Vegan Diet Health and Nutrient Gaps

So the claim everyone should aim to be vegan, you're happy with it? No, and here's why. So I am a third year med student and I will actually come out and say that the vegan diet tends to Be healthier.

Absolutely. Great. I don't think there's much dispute over that. You can look at the evidence it is. It is healthier, however, the biggest thing with the Vegan diet from a physician perspective to think about is and it's been mentioned a couple of times is the micronutrient deficiencies that you can have.

B12 is one of them. First off, kudos to him for at least acknowledging that vegans tend to have better health outcomes than meat eaters. But I do take issue with framing micronutrient deficiencies as an issue of a vegan diet specifically.

All dietary patterns have some gaps. Those gaps just change. For example, vegains may need to ensure they're getting enough of certain nutrients like vitamin B-12, but then meat-eaters need focus more on getting of things like magnesium and folate.

And this can be taken care of by making sure you're including certain food groups or supplements depending on the nutrient. Why wouldn't you take the supplements?

Because why would I take supplements when I could just have lean meats like chicken and fish and turkey and things that I really enjoy? Is that studied by Junie Wang in 2019 where she found the fortifieds and the supplement were more easily absorbed by the body because they're already taken away from the fibers?

So that's why you say that. So I actually disagree with that because, for instance, omega-3s. This was very odd. Dr. Jack Symes cited this study in which consuming cereal fortified with vitamin B12, which is similar to taking a supplement, resulted in higher B-12 levels in the body compared to consuming meat with the same amount of B 12. And that's without the cardiovascular risks of regularly consuming me.

And the reason likely is that the vitamin B12 in a fortified food or supplement isn't bound to protein like it is in meat, so its absorption doesn't rely as much on the health of the gut to be able to break the B-12 apart from the protein.

And after that, presumably without ever having actually read the study, the med student just disagreed because fish have omega-3s. I'm really not sure what the relevance of that is to whether or not nutrients from supplements are absorbed as well or better than nutrients form foods.

Nevertheless, to indulge his concerns over vegans not getting the long-chain omega-3s, EPA, and DHA from fish, the importance of which is debated.

B12, Supplements, and Absorption

I'll mention that algae-based supplements exist. They contain the same omega 3s and have been shown to be similarly bioavailable to fish oil. He's just plain wrong here.

According to data from the Food Climate Resource Network, University of Oxford, and USDA database, 76% of global soy production is for animal feed. Only 13% is oil meant for human consumption and 4% for industry use in the form of things like biodiesel.

It is literally the byproduct. They grow the soy for the oil. Even if it wasn't being fed to the animals, they would still grow soy. That is true. No, it's not true!

We can most generously call it a co-product or consider the OIL to be the bi- product. The demand for soybeans is tied to global meat consumption. If we didn't produce so much soy to feed to animals which can also be used to produce oils, we would just shift to producing other oils which could actually save money and resources.

That's because soybeans actually have a lower oil yield than rapeseed, sunflower and palm oil, so he's got it completely backwards. They're gonna have lower BMI if they're vegan.

They can get all the nutrients that they need. Yes, kids can be healthfully raised vegan as long as some care is taken to ensure they are getting adequate nutrition.

Just like any other diet. And like Dr. Jack Symes highlighted, there may be some benefits. For example, vegan kids tend to have a lower bmi and lower LDL cholesterol levels.

And if you're wondering why that even matters at that age, well, cardiovascular disease begins to develop in childhood or even earlier. So yes, attention needs to be paid to certain nutrients like iron and vitamin B12.

But let's not write off the potential benefits of feeding kids at the very least a plant-predominant diet. What are you gonna do about the calories? Because you know, you get rid of the mineral, the meats, and you cut out that calorie, but you also cut a lot of calories that you need to survive.

Soy, Omega-3s, and Animal Feed Claims

Because if we become too malnutritioned and neurodivisioned, we will die." That escalated quickly. Yes, if you eat far too few calories for far to long, You could die.

If you didn't know that, now you do. But when we look at vegans and the general population, We tend to see better health outcomes than meat eaters. In part because they tend consume somewhat less calories.

That can be a good thing. Nuts, seeds, nut butters, plant-based meats, avocados, oils and grains. And if you're more worried about getting enough protein, there's tofu, tempeh, seitan, fava beans, lentils, lental pastas, and once again plant based meats.

Just to name a few. Oh boy. So in 2022, the FDA Modernization Act 2.0 was signed into law. This allows for alternatives to animal testing in the preclinical phase of drug development.

