

Diet and Lifestyle Changes for Patients with Prostate Cancer

**A presentation given by Dr Joe Enis to the
NSW/ACT Prostate Cancer Support
Group Chapter Conference
in Tamworth, NSW on 10 March, 2012**

The contents of this presentation are in a Powerpoint slideshow that was used by Dr Enis at the NSW/ACT Prostate Cancer Support Group Chapter Conference in Tamworth, NSW on 10 March, 2012.

The Prostate cancer Support Group - ACT Region has converted the slides in that presentation into a set of slides in PDF format. Some of the original slides have been edited to make the content clearer - e.g. by spelling out acronyms.

DISCLAIMER

While the presentation includes recommendations about matters such as diet and supplements that might be taken, the Prostate Cancer Support Group - ACT Region and its Executive is unqualified and unable to evaluate the effectiveness of implementing such recommendations and any risks associated with implementing such recommendations. Therefore it is essential that you seek advice and supervision from suitably qualified medical professionals prior to adopting recommendations made in the presentation, especially those relating to diet and supplements.

NOTES ABOUT THE AUTHOR

Enis originally trained as a Neurologist. For some years he was Chair of Stroke Services for South East Health, Sydney. In 2002 he was promoted to Deputy Chair of Stroke Services for Greater Metropolitan Sydney. However, just one week after accepting his new role, at age 55, he was medically retired with advanced Prostate Cancer.

While Dr Enis has been actively involved in all his treatment decisions, he reviewed about 300 medical abstracts on Prostate Cancer each week.

Dr Enis attributes his greatest breakthrough to consultation in 2007 with Dr Charles Myers in the USA.

**“I think we should invest in
this company”**



My Story

- Diagnosed **9 $\frac{1}{2}$ years ago, aged 55**, with **PC, metastases** to bones, lungs, adrenal
- **Cord compression** at 2 levels; **PSA 554**
- Expected survival **2 years** (Dana-Farber, 2010)
- Had **1st** then **2nd** line **HT** (till 4 yrs ago), **IMRT** to **prostate**, **pelvic LNs** 1 $\frac{1}{2}$ yr ago
- **Complete remission** last 4 $\frac{3}{4}$ years (8 weeks after start 2nd line HT). **PSA < 0.01, no metastases**
- **Maintenance therapy** last 4 $\frac{1}{2}$ years

Causes of death (PC \geq 65 years)

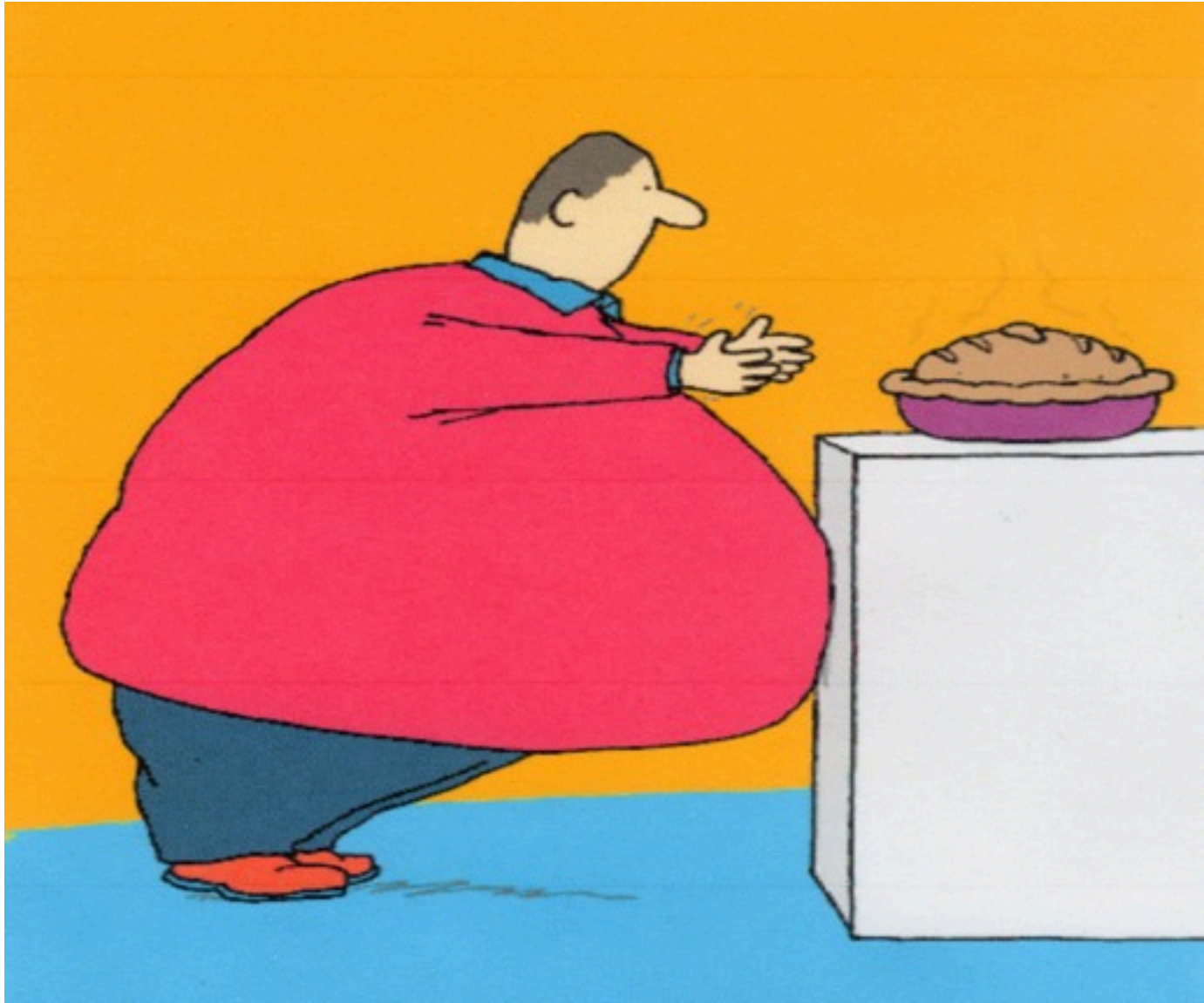
- 40% will die from **prostate cancer**
- 30% will die from **cardiovascular disease**
(1st line HT may increase risk, esp if pre-existing CVD)
- 12% will die from other cancers, esp. **colon**
- The same **dietary and lifestyle factors** that **increase** risk of PC also increase risk of heart disease and **colon cancer**
- **Mediterranean diet**, appropriate **lifestyle changes reduce** impact of **all 3 diseases**

