Podcast: Treating Menopause Symptoms Naturally Transcript

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NutritionFacts Introduction

Doesn't it seem like when it comes to nutrition, there are more opinions than [music] facts to go around? Every day we hear new theories about diets and supplements and >> [music] >> best foods to eat. Well, my role is to take the mystery out of good nutrition and look at the science. Welcome to the NutritionFacts Podcast. I'm your host, Dr. [music] Michael Greger. Today we look at how specific foods have been shown in [music] randomized controlled trials to improve the symptoms of menopause. There's a great variety of symptoms suffered by women undergoing menopause. There's the so-called vasomotor symptoms like night [music] sweats and hot flashes, difficulty sleeping or full-on insomnia, vaginal dryness and pain during sex, as well as adverse effects on mood including full-blown depression. Might exercise help? Exercise can certainly help with physical and psychological quality of life in general, but unfortunately, there's no evidence for the effects of exercise on menopause specific symptoms. You know, researchers are getting desperate when they try to see if giving people pig placenta will help. Spoiler alert, it doesn't.

Plant-Based Diets and Menopause Symptoms

Well, we know oxidative stress, which is a consequence of excessive free oxygen radicals or impaired antioxidant defense, is linked not only to diseases such as diabetes, obesity, and cardiovascular disease, but also menopausal symptoms like hot flashes. Low free oxygen radical defense is associated with more menopausal symptoms, just like having a diet with more antioxidants is associated with fewer menopausal symptoms.

In fact, a high intake of fruits and vegetables may delay the onset of menopause in the first place, thought to be because the presence of antioxidants in fruits and vegetables may counteract the adverse effects of free radicals on the number and functional eggs you still have in your ovaries. Whereas the reason high meat consumption has been related to degenerative diseases may not just be the saturated fat and cholesterol, but the pro-oxidation products generated during their production, storage, digestion, and the metabolism of meat. Similarly, since a pro-inflammatory diet has also been associated with higher menopause specific somatic symptoms, meaning like hot flashes and sleep issues, that would mean moving towards a more plant-based diet packed with anti-inflammatory components like fiber and away from pro-inflammatory foods containing saturated fat and cholesterol. No wonder whole plant foods intake has been associated with fewer menopausal symptoms.

In terms of specific foods, poultry and skim dairy products may be particularly bad, whereas soy milk seemed to help. So, women may derive benefit from lower consumption of poultry and skim dairy and a greater consumption of vegetables and soy milk. You don't really know though until you put it to the test. And indeed, women randomized to drink soy milk reduced their menopausal symptoms by 20% within 12 weeks. No wonder that those eating strictly plant-based diets report less bothersome menopausal symptoms. Among women undergoing menopause, vegans reported less bothersome symptoms and within the diet groups, more vegetables and in the immediate group, less flesh food was associated with less bothersome symptoms as well. So, eating a plant-based diet may be helpful for women in their menopausal transition who prefer a natural means to manage their symptoms. Consistent with all the other studies demonstrating reduced menopausal symptoms in those consuming greater quantities of plant-based foods and less meat.

But again, maybe there are other reasons healthier eaters have fewer symptoms. You can't prove cause and effect until you guessed it, an interventional trial to see if changing your diet actually reduces symptoms. And in this study, where women were encouraged to decrease fat and increase fruit, vegetable, and whole grain intake, they were significantly more likely to eliminate their vasomotor symptoms like hot flashes and night sweats compared to the control group. So, it's certainly not all or nothing. And within a plant-based diet, those randomized to a meat-free diet with daily flaxseed oil, walnuts, and almonds did better than those randomized to the same diet, but with daily extra virgin olive oil. After 16 weeks, the vegetarian diet that was rich in omega-3s did better reducing vasomotor symptom frequency. In fact, even just 2 tsp worth of ground flaxseeds a day alone can significantly decrease menopausal symptoms to about the same extent as hormone replacement therapy, but without the side

effects.

In our next story, does soy food consumption [music] explain why Japanese women appear so protected from hot flashes?

Soy, Hot Flashes, and Hormone Comparisons

When women hit menopause and their ovaries shut down, the estrogen level in their body drops 95%. This is good news for the endometrium, the lining of the uterus. Otherwise, the constant estrogen signaling could eventually result in endometrial cancer. In fact, maybe that's why menopause evolved to protect the uterus from cancer.

