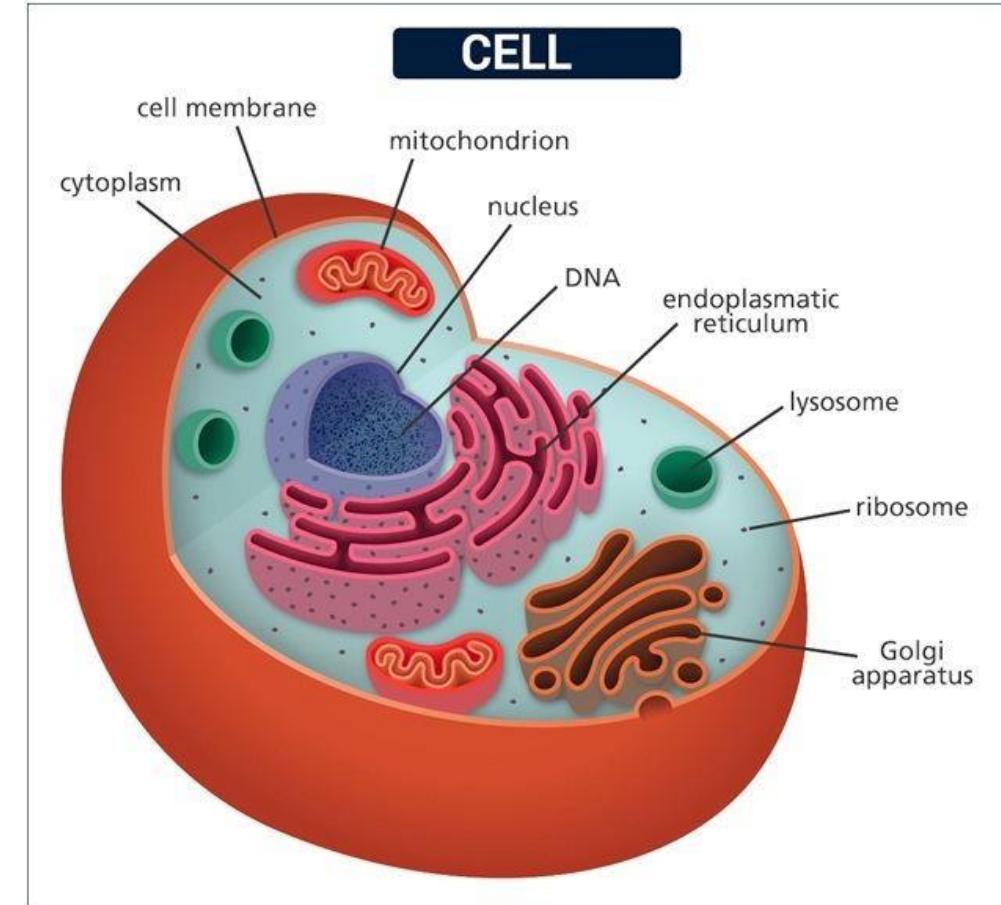


Nutrition Recommendations for Prevention of Modern Diseases

Randy Pendergrass LSN, CSCS, LMT

Causes of Disease

- Metabolic- A dysfunction in cellular respiration. Respiration is the production of energy, usually in the presence of oxygen.
- Toxicity- Natural and synthetic compounds
- Micronutrient deficiency- vitamins and minerals
- Microbial infection- viruses, bacteria, and fungus
- Genetic- BRCA-1, Li Fraumeni syndrome



Metabolic

- Cancer cells are primarily glucose metabolizers
- Diabetes is a dysfunction of glucose metabolism
- Thyroid disease creates numerous metabolic issues

T3 turns on cell receptors to other hormones

- Insulin resistance
- LDL resistance

- Alzheimer's is type 3 diabetes?



