

Lifestyle Factors to Help Prevent and Treat Prostate Cancer

Gabe Mirkin, M.D.

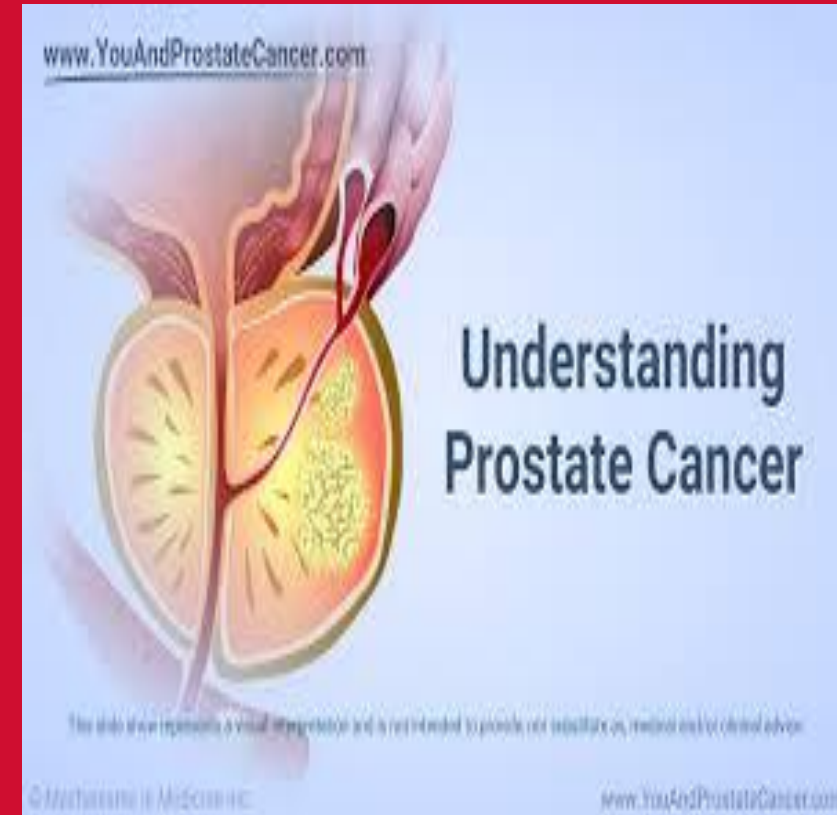


The Prostate Cancer
Education and Support
Group in The Villages
Wed. August 3, 2022
7:00 PM
Laurel Manor Recreation
Center
The Villages, FL

All Men Will Develop Prostate Cancer If They Live Long Enough

Autopsy results of men who died from other causes show that 30 percent over age 50 have had prostate cancer and 50% in their 70s already have the disease

Urol Clin North Am, 1989;16:635–655.



Incidence of prostate cancer

*80% of men in 70s

Int J Cancer, November 15, 1977;20(5):680–8

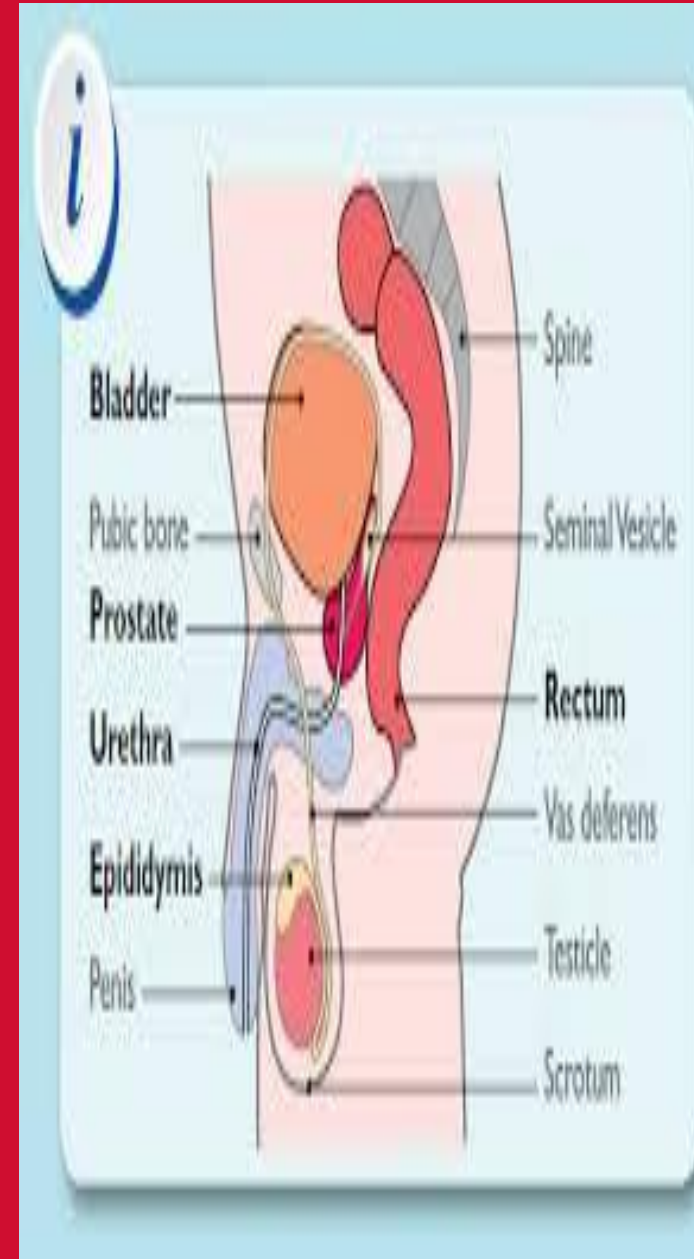
*50% of American men by age 60

J Natl Cancer Inst (2013) 105 (14):1050-1058)

