



Nutrition & Prostate Cancer

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What are some things we know?

- ▶ Differences in diet and lifestyle may account for the variability of prostate cancer rates in different countries
- ▶ Good nutrition may reduce the incidence of prostate cancer and help reduce the risk of prostate cancer progression.
- ▶ Research on relationship continues..

http://www.ucsfhealth.org/education/nutrition_and_prostate_cancer/

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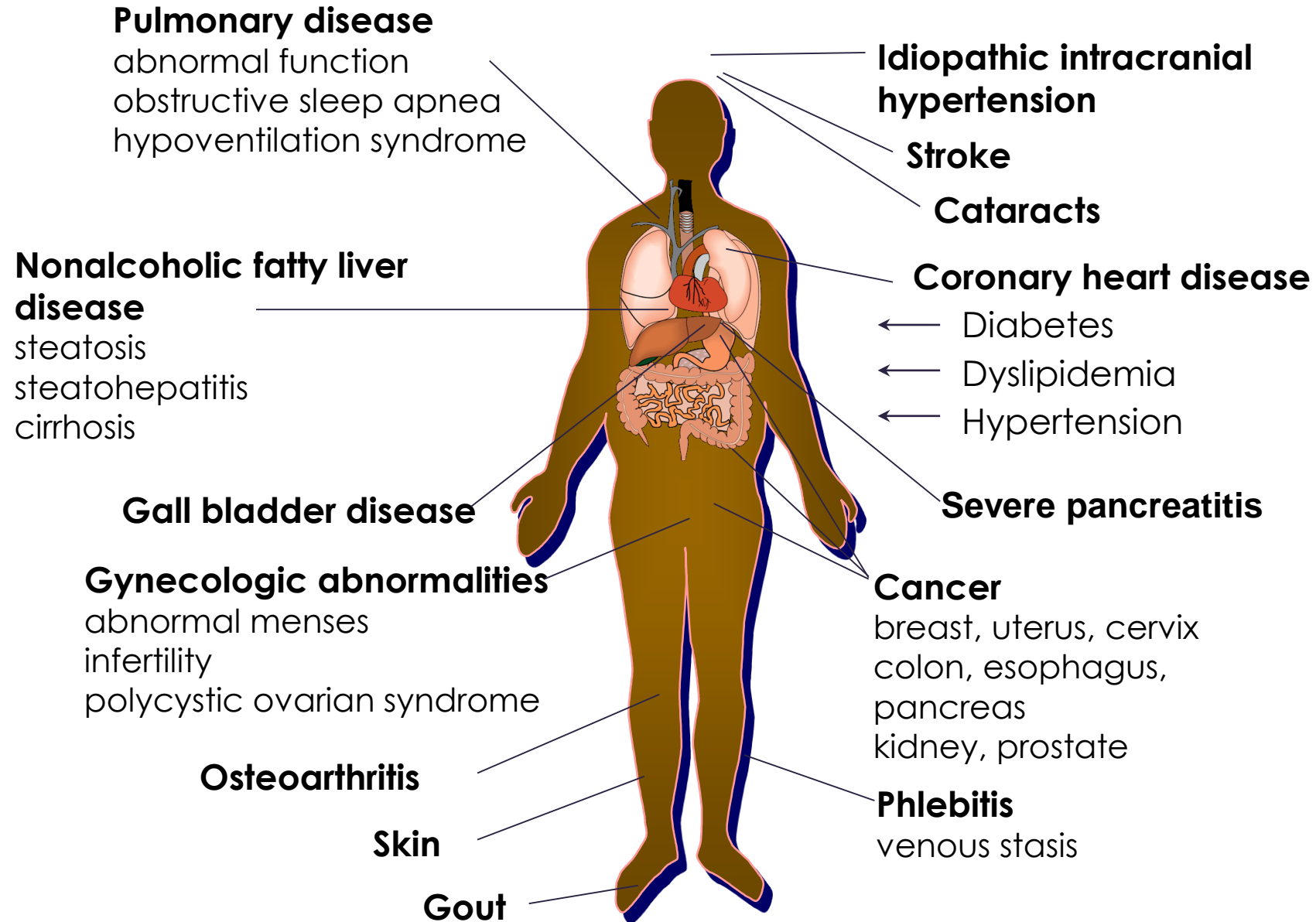
- ▶ Improved nutrition reduces risk of heart disease, diabetes, cancer and obesity, and usually improves overall quality of life
- ▶ 1/3 of cancer deaths in adults in the United States can be attributed to diet
- ▶ A healthy diet helps to:
 - ▶ Increase energy levels
 - ▶ Facilitate recovery
 - ▶ Enhance the immune system

Obesity Increases Risk

- ▶ Obesity, but not overweight was associated with excess mortality, mainly - from CVD and cancer
- ▶ Prevention: normal and overweight from becoming obese