**"NO disease,
including cancer,
can exist in an
alkaline environment."**

Dr. Otto Warburg,
1931 Nobel Prize winner
for cancer discovery

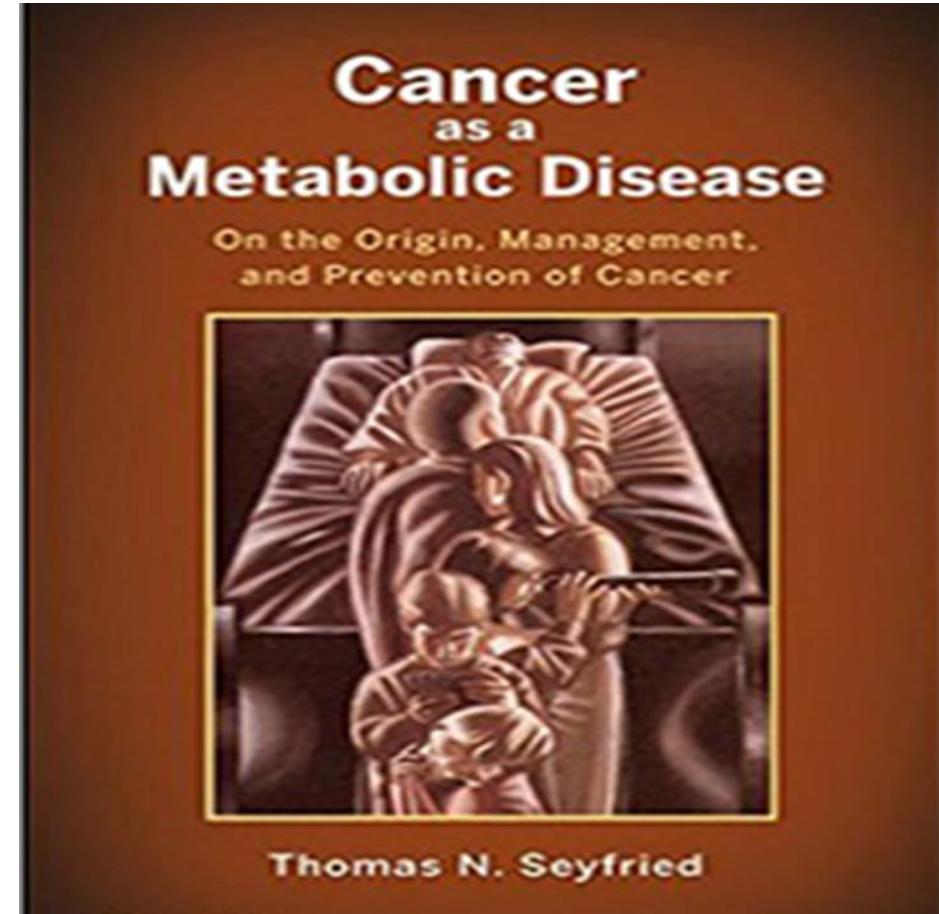
Thomas Seyfried

- “One of the key issues here is that if you transplant the nucleus of a cancer cell into a normal cell, you don't get cancer cells. You can actually get normal tissues and sometimes a whole normal organism from the nucleus of a cancer cell. Now, if the tumors are being driven by driver genes – all these kinds of mutations and things that we hear about – how is it possible that all of this is changed when you place this cancer nucleus into the cytoplasm of a cell with normal mitochondria?”



Thomas Seyfried

- Seyfried says. "But as Warburg said, there are many secondary causes of cancer but there is only one primary cause, and that's damage to the respiration. So inherited mutations through the germ lines that cause cancer to affect the mitochondria, it is [still] the mitochondria that is the origin of cancer.



Toxicity: The dose makes the poison.

Natural

- Arsenic, mercury, lead
- Talc (talcum powder)
- Asbestos
- Castor beans (ricin)
- Peanuts (aflatoxins)
- Red kidney beans (phytohaemagglutinin)
- Gluten
- Wheat germ agglutinin
- Lectins

Grains and Beans (legumes) have the highest levels of naturally occurring toxins in the food supply. They are also the most common allergens. This is why our ancestors utilized preparation methods like sprouting, fermenting, culturing, and soaking to minimize exposure.