*5% of men have it by age 30

Int J Cancer, 2015 Oct 1; 137(7): 1749–1757

Unlike many other cancers, prostate cancer usually grows very slowly and does not kill the vast majority of men who have it.



Cause of Death in Prostate Cancer

Compared to men who do not have prostate cancer:

- The 15-year relative survival rate is 95%

Am Cancer Soc 2017

- The vast majority of patients will die from heart attacks or diabetes



Heart Attack Risk Factors

- *78% have high cholesterol
- *91% have high blood pressure
- *35% become diabetic
- *40% die of heart attacks



Prostate Cancer: Same risk as Diabetes + Heart Attacks

***high blood sugar, high insulin levels, high cholesterol, (Horm Cancer, April 2016;7(2):75-83).**

***Obesity increases risk for dying of prostate cancer by raising leptin, interleukin-6, heparin-binding epidermal growth factor-like growth factor (HB-EGF), vascular endothelial growth factor (VEGF) and adiponectin (Int J Oncol, Mar 2006;28(3):737-45**

***Fasting sugar over 100 increases risk of death (Prostate Cancer Prostatic Dis, June 2013;16(2):204-8) as does eating sugar and refined carbs (Ann Oncol, Jan 2013;24(1):245-51)**

***Exercise reduces risk for prostate cancer (Journal of Urology, November 2009;182(5):2226-2231)**

Chemotherapy and Radiation to treat Prostate Cancer can Increase Risk for Heart Attacks

Circulation, Feb 4, 2016

1) **Radiation** increases risk heart failure, irregular heartbeats & heart attack The Lancet, Nov 12, 2011;378(9804):1707-1716)

2) **Chemotherapy** drugs damage heart

3) **Drugs blocking male hormones**, increase risk for heart attacks JAMA, Sept 22, 2015;314(12):1291

4) **Prostate cancer patients who use heart-attack-preventing program are far less likely to suffer recurrences**

Journal of Clinical Oncology, Oct 20, 2012;30:3697-3704



ABCDEF to prevent prostate cancer recurrence

Aspirin if indicated major heart attack risk

Blood pressure monitoring

Cholesterol management & no **C**igarettes

Diet & **D**iabetes Prevention: eat fruits & vegetables; restrict sugar-added foods & drinks, meat & fried foods

Exercise

Fat loss



Foods: Reduced Risk for Prostate Ca Recurrence

***Fruits, vegetables & nuts**

***soluble fiber**

***Beans, mushrooms and seeds**

***The onion family**

***Berries**

***Tomatoes**

***Tea**

***Coffee**

***fish**

Cancer. Mar, 2021;127(5):720-728



Foods: Increase Risk for Prostate Cancer

- Processed meats (salami, bologna, sausage, bacon and hot dogs)
- All meats from mammals
- Deep fried foods. Without water, sugar binds to the protein in meat to form AGEs (advanced glycation endproducts)
- eggs and milk

Nutr Cancer. 2011; 63(4): 525–537.



Non-Food Risk Factors for Prostate Cancer

- Being overweight
- Lack of exercise:
- Smoking
- Alcohol
- Low vitamin D



100 Trillion Colon Bacteria

• Saliva	100,000,000,000	(11)
• Stomach	10,000,000	(07)
• Duodenum & Jejunum	10,000,000	(07)
• Ileum	100,000,000,000	(11)
• Colon	100,000,000,000,000	(14)

