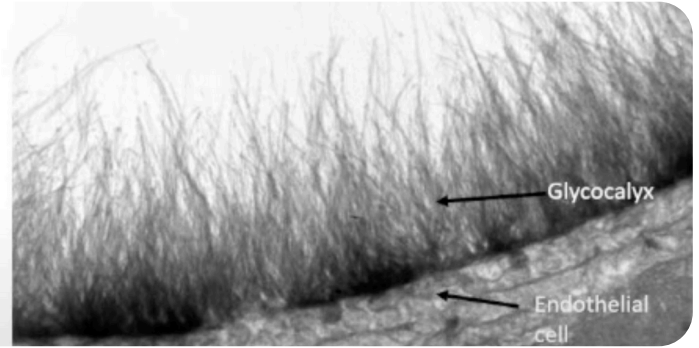
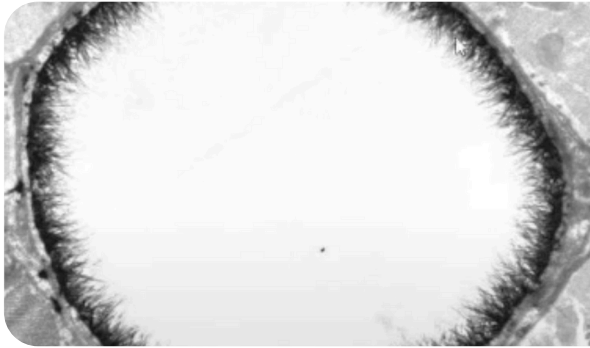




Glycocalyx



Glyco What ?

Glycocalyx is the amazing protective layer that no one knows about. The picture above was taken with an electron microscope and depicts what the inside of our arteries actually look like. We thought that the inner most lining of our arteries were the endothelial cells. As you can see from the photo above, we were wrong. There is a whole other layer called the glycocalyx that most of us have never heard of.

Glycocalyx is present throughout our body encasing every cell: the cardiovascular system, the brain, our joints, the gastrointestinal tract and all of our organs. The integrity of the glycocalyx is what protects us from chronic illnesses, arthritis, Alzheimers, kidney disease, high blood pressure and it is being looked at in cancer as well. The better our glycocalyx health the better our chances of aging gracefully.

What affects glycocalyx integrity ? Thought you would never ask. The following will all break down the glycocalyx: high blood sugars, inflammation, toxins, heavy metals infections (EBV and Covid protein spike), oxidative stress, shear stress, sleep deprivation, and hypoxia. There are some priveleged few who genetically have "bullet proof" glycocalyx.

This is not typical and more of an exception. For most of us our glycocalyx will breakdown with age and toxin exposures over time.

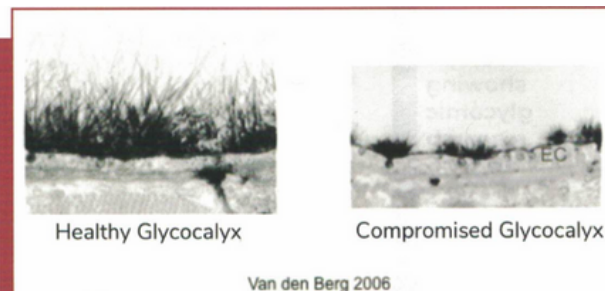


Image Credit: Gouverneur, et al., Journal of Internal Medicine (2006), 259: 393-400

Supplements of the Month

CoQ10 100mg or 300mg is 50% off for the month of September:

The following supplements and IV are 15% off for the month of September:

Endothelial Support: This is the supplement referenced in the newsletter to help with maintaining and rebuilding your glycocalyx.

Recommended dose is 1 cap 2 x per day and 2 caps 2 x per day if you have serious illness, with the understanding that this is life long - a multivitamin for your glycocalyx if you will.

NOX Support: This product specifically increases nitric oxide production within the body and will reduce ADMA levels. Elevated ADMA and reduced nitric oxide levels are directly related to glycocalyx and endothelial cell health. **Recommended dose is 2 caps 2 x per day.**

Vitamin and Mineral IV

(Requirements are that you are an active patient and have had a kidney test (GFR) in the last 6 months.)

Covid and Glycocalyx:

Traditionally the glycocalyx breaks down slowly as we age explaining why we are most vulnerable to chronic illness in our later years of life. The Covid protein spike we now understand is incredibly inflammatory and has been destroying the glycocalyx at a very accelerated rate. This explains why the sudden increase in strokes, pulmonary emboli, DVT and cancer diagnoses in the last couple of years. This rapid destruction of the glycocalyx is presenting now. We have testing available to see if you are at higher risk for clot formation as well as an indirect measure of potential covid protein spike body burden to help minimize your risk and to protect your glycocalyx.

Mediators Inflamm 2023 Aug 29;2023:6685251. doi: [10.1155/2023/6685251](https://doi.org/10.1155/2023/6685251)

So what can I do about it?

Unfortunately, as far as we know at this time once the damage has occurred our body does not have a way to repair the glycocalyx. **However, we have supplements that can help with rebuilding the glycocalyx**, and in doing so greatly reduce your risk of CAD, CKD, arthritis, Alzheimers, dementia and gastrointestinal diseases and the potential to reverse disease.

Heavy Metals:

We talked in our newsletter last month about how destructive heavy metals are in the human body and how they are implicated in so many disease processes. This is that link, heavy metals among other items listed will destroy the glycocalyx. **Get tested and reduce your burden.**

Other Variables:

- Manage your blood sugars. **Target hemoglobin A1C for longevity is 5.2.**
- Manage your blood pressure
- Manage and minimize toxic burden/load as best you can, clean air, water and food.
- Manage your stress - **HRV-Heart Rate Variability** is an excellent way to understand how stressed you are. The higher the HRV the better your stress is managed
- Get 8 hours of sleep, address sleep apnea if you have it or possibly have it.
- Regular Exercise - an hour a day of movement
- Detox - sauna, colonics, heavy metal chelation, detox program 1-2 x per year, supplements

Presentation:

- Dr. Archambault will be giving a more in depth talk on Glycocalyx at the Verrado Community Center on 9/11/25 from 6-8pm if you would like to learn more.

Office Updates:

- **Happy one year anniversary to Dr. Rada (9/9/25)!
Thank you for all that you do!**
- Office will be closed on Monday 9/1/25 in observance of Labor Day. We will resume our regular hours on Tuesday 9/2/25 at 8am.

