



# CONVERGENCE

News, Links, and Insights  
by JEFFREY BLAND, PHD



## May 2019 - Mid-Month Bonus

Thank you for subscribing to Dr. Jeffrey Bland's newsletter. Enjoy and share this information, which is for educational purposes only. Always consult with a qualified healthcare professional when you are in need of medical advice, diagnosis, or treatment.

**In this issue:** The Vantage Point: Close to Home; The Benefits of Multi-Level Checks and Balances; Remembering Dr. John Hathcock (New Video Blog)

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## The Vantage Point: What's Been Happening in Dr. Bland's World?

Do you want to track Dr. Jeff Bland's activities, see photos from his travels, and find inspiration in his words? Follow his social media pages to stay connected!

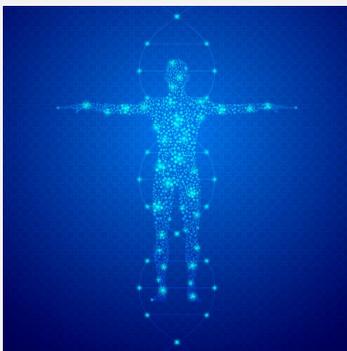


### Paradise, Close to Home

Dr. Jeff Bland is the ultimate road warrior. He's racked up a huge number of frequent flyer miles, sped across China in a bullet train, and even logged time on the high seas. But the Pacific Northwest is home, and spring is this region's finest hour. So instead of travel photos this month, here's a rare look into the daily scenes that nurture and inspire Dr. Bland—cherry blossoms in bloom, walks with Nutmeg, and canoeing on Puget Sound with Susan Bland.

The Bland family is committed to environmental causes and supports a number of organizations that are dedicated to preserving and protecting the beautiful landscapes and habitats found in this unique and peaceful part of the world.

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## The Benefits of Multi-Level Checks and Balances

Genes and lifestyle each provide messages to the body, and they also talk to each other—and this can result in a harmonious chorus of health or amplify a distress call throughout the body. Recent research shows that adiposity and diabetes enter into this conversation in different ways depending on genetic and dietary inputs, underlining the importance of recognizing individuality in response patterns.

The *FADS1* gene codes for enzymes that form eicosapentaenoic and arachidonic acids from polyunsaturated fatty acids, and at its rs174550 locus, T is the most common (major) allele while C is minor. In non-obese, non-diabetic men, a single genetic polymorphism within the *FADS1* gene was seen to [influence the effect of linoleic acid](#) (LA, the principal dietary omega-6 fatty acid) on the glycemic and immune responses. When these men consumed more LA, those with the less common CC genotype experienced a significant decrease in plasma glucose, though their hsCRP (high-sensitivity C-reactive protein) levels increased, while subjects with a TT genotype showed decreased hsCRP and no significant change in plasma glucose.

In a larger population that included men with obesity and/or diabetes, findings were somewhat different, as these men with the TT genotype showed lower fasting glucose and lower hsCRP levels with increased LA intake, whereas those with the CC genotype showed no significant change in either measure at higher LA intake. Though a T allele at rs174550 relates to increased risk for diabetes, in non-diabetic men, it has previously been associated with the following [lipoprotein particle](#) characteristics, which, in combination, would generally be considered advantageous for cardiovascular function in modern times:

- high concentrations of large HDL, very large HDL, and very small VLDL particles
- low concentrations of small VLDL and very large VLDL particles

However, in women, a C allele at rs174550 is associated with increased risk for [gestational diabetes](#).

This combination of results may be confusing—why would a gene allele that seems “bad” for diabetes seem “good” for lipoproteins, and why would a major gene variant be “bad” for diabetes in men while a minor variant at the exact same gene locus is “bad” for diabetes in pregnant women? It may help to avoid thinking of genes as either good or bad. Genes code for structural and regulatory proteins that cooperate according to what has best achieved life, function, and reproductive capacity in previous generations. The same networking genes that influence development of diabetes and chronic inflammation within the milieu of 21<sup>st</sup> century living optimized the immune response (including limited, acute, protective inflammation) and energy storage during earlier ages when famine and infectious diseases were major causes of death.

The body’s four-dimensional wisdom prepares versatile strategies for many possibilities, and does so through overlap and redundancy among multiple levels of regulation of metabolism, response, and memory. The demands of chronic illness are different from those of wellness, and genetic patterns that serve to bolster immunity in metabolic health may predispose to self-perpetuating inflammation in dysfunction. For many people, the most accessible means of regulating function is through voluntary inputs: nutrition, physical activity, and controllable aspects of one’s mental, social, and physical exposomes. Fat and glucose metabolism are remarkably responsive to this lifestyle-related messaging, making it the most direct and most profound way to maintain comfort, resilience, and health in the long run.



### **Remembering Dr. John Hathcock**

Video Link: <https://bit.ly/30sSX7F>

It's important to remember those who forged the paths that many of us take for granted. Last month, Dr. John Hathcock passed away. Dr. Hathcock was a longtime key opinion leader among dietary supplement manufacturers, especially during his 17-year tenure with the Council for Responsible Nutrition. He believed in nutrition science that was evidence-based and well documented. Dr. Hathcock's own publication record is substantial and wide-ranging—truly a testament to his dedication and renown. Dr. Jeff Bland shares his personal tribute and tells you more about Dr. Hathcock's legacy in this new video.

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