PLoS Biol. Aug, 2016;14(8):e1002533

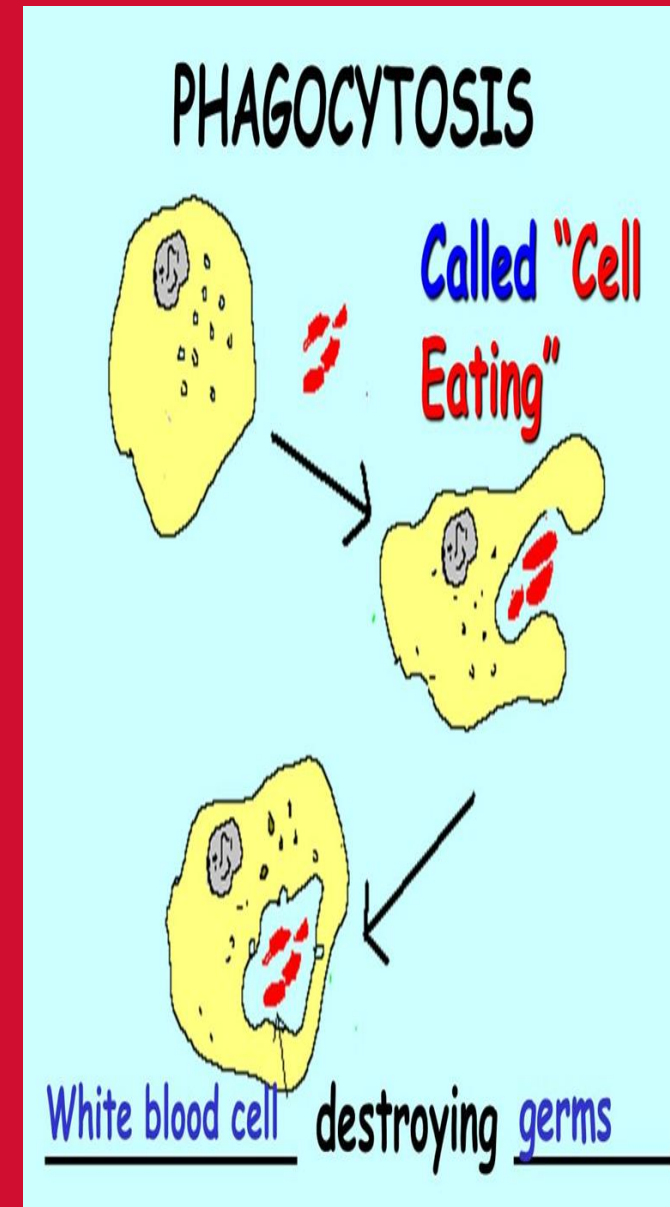
Harmful Colon Bacteria: Inflammation



- Colon bacteria eat what you eat.
- HEALTHFUL BACTERIA do not try to enter your colon cells
- HARMFUL BACTERIA enter colon cells to turn on your immunity to cause inflammation

INFLAMMATION

Your immunity is good because it kills germs, but if it stays on all the time, it uses the same cells & chemicals to attack your genetic DNA to cause cancer



INFLAMMATION CAUSES HEART ATTACKS



Healthful Colon Bacteria

convert soluble fiber in plants to ***Short Chain Fatty Acids** (**Front Cell Infect Microbiol., January 21, 2019**) ***that** increase colon mucous that ***prevents** harmful bacteria from penetrating colon cells ***to turn on your immunity *to cause Inflammation *that increases risk for heart attacks and cancers.**

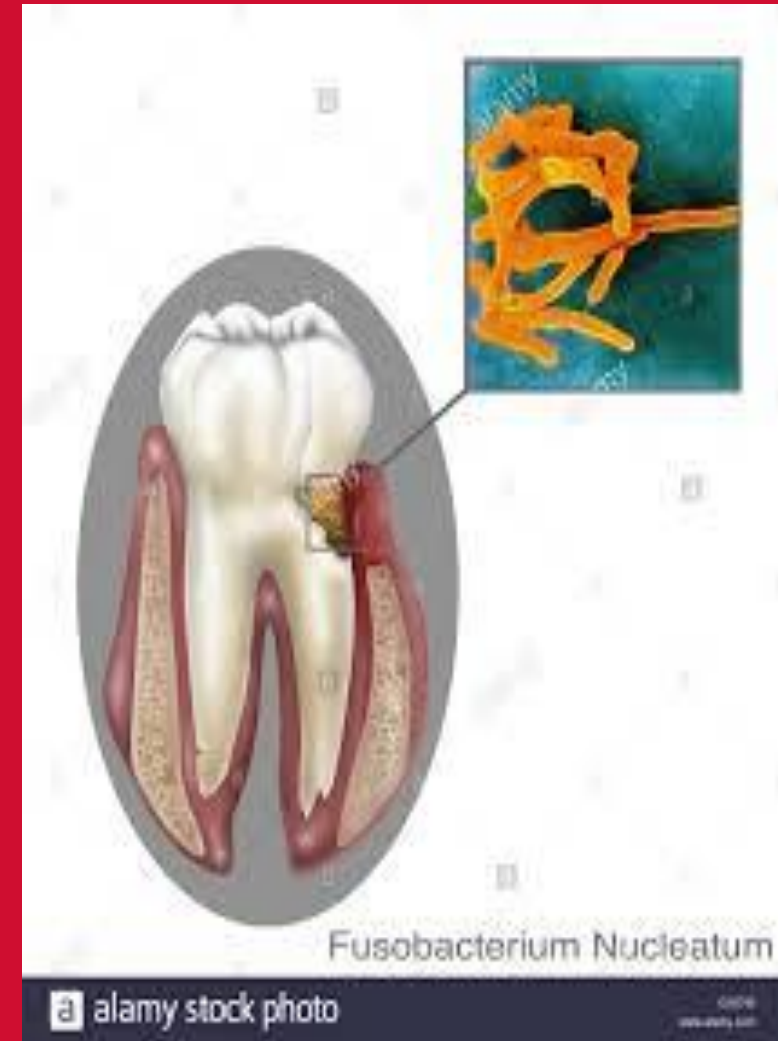
Nature Microbiology. Nov 5, 2018;3:1461–1471