<http://www.ncbi.nlm.nih.gov/pubmed/21681546>

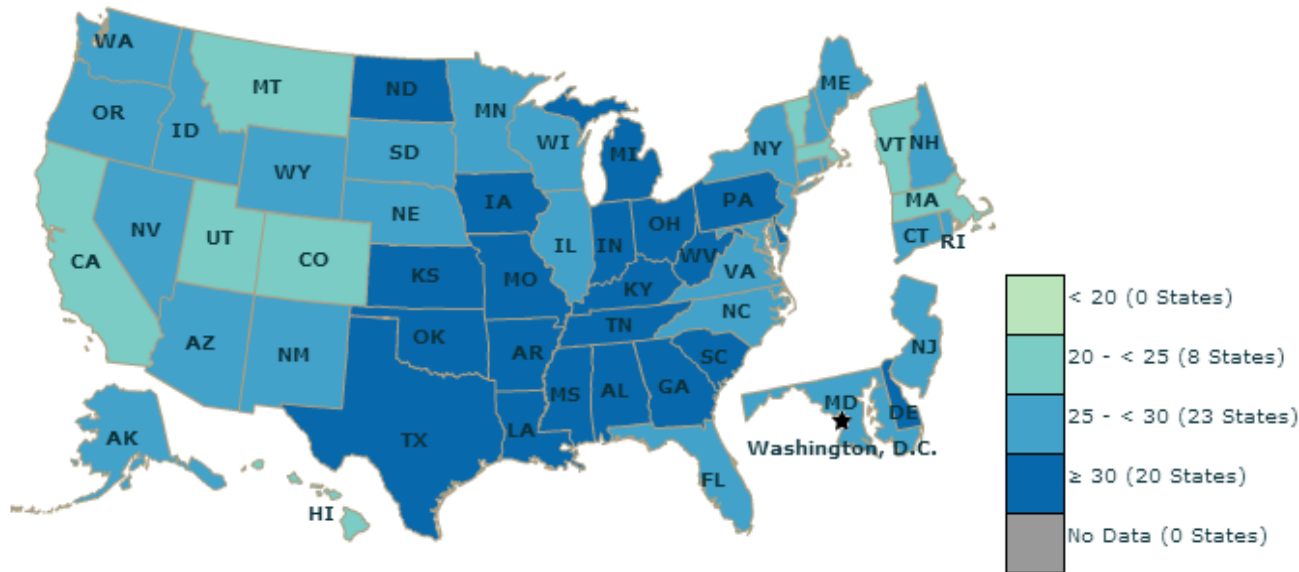
Overweight & Obesity- Complication



Overweight & Obesity- Complication

2013: Percent of adults aged 18 years and older who are obese †

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- ▶ Obesity rates for people age 20-74 have doubled in the past 30 years.
- ▶ Percentage of people who are overweight has remained largely constant

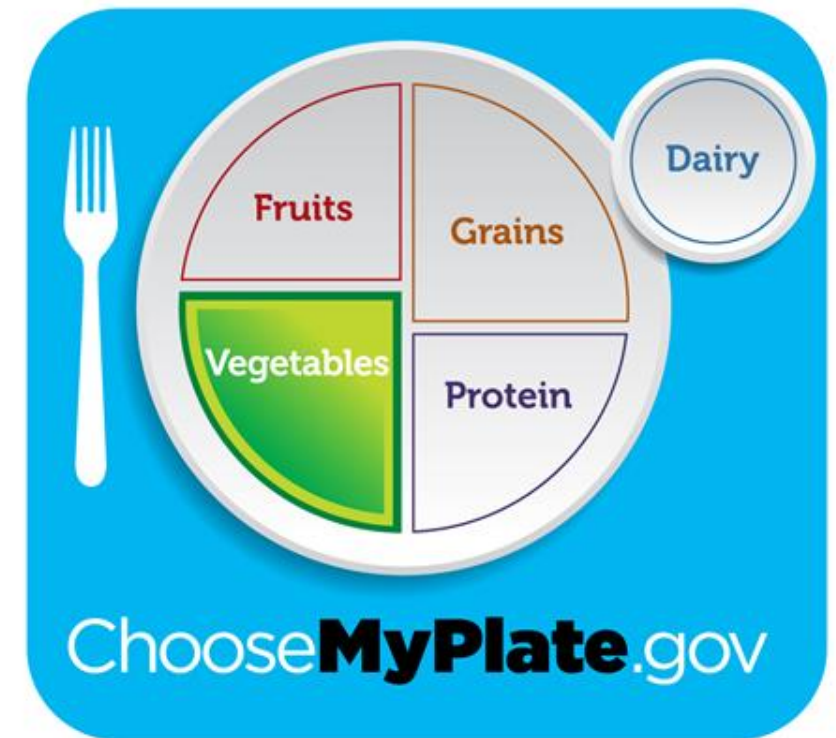
Source: CDC (2013). Health, United States, 2013.