Diet and Lifestyle

- These measures important for **all PC patients**, regardless of disease severity or current therapy
- Help **prevent recurrent PC** that may follow prostate surgery, radiotherapy in up to 1/3 of cases, esp if PC more advanced
- Help those on **hormone therapy** achieve a **complete remission**, while **preventing vascular complications** of this therapy

Diet and Lifestyle

- Once PC has **metastasized**, difficult to achieve a durable **complete remission** (PSA < 0.01, scans clear) without using these measures too
- Once a complete remission is achieved, continuing with these measures is important in helping to **maintain** this remission



Obesity

- **Increases risk of developing more aggressive prostate cancer (also CVD, other cancers, esp. colon cancer)**
- **Increases risk of recurrent PC after RP**
- **Weight gain common in men on first line HT (along with hypertension, diabetes, cardiovascular disease)**
- **Weight loss helps reverse all these problems. Aim for $BM1 \leq 25$**

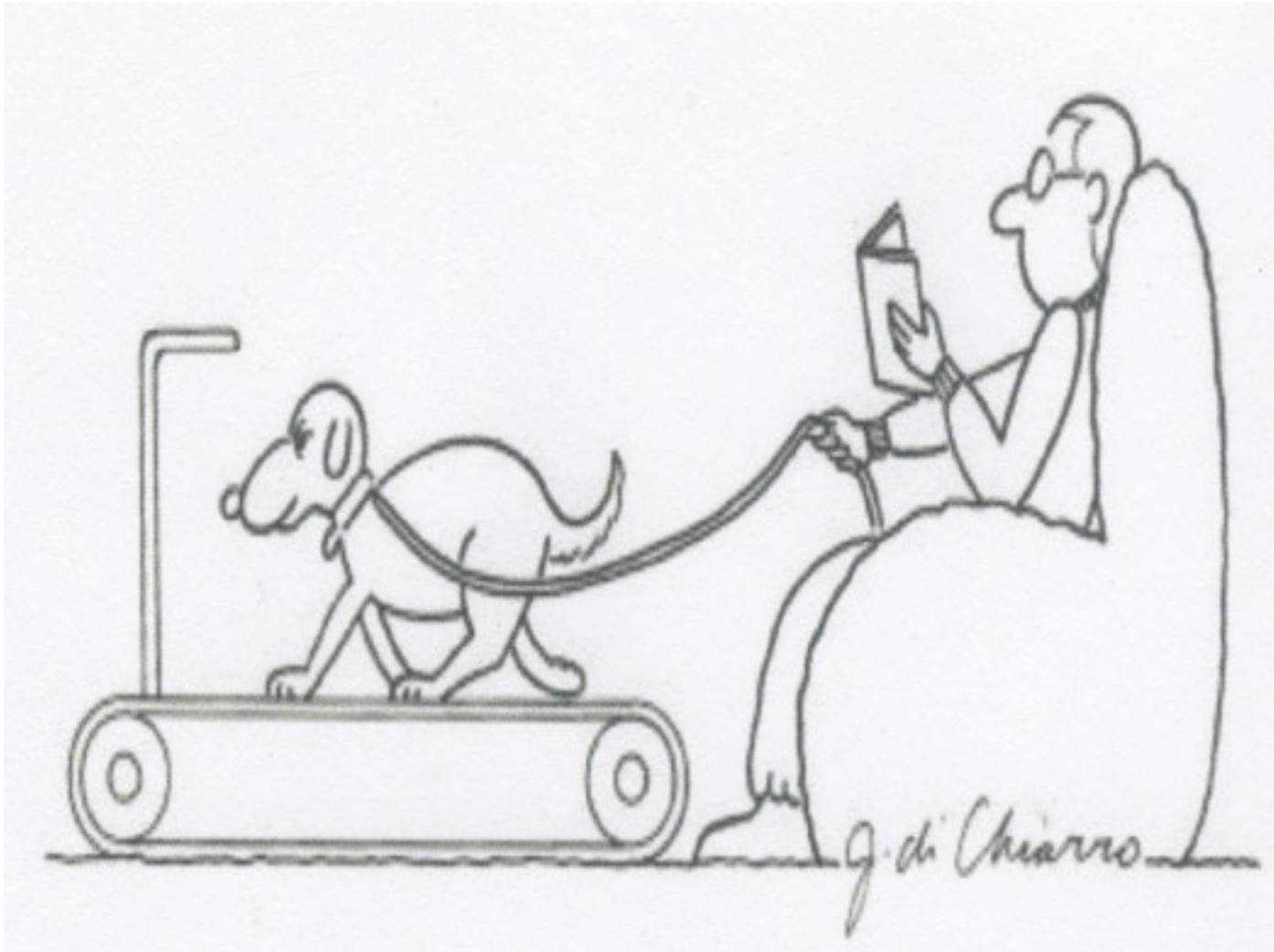
New "drug" (Moyad)

- Reduces risk of advanced PC
- Reduces heart disease, stroke
- Reduces hypertension, diabetes (type 2)
- Reduces obesity, bone loss
- Reduces anxiety, depression, fatigue
- Increases HDL, improves sleep
- Improves physical strength, fitness
- Has very few side effects

Exercise

- Regular **aerobic** exercise provides all those benefits
- Need minimum **30 minutes a day**. 60 minutes better. **Vigorous** exercise (eg brisk walk) best
- Also need **resistance** exercise **twice a week**. Particularly overcomes side effects of **hormone therapy**, eg improves **muscle bulk, strength and fatigue**