Synthetic

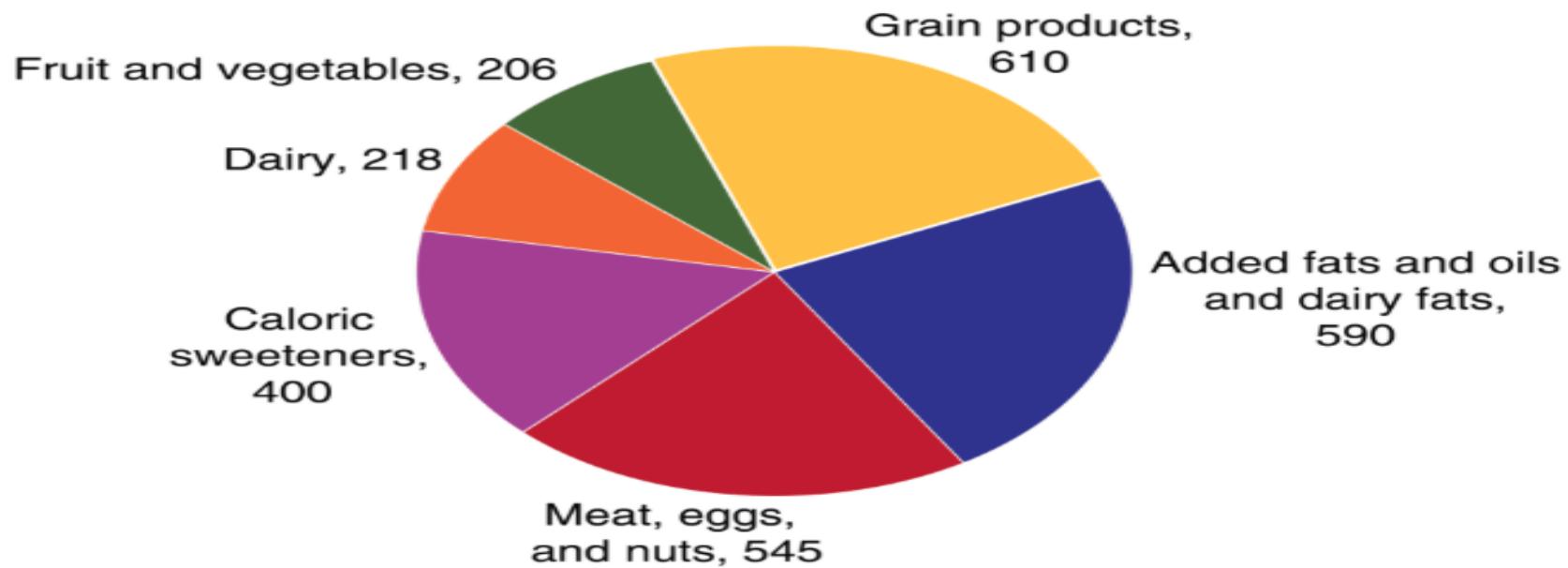
- Carbon tetrachloride (refrigerant)
- Pesticides
- Hexane (solvent used to extract oils out of plants)
- NSAID's
 - acetaminophen
 - ibuprofen
- Perfluorooctanoic acid:
 - Non stick cookware
- Plastic residues:
 - Bisphenol a
 - Phthalate

Micronutrient Deficiencies

- Vitamin C- scurvy
- Vitamin D- rickets
- Niacin (B3)- pellagra
- Thiamine- beriberi
- Iodine/selenium- hypothyroidism
- Folate- birth defects
- Vitamin A- blindness
- Vitamin K2- osteoporosis, heart disease