Guidelines for a Healthy Diet

PRIMARILY PLANT-BASED DIET

- Plenty of fruits and vegetables – ½ plate
- High in fiber – aim 25g-35g
- Low in fat – type is of fat crucial
- Limited simple sugars – no more than 6g/9g/day
- Omega-3 fatty acids - reduces your risks for prostate cancer progression
 - consume fish at least twice weekly to obtain an adequate amount of omega-3 fatty acids
cold-water fish — such as salmon, trout, herring and sardines — flaxseeds, walnuts, soybeans and canola oil

A plant-based diet



Fruits are Super Foods

- ▶ Foods rich in bioactive phytochemicals
- ▶ Commonly cited examples include blackberries, black and red raspberries, blueberries, cranberries, and strawberries



Cruciferous Vegetables



Mustard Greens



Collard greens



Kohlrabi



Chinese cabbage



Arugula



Brussels Sprouts



Rutabaga



Wasabi



Water cress



Horseradish



Nutrients & Bioactive Phytochemicals in Cruciferous Vegetables

- ▶ Folate, fiber, carotenoids, & chlorophyll chemoprotective properties
- ▶ Rich sources of glucosinolates –sulfur containing compounds that are responsible for their pungent aromas & spicy/bitter taste
- ▶ Over 100 glucosinolates identified in plants-each with unique hydrolysis products

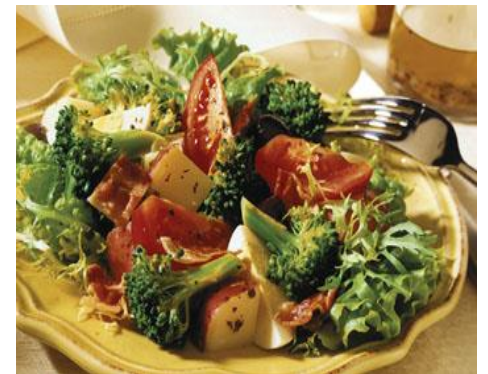


Why More Fruits & Vegetables?

- ▶ Vitamins, minerals and fiber + cancer-fighting phytochemicals, such as carotenoids, lycopene, indoles and flavonols
- ▶ Consistent evidence that diets high in fruits and vegetables are associated with decreased risks of many cancers
- ▶ There is some evidence that vegetables — particularly cruciferous vegetables like broccoli, cauliflower, cabbage, kale, Brussels sprouts and bok choy — may be associated with a reduced risk of prostate cancer.

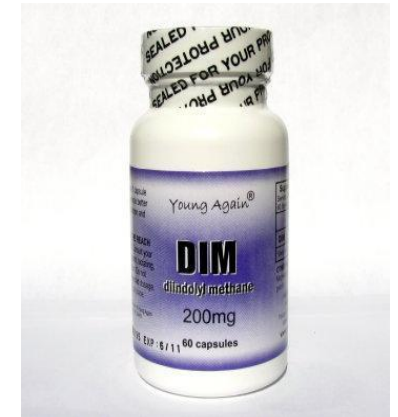
Possible Mechanisms

- ▶ Protection against reactive oxygen species
- ▶ Altered detoxification by induction of phase 2 detoxifying enzymes -thus protects us from carcinogens
- ▶ Decreased carcinogen activation by avoiding DNA binding of carcinogens
- ▶ Slowed tumor growth
- ▶ Induction of apoptosis - programmed cell death



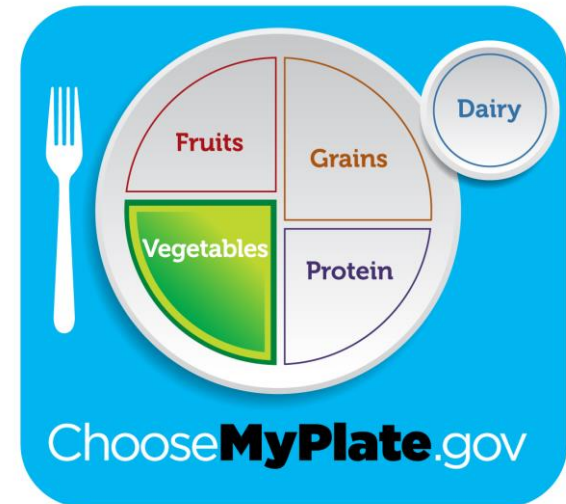
Caution: OTC Phytochemicals

- ▶ In some cases, phytochemicals such as Indole-3-Carbinol enhanced development of cancer in animals when given after carcinogen but not when given with or before
- ▶ Until potential risks and benefits are completely investigated, experts caution against the use of I-3-C & DIM supplements



Fluids

- Carries nutrients and waste products
- Participates in chemical reactions
- Acts as a lubricant and cushion around joints
- Acts as a shock absorber in the eyes and spinal cord
- Aids in the body's temperature regulation
- Maintains blood volume



Energy Balance

- Drink adequate fluids
- Be physically active



Keeping a Healthy Weight

- ▶ Exercise safely
- ▶ Eat mindfully- slow down
- ▶ Balance your meals
- ▶ Portion Control
- ▶ Watch liquid calories
- ▶ Build a Support Network
- ▶ Talk to your doctor
- ▶ Get OK from doctor for OTC





Questions?