In part because there's such a low translation of results from animal studies to human studies. More on that. This is well understood. It's like she's never actually looked into the topic yet wants to debate it.

Here's another recent review, separate to what Jack is citing, stating that, on average, the translation rate of animal research to humans is about 5%.

He looked at 2,500 articles and he said, quote, most of the data is not worth publishing and most experiments are not worthwhile doing. That was just cringy.

She asked who wrote the paper or where she could find the research, but I think it's pretty clear she doesn't actually care.

Children, Calories, and Vegan Nutrition

No matter which researchers were involved or were it was published, she was probably just going to respond with, oh, that's all you've got? Accompanied by a fake laugh, of course.

And I'd be curious to know if she's even aware of the FDA Modernization Act that I mentioned earlier, replacing the old requirement for animal testing from 1938. That aside, we currently live in a world where medications have historically been tested on animals.

However, moving forward, because of poor translation of animal research to humans and advancing technology like AI, I could see a transition, albeit a slow transition away from animal-testing being the standard.

Please don't do this and don' use it as an argument against a plant-exclusive diet because how she practiced it is not what's recommended. Yeah, I think any sensible nutritionist will say that you need to make sure you're doing it properly.

You need be doing carefully and that means first start taking a B12 tablet. I don't think there's anything wrong with that. We do lots of unnatural things, flying on planes, watching television.

Going straight to the source and having a b12 tablets absolutely fine. Come back to life. Take the B 12 tablet and become vegan. But I'm not pro-aliopathic medicine.

These supplements are really beneficial. The evidence that these supplements work is overwhelming. You can take people with pernicious anemia, which is a form of anema caused by the inability to properly absorb vitamin B12 from food, supplement them with B-12, and improve their blood markers.

And there are cases like this where B 12 deficiency manifests as dementia-like symptoms, but even then supplementing with b12 improved cognitive function within weeks.

But of course, I prefer that people take the route of supplement in the first place so that they don't get to that point. Especially since, if severe enough or left long enough, it may not be completely reversible.

So yes, this is a gap that exists within plant-exclusive diets, but we have a very cheap, very safe, and widely available solution.

Animal Testing and Drug Development

And vegans in the general population, who in more recent studies tend to have similar vitamin B12 levels to meat-eaters, likely because of widespread supplementation and fortification, tend have lower risk of things like cancer and heart disease.

No big deal. See these two here? These are opposable thumbs. We evolved these in order to hunt better. These two pair of legs, bipedal. They are bipetal to become better hunters.

Even communicating with each other, we've evolved to be better hunter. Our entire existence as a human species has been around eating meat. And for you to just say all of a sudden, to say you shouldn't do that anymore is kind of asinine.

We evolve these traits like opposable thumbs, bipedalism, and speech for reasons that extend well beyond just hunting. So suggesting that hunting is THE reason is asinine.

That said, even if we had developed these trades primarily to make us better hunters, that wouldn't make engaging in that behaviour ethical. Similar arguments can be presented around our evolutionary impulse to mate.

The fact that that impulse exists doesn't make it ethical to mate without consent. In fact, one of the things that makes humans unique is our capacity for abstract moral reasoning.

So we can actually ask whether following our biological drive is morally justified. And finally, adaptations that may help us survive in the short term, like procuring calorie-dense animal foods during times of scarcity, can often be detrimental in long term.

This is something known as antagonistic pleiotropy. For example, genetic variants that cause sickle cell anemia can help people survive long enough to reproduce in areas where malaria is endemic.

That's because the sickle cell trait protects against malaria, but then it can go on to cause cardiovascular issues later in life. Similarly, Huntington's disease can increase fertility, then cause death within 20 years of symptoms arising.

B12 Supplementation and Vegan Safety

These traits either increase the likelihood of living long enough to reproduce, or they improve fertility so they're more likely to pass their genes on, yet lead to long-term issues.

So, adaptations to meat consumption may have actually been beneficial in the short term when food was scarce. But our ancestors didn't typically live long enough to deal with things like cardiovascular disease or colorectal cancer, which usually appear at old age.

And those are some of the health reasons to limit red meat consumption today. No you don't. Or you can have the Mediterranean diet, where you could just have a good diet without those supplements or added things in it.

You know you don't need those five or six. And the hard thing is that you have to be super, super careful about how much of the micronutrient you're consuming.

So as a vegan, you've got to make sure, okay, I'm having this many of this kind of food group, this one of that kind, because you want to ensure that your getting those vitamins and those micronutsrients in.