Standard American Diet

Daily calories per capita by food group, 2010



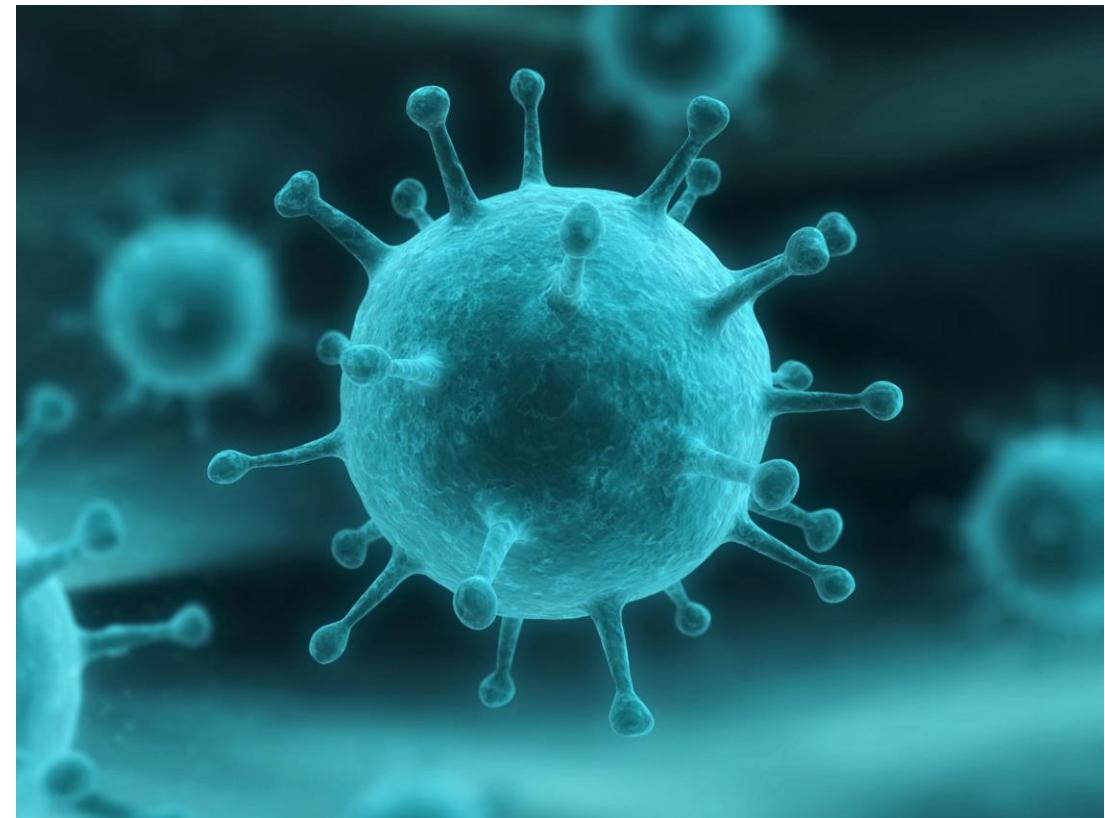
Added fats and oils and caloric sweeteners are added to foods during processing or preparation. They do not include naturally occurring fats and sugars in food (e.g., fats in meat or sugars in fruits).

Source: USDA, Economic Research Service, Loss-Adjusted Food Availability Data.

Microbial Infections

- Hepatitis C, Hpv, Epstein –barr, cytomegalovirus linked to cancer
- *Chlamydophila Pneumoniae* linked to heart disease
- Epstein-barr, Hep C, Mumps, Rubella viruses, Campylobacter & E. coli bacteria linked to autoimmune diseases: lupus, MS, RA, Crohn's, etc.
- Human herpes viruses 6 & 7 linked to Alzheimer's

Infections alters cellular metabolism



Disease Reducing Strategies

- Increase oxygenation
- Decrease inflammation
- Improve Immune Response
- Improve detoxification pathways

