## nutrition guide



Director PeopleBeatingCancer Multiple Myeloma Survivor MM Cancer Coach

## introduction



### Research shows that:

- Nutrition can reduce your risk of cancer
- Nutrition can reduce inflammation
- Nutrition can reduce your risk of Pre-Myeloma becoming full Multiple Myeloma

Having said all that I have to say that A) I focus daily on maintaining a nutritious diet and B) I don't "diet." I follow guidelines from Dr. William Li's Ted Talk linked below, I follow principles put forth in studies I've read. I even blog about the Mediterranean diet (READ MORE<sup>1</sup>).

But I don't "diet" in the Weight Watchers sense of the word. I don't count calories. I don't follow a specific "diet." Most people can't. (READ MORE2) The anti-myeloma diet that I follow is a lifestyle change, not a specific diet.

I'm not vegetarian. Close but not 100%. I'm no where near vegan.

I have goals outlined below. My philosophy is progress not perfection.

According to both my personal experience and a large and growing body of evidence, a diet rich in fruits, vegetables and whole grains reduces your risk of a host of chronic diseases, especially cancer.

More importantly, specific foods and supplements have been shown to be anti-angiogenic. That is to say these foods can reduce the risk of pre-myeloma becoming full-blown multiple myeloma.

The Pre-Myeloma CC Nutrition Guide is about how to eat to reduce your risk of a multiple myeloma diagnosis.

The first step in understanding how and why nutrition is an important anti-MM therapy, please watch the Ted Talk given by Dr. Bill Li, linked below. You will learn how and why angiogenic nutrition is an essential therapy for pre-myeloma patients who want to reduce their risk of multiple myeloma. DAVID EMERSON

> Director PeopleBeatingCancer Multiple Myeloma Survivor MM Cancer Coach

# nutrition and your risk of cancer

## Angiogenesis and Plasma cells

"Angiogenesis is the physiological process through which new blood vessels form from preexisting vessels,[I][2][3] formed in the earlier stage of vasculogenesis. Angiogenesis continues the growth of the vasculature by processes of sprouting and splitting.[4] Vasculogenesis is the embryonic formation of endothelial cells from mesoderm cell precursors,[5] and from neovascularization, although discussions are not always precise (especially in older texts).

The first vessels in the developing embryo form through vasculogenesis, after which angiogenesis is responsible for most, if not all, blood vessel growth during development and in disease (READ MORE<sup>3</sup>)"

## Bone marrow angiogenesis and progression in multiple myeloma

"A clinically relevant aspect of the interactions of multiple myeloma plasma cells in the bone marrow microenvironment is neovascularization, a constant hallmark of disease progression.

This process is only partially supported by factors such as vascular endothelial growth factor, fibroblast growth factor-2 and metalloproteinases, which are directly secreted by the tumor cells.

In fact, the presence in the bone marrow microenvironment of cytokines, in particular interleukin-6, as a consequence of plasma cell-stromal cell interactions, induces the production and secretion of angiogenic factors by other cells present in the bone microenvironment, thus contributing to the angiogenic switch during the progression of the disease... (READ MORE<sup>4</sup>)"

## Can We Eat to Starve Cancer? William Li M.D.



(WATCH<sup>5</sup>)

## DR. WILLIAM LI'S LIST OF ANTIANGIOGENIC FOODS

**Dietary Sources of Naturally-Occurring** 

#### **Antiangiogenic Substances** Green tea Red grapes Lavender Pumpkin Strawberries Red wine **Blackberries** Sea Cucumber **Bok choy** Raspberries Kale Tuna Blueberries **Parsley** Soy beans **Garlic Oranges** Tomato Grapefruit Maitake mushroom Olive oil Lemons Licorice

Grape seed oil

Dark chocolate

Others

Apples Turmeric

Pineapple Nutmeg

Cherries Artichokes

Source: Anglogenesis Foundation (www.anglo.org)

## Dietary intake is associated with risk of multiple myeloma and its precursor disease

"We additionally found that intake of fruit at least three times per week during the late life period was associated with decreased risk of progressing from MGUS to MM when compared to lower intake.

Adolescent intake of fruit may reduce risk of MGUS, whereas fruit intake after MGUS onset may reduce risk of progressing to MM.

Our findings suggest that diet might alter the risk of developing MGUS and progression to MM. (READ MORE<sup>6</sup>)"

## **Anti-cancer nutrition**

## 1. Consume anti angiogenic foods-

Anti angiogenic foods and supplements have been the foundation of my own anti-MM efforts and the research supports what I do and why I do it.

## 2. Eat cruciferous vegetables-

Dozens of studies document that cruciferous veggies kill cancer. (READ MORE<sup>7</sup>)

### 3. Consume fewer calories-

Portion control is, in my experience, the single most effective method of reducing my caloric intake. Every meal, morning, noon and night. If I'm hungry, my eyes are always bigger than my stomach. And I am satisfied by eating less. The challenge, in my experience anyway, is being patient. If I am patient and eat slowly, I will feel satiated with less food, fewer calories. (READ MORE<sup>8</sup>)

## 4. Consume as little refined sugar as possible-

You might have heard that cancer feeds on sugar or sugar makes cancer grow faster. In some ways, this makes sense. Every cell in your body uses blood sugar (glucose) for energy. But cancer cells use about 200 times more than normal cells.

In addition, I eat a lot of fruit that contains fructose- a type of glucose. And if you read food labels, you will see that there is some form of glucose in just about every prepared food.

My point is that yes, we must limit our sugar intake as best we can. But I believe that it is almost impossible to cut sugar completely from your diet.

Tumors that start in the thin, flat (squamous) cells in your lungs gobble up even more glucose. They need huge amounts of sugar to fuel their growth. (READ MORE<sup>9</sup>)

### **FOOTNOTES**

- 1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6769787/
- 2. https://www.thediabetescouncil.com/why-do-most-diets-fail/
- 3. https://en.wikipedia.org/wiki/Angiogenesis
- 4. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3301416/
- $5. \qquad https://www.ted.com/talks/william\_li\_can\_we\_eat\_to\_starve\_cancer?language=en$
- 6. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6211667/
- $7. \qquad \text{https://www.cancer.gov/about-cancer/causes-prevention/risk/diet/cruciferous-vegetables-fact-sheet} \\$
- https://www.nature.com/articles/s41467-021-26431-4
- 9. https://www.webmd.com/cancer/features/cancer-sugar-link