Applied & environmental microbiology 2004;70(10):5810-7



Fusobacterium nucleatum

- *pro-inflammatory anaerobe
- *common dental pathogen
- *invades teeth and cells
- *associated with colorectal
And other cancers, heart
attacks, dementia, and more



Current Opinion in Microbiology. Feb, 2015;23:141-147

Feces from Fat & Normal Monozygotic Human Twins

- Feeding feces from fat twin made germ-free mice **FAT.**
- Feeding feces from normal-weight twin did **NOT CAUSE WEIGHT GAIN**



Science. 2013;341(6150):1204-1214

Anti-inflammatory Diet

- 1. Unlimited vegetables, fruits, whole grains, beans, nuts & other seeds**
- 2. Some deep water fish**
- 3. Poultry not assoc'd with disease (unless skin or fried)**
- 4. Limit refined carbohydrates (bakery products & pasta particularly if overweight or diabetic).**
- 5. Limit sugared water, sugar-added foods.**
- 6. Limit red meat**
- 7. Avoid partially-hydrogenated fats**
- 8. Avoid burnt fats: Polycyclic Aromatic Hydrocarbons (PAH) and Advanced Glycation End Products (AGE)**

Red Meat Increases Risk: Diabetes & MIs

***DECREASES INSULIN SENSITIVITY**

***SUPPLIES CHOLINE AND LECITHIN THAT ARE CONVERTED TO TMAO THAT PUNCHES HOLES IN ARTERIES TO START PLAQUE FORMATION.**

38,094 Dutch Followed 10 years

Diabetes Care, January 2010



People who eat fish twice a week suffer fewer heart attacks than those who eat less.

However, no additional benefit has been shown for eating fish more than twice a week.

BMC Medicine. Feb, 2022;20(73:



A High Rise In Blood Sugar Damages Every Cell In Your Body



Blood sugar >140 after meals damages cells
Diabetes Care. 2001;24 (8):1448-1453

Refined carbohydrates

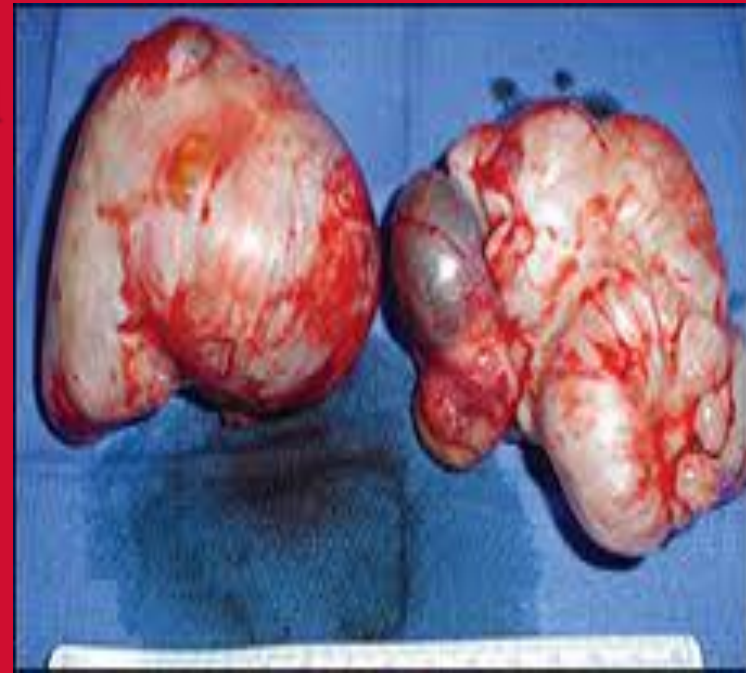
- *Blood sugar rises too high →
- *Sugar sticks to cell membranes →
- *Once attached, never detached →
- *on cell, glucose converted to sorbitol →
- *Blindness, deafness, MI, stroke, dementia
kidney failure, certain cancers etc.

J Biol Chem. Sep 10, 1978;253(17):5985-9



Public Library of Science Medicine, January 2010

PEOPLE WITH HIGH BLOOD SUGAR LEVELS ARE AT INCREASED RISK FOR CANCERS: prostate, liver, gallbladder, resp. tract, thyroid, rectum pancreas, bladder, uterus, cervix, stomach; and multiple myeloma.



American Journal of Clinical Nutrition, April 7, 2010;
Archives of Internal Medicine, May 2010

People who ate the most **FOODS THAT CAUSE HIGH RISES IN BLOOD SUGAR**

have more than twice the risk of heart disease than those who ate the least.



Health Professionals Study:

All sugar-sweetened beverages are associated with a significantly elevated risk of type 2 Diabetes

American Journal of Clinical Nutrition. March 23, 2011



High Glycemic Load Diet

increased death rate by 80% in 7 years, in 1000 men and women with metastatic colon cancer, stage III. Expected 5-year survival less than 50%

J Natl Cancer Inst., November 7, 2012



**Fruit juice and soft drinks
increase diabetes risk by 130%**

Arch Intern Med. 2008;168(14):1487-1492.