Lower estrogen levels are also good for lowering breast cancer risk. In postmenopausal women, relatively high blood levels of estrogen are associated with more than double the increased risk for breast cancer.

Estrogen levels drop 95% at menopause, but not to zero because other tissues can make estrogen like our own fat cells. This probably explains the increase in breast cancer risk in obese postmenopausal women. More fatty tissue means more estrogen production. Then we learn that soy phytoestrogens can block the production of estrogen such that drinking a glass of soy milk with each meal can cut estrogen levels in half in premenopausal women, but levels in postmenopausal women are already down 95% and because of that, many women suffer from hot flashes. Might lowering levels even further with soy make menopausal symptoms even worse? Estrogen treatment very effective reducing menopausal symptoms. Unfortunately, the downside is not only the uterine cancer, but blood clots, strokes, and cognitive impairment.

Taking progesterone type compounds with the estrogen helps prevent the uterine cancer, but increases the risk of heart attacks, more stroke risk, breast cancer, more clots, and dementia. So, what's a woman to do? Well, the 80% hot flashes figure is not universal. Uh maybe 80 to 85% in European and American women, but it may be as low as just 15% in places like Japan. In fact, there's not even a word for it in the Japanese language, which supports how relatively rare it is.

Maybe the phytoestrogens in soy are helping? The association between soy product intake and the occurrence of hot flashes was examined by following a thousand Japanese women before they started menopause over time to see who developed hot flashes and who didn't. And those women who were eating like 4 oz of tofu a day appeared to cut their risk in half compared to women who only ate like an ounce or two a day, suggesting soy products are protective. But maybe soy intake is just a marker for a healthier diet overall? A study in China found that consumption of whole plant foods in general seemed to be associated with decreased menopausal symptoms. So, to see if soy was something special, you'd have to put it to the test. Studies like this of soy phytoestrogens in pill form showed extraordinary results, a significant drop in hot flash presence, number, and severity from 100% of women suffering at the beginning to only 31% suffering by the end of 3 months. The average number of hot flashes dropped from about 120 months down to 12.

But the problem with studies like these is that there's no control group to control for the placebo effect. If you look at all the hormone trials, even the women who got the placebo sugar pills had up to a 60% reduction in hot flashes over the years. That's why any therapy purported to reduce such symptoms must be assessed in blinded trials against the placebo because of the large placebo effect. You know, and also because menopausal symptoms often decline on their own over time.

Uh but it's important to recognize how powerful the placebo effect can be. Over the past 20 years, more than 50 clinical trials have evaluated the effects of soy foods and supplements on the alleviation of hot flashes.

Compiling the best ones together, the placebo groups got about a 20% drop in hot flash severity. The soy groups achieved about a 45% drop. So, on average, the soy did about 25% better than control.

There've been two studies that compared soy phytoestrogens head-to-head against hormones, and in one study, they actually seemed pretty comparable in terms of reducing hot flashes, muscle and joint pain, and vaginal dryness compared to placebo. Though in the other, soy did better than placebo, but estrogen and progesterone

therapy did better than them both. But the soy has the benefit of not increasing cancer, heart disease, and stroke risk. Finally today, approximately half of the variability of age of menopause among women is explained by genetics, but behaviors or circumstances can help explain the rest. Since 1970, the proportion of women having their first child after age 35 increased nearly tenfold. This may introduce a longevity penalty on their children as those born to older mothers don't tend to live as long. But mothers having children later tend to live longer themselves. For example, female centenarians were found to be nearly four times more likely to have had children after age 40 than women who died by their 70s.

Menopause Timing, Genetics, and Lifestyle Factors

This doesn't necessarily mean delaying kids will make you live longer. Smoking, for example, could be a confounder causing both early menopause and early death. Or maybe delayed reproductive aging is just a sign of slower aging in general. However, some have suggested the biological changes of pregnancy might have a rejuvenating effect even going so far as to suggest a parabiosis mechanism, bathing in the blood of babies, but just not in a Countess Bathory sort of way. To sort between these possibilities, researchers studied the longevity of brothers of women who gave birth after age 45 and that of their wives. The brothers with late fertile sisters lived longer, but their wives did not. This suggests a genetic robustness cause rather than a rejuvenation effect. And the fact that the longevity benefit didn't extend to their wives suggests it's not due to a confounder like socioeconomic strata. On the other hand, women who experience extremely early menopause, the 1% who stopped menstruating by age 39, may be at risk for diminished longevity and should therefore be counseled to adopt a particularly healthy diet lifestyle.