Just like any other diet. Where, as a Mediterranean diet, you wouldn't need to do that as much. First off, a mediterranean diet is often defined by the consumption of certain food groups.

So, to follow a Mediteranean diet you inherently have to focus on which food group you consume. Now, vegan or plant-exclusive diet are defined as the foods you don't consume, but to ensure it's nutritionally adequate, yes, You need place some focus of which foods groups you're consuming.

Again, like the Mediterranean Diet. And I'll even grant that more focus may need to be placed on certain micronutrients than with a Mediterranean diet, but to say that it's not an issue or a very minor issue with the Mediterranean Diet is also questionable.

For example, adherence to a mediterranean diet is still associated with significant amount of vitamin D and vitamin E inadequacy, and certainly doesn't guarantee adequacy of other nutrients like calcium.

But there's a simple solution. It's called a multivitamin. Now, I'm the first person to say that a Mediterranean diet is an excellent, super-healthy dietary pattern.

And yes, it may have some advantages over a plant-exclusive diet with regard to certain micronutrients, but let's not hand-wave away some of the advantages that plant exclusive diets may offer.

Evolution, Meat Eating, and Ethics

If we look at the OmniVeg randomized crossover trial comparing a Mediterranean diet to a vegan Mediterranean where the animal foods were replaced with plant-based foods with comparable protein and fat content, we see that the vegan diet led to lower total and LDL cholesterol levels, an important cardiovascular risk factor.

And this is similar to an earlier trial where a whole foods-focused vegan diet resulted in lower body weight, lower LDL cholesterol, and greater insulin sensitivity than the Mediterranean diet.

But again, I'm not going to use that to conclude that a vegan is inherently superior to a Mediterranean. I'd say both can have their advantages and both lead to really good long-term health outcomes.

So let's not be one-sided and trash on a Vegan diet for the small advantages a mediterranean diet may have

without considering the advantages that the vegan may.

I couldn't find any studies with the 30% statistics specifically, but what most people cite is the epic Oxford study in which vegans had a 43% higher risk of fracture, largely driven by hip fracture.

And that translates to about 19 more fractures per thousand people per 10 years. However, I do take issue with using these data to suggest that vegains are inherently at higher-risk.

For starters, the risk was only statistically significant in post-menopausal women, not men or pre- menopause women. As well as in inactive people and people with a BMI below 22.5. That last point is important because there were far more vegans below a bmi of 20 than there where meat eaters.

And they did not adequately account for differences in Bmi among people who would be classified as underweight.

Mediterranean Diet vs Vegan Diet

In essence, they could very well have been comparing some vegains who were very under weight to meat-eaters who barely classified under-weight And this is critical because fracture risk increases substantially once BMI gets below that level.

They also didn't adjust for vitamin D intake or status at all, and didn' t do adequately so for calcium. Contrast this with the Adventist Health Study 2, which was published just months later.

These studies just highlight the importance of eating enough to maintain a healthy weight and ensuring adequate vitamin D and calcium from supplements or fortified foods.

And fortunately, many plant-based milks today are fortify and contain as much or more calcium and vitamin d than their dairy counterparts. Yikes. I've seen doctors, I seen GPs, they've all put me on medications.

Notice how she didn't say she's seen a dietitian. If you have concerns around your nutrition, or you're having health issues that may be related to what you eat, i highly recommend working with a dietician, THEY are the nutrition experts.

And I hear this time and time again, where people will claim that a certain dietary practice didn' t work for them, but then they didn t actually work with the people who are best equipped to help them with that.

But access to dieticians can also be limited, so there's definitely a systemic issue there as well. Now obviously I can't diagnose her and I don't know her health history.

Fracture Risk, Bone Health, and Dietitian Advice

But it is interesting that, generally speaking, plant-based diets tend to be associated with substantially lower gastroesophageal reflux disease, or GERD, prevalence.

but when it comes to individuals, people can have very different triggers, which is where, again, dietitians can come in really handy to help you navigate.

and I was on medication for over 10 years that actually ended up depleting my vitamin D levels. It is true that the typical medications that are prescribed in this case can reduce absorption or affect metabolism of certain nutrients, and long-term use is associated with lower vitamin d levels, but then a possible solution there is just a simple supplement like vitamin-d or a multivitamin, which again can be discussed with a dietitian.

So if one's goal is to be vegan but there are concerns about some specific nutrients there, are likely solutions for that. But it starts by working with the right professionals.

I've watched a lot of Jubilee debates and have never seen this happen. The topic of veganism is so triggering that even the host jumped in to debate Dr.

Jack Symes.