**Fruit: decrease diabetes risk by
80%**

Diabetes Care, July 2008



Sugared Drinks Cause Highest Rise in Blood Sugar

Fruit juices and sugared soft drinks are not stopped by the pyloric sphincter.

They enter the intestines immediately to cause a rapid rise in blood sugar.

Quart. J. Med. Sept 18, 2015

An orange can stay in your stomach for 5 hours

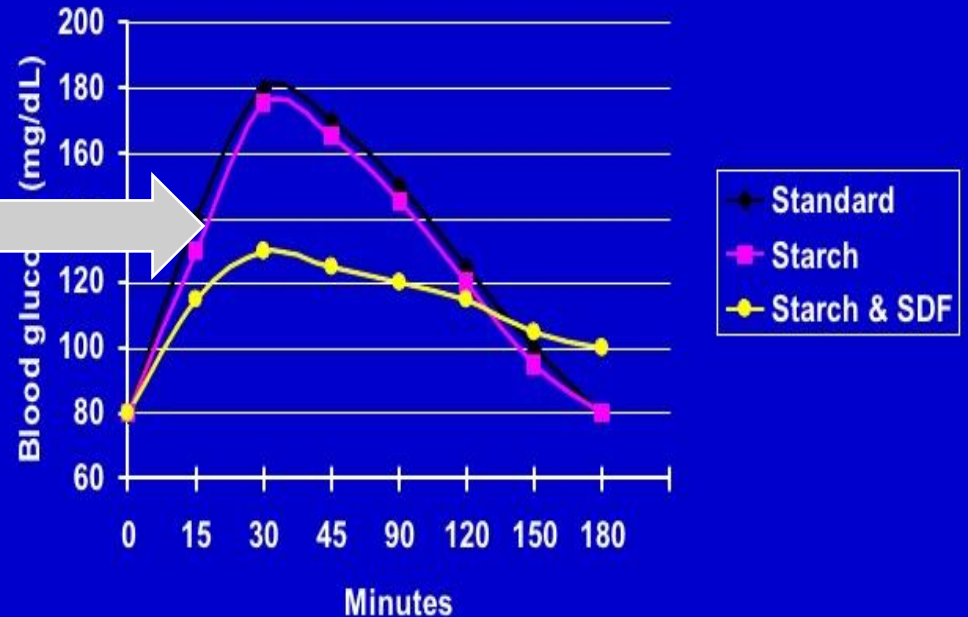
JAMA. August 25, 2004



Sugar in Fruits Safe

- **Intestines: Fruits have soluble fiber, a gel that binds to sugar.**
- **Colon, bacteria ferment soluble fiber to release sugar.**

Blood Glucose Response:
Starch+ or - Soluble Dietary Fiber
(SDF)



Sugared Drinks Cause *Inflammation, *Abdominal Obesity, *Metabolic Syndrome, *High Triglycerides & *Lowered HDL



- *increased C-reactive protein
- *increased waist circumference
- *decreased HDL cholesterol



Whole Grains

prevent diabetes, do
not cause a high rise
In blood sugar.

