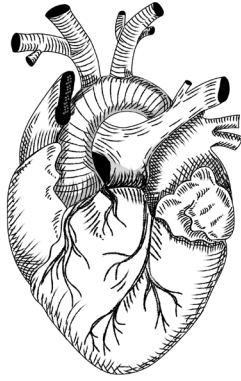
7. Closing Note and Reference

Readers who want to explore this clot-centred view in more depth can be directed to:

Kendrick M. "The Clot Thickens: The Enduring Mystery of Heart Disease" A thoughtful, often provocative exploration of why atherosclerosis looks more like a clotting and repair problem than a simple fat-storage issue. His book of 324 pages reads like a detective novel! I liked it!



Figure 3: "The Clot Thickens" - My go-to Book to Reverse Plaque.



Acknowledgements

Just as it takes a village to raise a child, I have needed a village to write this book. I am grateful to everyone who have contributed to this end result. Inevitably, I will miss someone, and I sincerely apologize for that.

My inhouse editors of my wife Denise, son Brian, Karen Whitehouse, Patrick Hrushowy, Amy Newhook and Andrew Paterson. I also thank my many friends for their assistance: McKenzie Paterson, Elaina Konoby, Peter Burris, Lani Royce, Elaine Merritt, Alan, Diane and Ashlee Brough, Julie Monty, Cynthia Pincombe, and Stuart Tomc. These individuals have all contributed both inspiration and effort. I have been greatly assisted in this book's preparation by Laura Timmermans.

Any errors you note in this book are my responsibility. Please forgive me and let me know for the next printing.