Approximately half of the variability of age of menopause between women is explained by genetics. Other than smoking, what other behaviors or circumstances can help explain the rest?

Factors that don't appear to affect the age of menopause include exercise, obesity, alcohol, coffee, or vitamin D status. Interestingly, women who've been married tend to arrive at menopause later. Some suggest it may be the influence of male pheromones given the fact that exposure to male armpit odor makes women's cycles more regular. But turns out that male cohabitation alone doesn't appear to matter. It may be the sex. Married older individuals tend to have more sex. And indeed, pre- and perimenopausal women average age 46 who reported sex weekly were 20% less likely to experience menopause over the subsequent decade than those reporting sex less than once a month. You can very well imagine how this could be a result of reverse causation. Though instead of more sex leading to later menopause, a later menopause may have instead led to more sexual engagement.

The relationship between tobacco use and early menopause is thought to be mediated by the toxic effects on the ovaries of the polycyclic aromatic hydrocarbons in the smoke. Among non-smokers, this PAH exposure is almost entirely from food, mostly grilled, barbecued, and smoked meats. Could this explain why in the Harvard Nurses' Health Study II, higher plant protein intake was associated with significantly lower risk of early menopause? Feed female monkeys a diet high in animal protein, not only did they get more atherosclerosis, but also an acceleration of ovarian aging.

Now, in the original Harvard Nurses' Health Study, animal protein consumption was associated with infertility such that replacing even 5% of animal protein intake with plant protein could potentially cut the risk of infertility in half. But in the Nurses' Health Study II, while plant protein appeared to delay menopause, animal protein intake was not associated with menopause age either way. And in the UK Women's Cohort Study, those eating more animal protein were 60% more likely to experience a later menopause.

The data is similarly conflicting in vegetarians. Some studies found no difference or a later age of menopause in vegetarians, but others found an earlier age compared to non-vegetarians. For example, the largest study found that vegetarians reached menopause at an average age of 50.1 years compared to non-vegetarians at 50.7 years.

As I noted, premature menopause before age 40 may be detrimental for longevity, but being a little earlier within the normal range may actually be beneficial for cancer risk. At the same age, breast cancer risk is about 40% higher in premenopausal compared to postmenopausal women, presumably due to higher exposure to the necessary evil hormone estrogen. Breast cancer risk is 3% higher for every year later a woman starts menopause

and 5% higher for every year earlier a girl starts menstruating. On average, women whose periods hold off until age 15 appear to live the longest. Vegetarian women tend to have lower estrogen levels, perhaps due to higher fiber intake, and interventional studies show that switching to a more plant-based diet can reduce circulating estrogen levels by more than 40%. This could explain why vegetarian girls may hit puberty later and why those eating strictly vegetarian not only have lower cancer risk overall, but particularly lower risk for female-specific cancers. Age of menopause may not be a factor though based on an interventional trial randomizing women on the verge of menopause, average age 49, to 2 years of a lower fat diet to reduce breast cancer risk. The intervention group ended up eating more fiber and therefore more plant-based, but though they did experience improvements in mammogram findings, the dietary shift failed to influence the timing of menopause. Visit nutritionfacts.org/audio to see all the podcast episodes with descriptions that include links to the associated videos. Sources cited and other details are available on each video's page. Information about my books, How Not to Die, [music] How Not to Diet, and How Not to Age, is at nutritionfacts.org/books. All proceeds of which I get are donated directly to charity. And I've got a new book in the publication pipeline, the manuscript for How Not to Hurt on diet and lifestyle approaches to pain management. It's been handed in and will be published December 15th. I'm going to be doing a series of webinars to feature some of the new research that I discovered. Sign up for our free newsletter at nutritionfacts.org/subscribe to stay updated on when those will be.

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