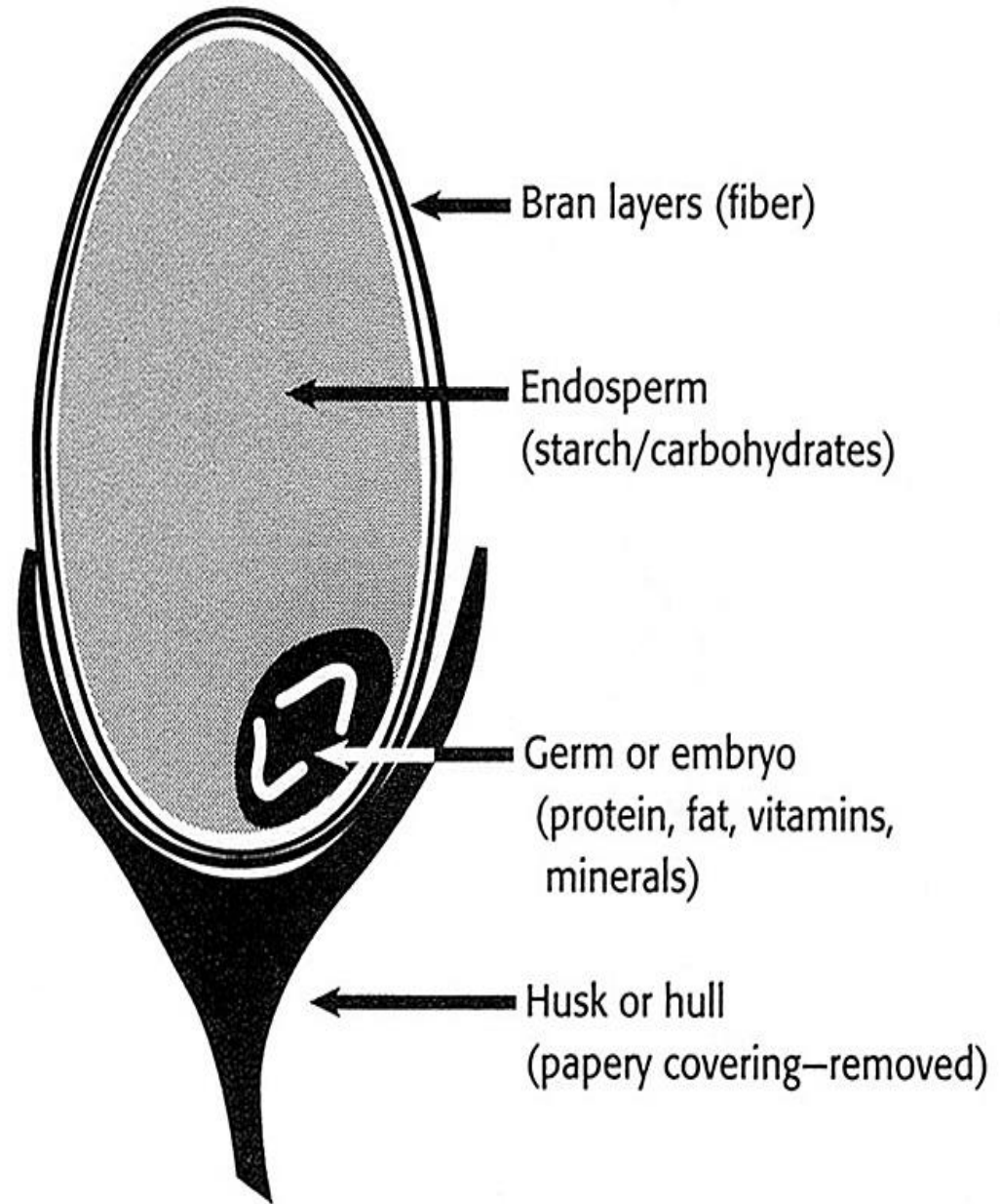
Am J of Epidem. 2003;58(3):243-250

Am J of Clin Nutrition 12/12, 2012

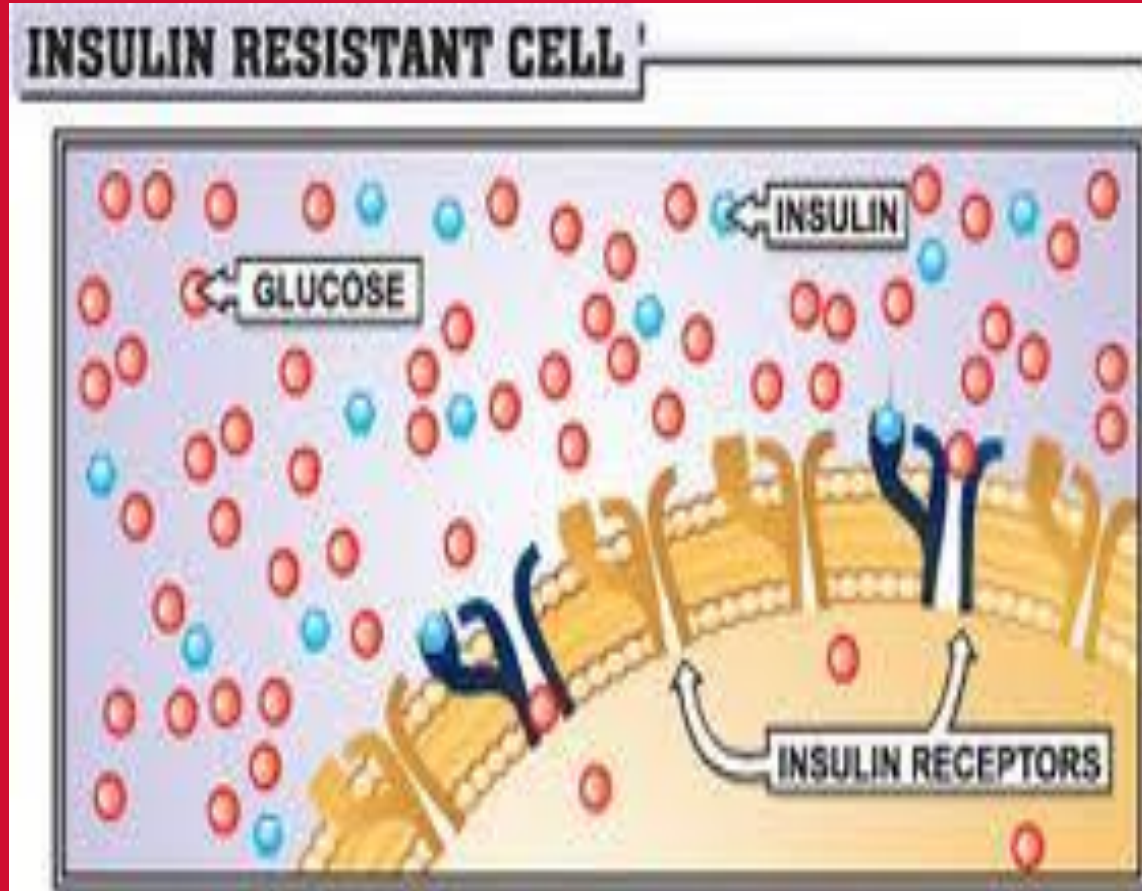
Am Soc for Nutr July, 2013:



Grinding & Cooking raise Glycemic Load



**Whole grains
increase insulin
sensitivity, help
prevent diabetes
& heart attacks &
lower cholesterol.**



**American Journal of Clinical Nutrition,
2003;78(5):965-971**

Current Opinion in Cardiology. Aug 13, 2015

**Wheat Belly, Grain Brain & Paleo Diet
recommend that you avoid whole grains**

**NONSENSE: No epidemiological
data to show that unrefined wheat
causes obesity, diabetes or MI's.**



NUTS Full Of Fat, But Not Fattening

Fat in almonds **inside** cells.

***In mouth:** Most almond cells remain intact after being chewed.

***In upper GI tract:** fat is not absorbed.

Am J. Clinical Nutrition. 2015, Jan;101(1):25-33

***In colon:** fat is released from cells by Bacterial fermentation and then absorbed.

Am J Clin Nutr. 2004 Sep;80(3):604-13

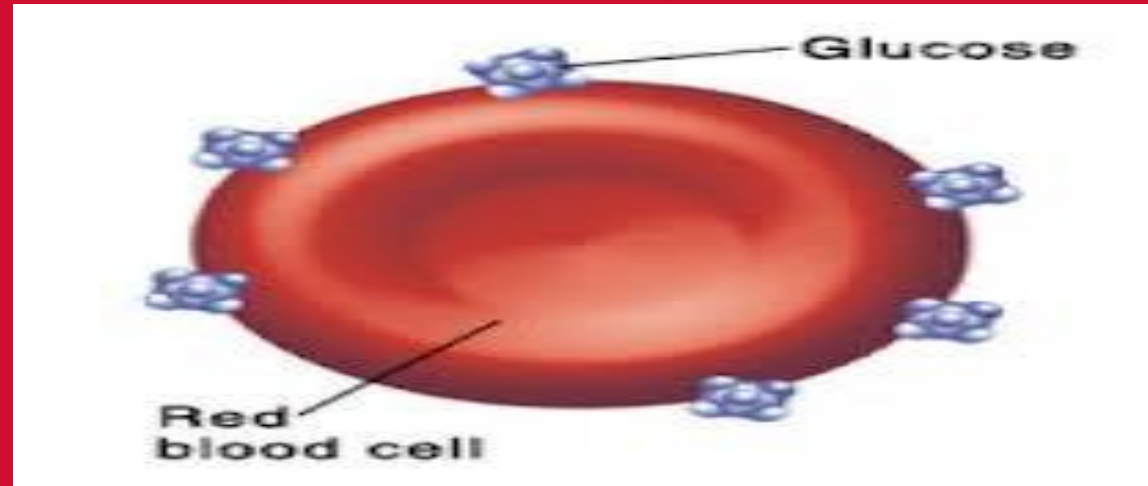
(Roasting almonds not increase fat absorption)

Br J Nutr. 2014 Nov 14;112(9):1521-9



Advanced Glycation End Products

Cooking without water causes sugar to attach to fat, protein, and nucleic acids to form AGEs that can damage every cell in your body. You eat them in food or form them in your body.



- Aging Research Reviews. November, 2018;47:1-278

AGEs

- **INCREASE** :Frying, broiling, grilling, and roasting
- **REDUCE**: boiling, poaching, stewing, steaming and microwaving



Weight Control



Eat:

- *lots of raw fruits and vegetables.
- *foods not cooked, chopped, ground or puffed with air.
- *cooked fruits and non-starchy vegetables. They are usually low in calories even when cooked.
- *WHOLE grains, beans, seeds and nuts not ground into flour.

Restrict:

- *sugared drinks because virtually 100% of calories rapidly absorbed.
- *all sugar-added foods.
- *foods made from flour such as bakery products and pastas.
- *soft or puffed cereals - including popcorn.



Rx Prostate Cancer same as for DIABETES

- **BREAKFAST: Steel-ground oatmeal**
- **LUNCH & SUPPER: Salads**
- **No meat, chicken (?), whole-milk dairy products, pastas or bakery products, sugar-added foods and drinks & prepared foods with partially hydrogenated fats**