Liver/gall bladder

Lymphatic

Kidneys

Skin

Colon

Oxygenation

- Exercise (move)
- Stress management
- Eat an anti-inflammatory diet
- Sleep
- Deep breathing: Buteyko method
- Foods that increase circulation and vasodilation
 - potassium rich foods
 - magnesium (greens, supplement)
 - beets (nitrates)
 - dark chocolate
 - garlic, onion, shallots
 - spicy foods if tolerable
 - high arginine foods like walnuts, meats, pumpkin seeds



Inflammation

Pro-inflammatory

- Omega 6 fats
- Refined carbohydrates (sugar)
- Artificial ingredients
- Pesticides: antibiotic potential on gut flora
- Improperly prepared grains/beans
- Dairy?
- Burnt foods especially those with protein and fats
- Digestive disruptive foods: any item you are intolerant, sensitive, or allergic to
- Keep weight down

Anti-inflammatory

- Omega 3 fats
- Colorful fruits and veggies
- Herbs and spices
- Cultured foods/beverages:
 - sauerkraut, kim chi, pickles
 - soy: natto, miso, tempeh (organic)
 - dairy: yogurt, kefir
 - beverages: kvass, kombucha
- Tea: black, green, rooibos, herbal

Improve Immune Response

- Keep glucose and insulin low
- Keep omega 6 fats very low
- Do not eat anything artificial
- Eat nutrient dense foods
- Get your gut healthy
- Get vitamin D levels around 50ng/mL
- Improve sleep quality
- Reduce stress
- Fasting (autophagy)? Many different ways to do this and needs to be approached carefully. Not for some.



Improve Detoxification

- Poop daily
- Stay hydrated
- Move
- Don't put in what you want to detox out
- Sweat
- Careful with skin care products
- Fasting?
- Lots of dark green leafy veggies
- Juicing- careful with the fruit



Sugar

- Sugar raises insulin
- Elevated sugar and insulin increase inflammation
- Elevated sugar feeds cancer
- Elevated sugar weakens the immune system
- Elevated sugar feeds pathogenic microbes and changes gut flora
- Elevated sugar slows digestion



Types of Dietary Fat

- **Polyunsaturated Fat**
 - *omega 3 fat
 - *omega 6 fat
- **Monounsaturated Fat**
 - *omega 9 fat
- **Saturated Fat**
- **Trans (Transformed) Fat**



Truths about Polyunsaturated Fats

- Two kinds: omega 6 and omega 3
- Omega 6 and omega 3 have opposite functions and need to be balanced in close to equal amounts, e.g., omega 6's increase inflammation, omega 3's decrease inflammation
- Essential- We have a need for them, but are unable to make them (~3% of total calories?)
- The least stable fats- unstable when exposed to heat, light, oxygen, toxins (easily oxidized)
- Increase in intake after World War II due to promotion of grain and seed oils
- Mostly used in processed foods and by restaurants
- Recommendations are to decrease consumption of grain and seed oils and incorporate more longer chained omega 3 fats from fatty fish and pastured animal products



Truths about Saturated Fats

- Resistant to oxidation
- Makes LDL large and buoyant
- Raises HDL
- Along with monounsaturated fats, saturated fats are great at increasing absorption of fat soluble anti-oxidants like carotenoids
- The saturated fat butyric acid (butter) has numerous benefits in colon health
- Increases ketosis
- Several saturated fats are potent anti-microbial
 - lauric acid*
 - caprylic acid*
 - caproic acid*
 - capric acid*



Truths about Monounsaturated Fats

- Not essential
- Provides energy and cell structure
- Basically neutral on cholesterol
- Some are anti-microbial
(Palmitoleic acid)



Nutrient Dense Superfoods

- Bone and gelatin broths
- Liver- from healthy animals
- Eggs- from healthy animals
- Fermented vegetables- sauerkraut, kim chi, etc.
- Wild oily fish- sardines, anchovies, wild salmon
- Dark green leafy veggies
- Brewer's yeast
- Raw local honey
- Blackstrap molasses
- Herbs and Spices

turmeric, cinnamon, black pepper,
coriander, sage, etc