HEART ATTACK WARNING SIGNS

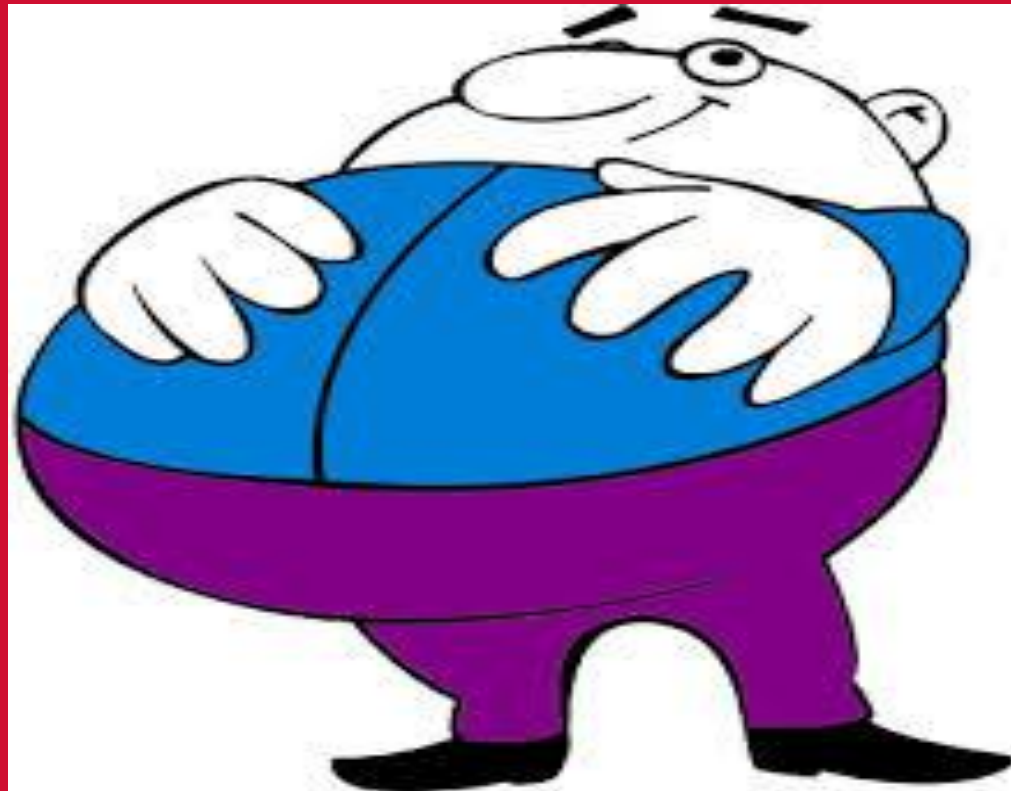
- BP > 120/80
- LDL > 100
- HBA1C > 6
- CRP > 1
- ABD. OBESITY
- Lp(a) > 125
- Triglyc > 150
- HDL < 40
- Homocys > 10
- Small Particle size



***Almost all people with small hips and big bellies have high blood sugar levels. A fatty liver prevents liver from accepting sugar from blood.**

***Mediterranean Diet cures fatty liver.**

Review article: [Current Opinion in Lipidology, 01/06/2015](#)



High Glycemic Foods Cause Heart Attacks

Studies from Denmark & Italy:

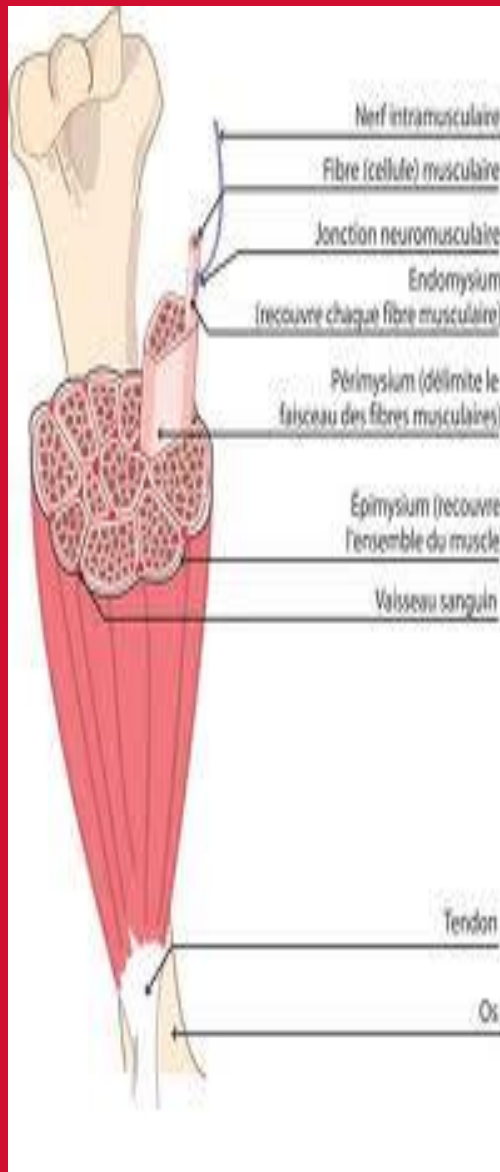
Those who ate the most **FOODS THAT CAUSE HIGH RISES IN BLOOD SUGAR**

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American J. of Clinical Nutrition, April, 2010

Archives of Internal Medicine, May 2010





Exercise sensitizes muscle cells to insulin to help prevent high rise in blood sugar that follows eating refined carbohydrates up to 17 hours after you finish a workout.

(athletes' recovery: maximum effect for 1/2 hr)

**Am J Clin Nutr.
2008(July);88(1):51-57**

**For an extensive list of
articles and medical journal
articles on the likely causes of
prostate cancer, go to
WWW.drmirkin.com
search “prostate”**

Thanks for Listening

Prostate Cancer & Heart Attacks should be treated with the same lifestyle changes