This is simply not good enough



Smoking

- Current smokers are more likely to be diagnosed with **advanced prostate cancer**
- Current smokers at greater risk of **recurrence** after surgery, radiotherapy
- Current smokers more likely to **die** from their **prostate cancer**
- Current smokers also more likely to **die** from **cardiovascular disease**

Stress

- Stress may hasten **development** and **progression** of PC
- **Hormones** released during stress may **stimulate PC growth**, **reduce** body's **immune response** against it
- **Relaxation** (meditation, gardening, exercise, listening to music) **may help**
- **Sharing love** and **support** (receiving and giving) very important

Importance of Hope

- If recurrent PC after curative therapy, wrong to quote **18 months** until CRPC
- Silly to quote **median survivals**, as **half do better**. Indeed most survival curves have a **tail**, so **10-20%** will **survive much longer**
- Progress of PC usually orderly, first **loco-regional**, then **oligometastatic**
- **5 (6) fantastic new drugs** have recently been approved for use in PC

Environment

- **Deaths from PC 90% lower in Japan** than in USA and other Western countries
- When Japanese men **migrate to USA**, **death from PC increases** toward that of local population, in proportion to time they have lived there. Death rates same after just 2 generations
- Suggests something in **environment** is contributing to development of PC

Role of Fats

- **PC cells**, unlike many other cancers, **depend on fat**, not sugar, for energy
- US and Japanese diets **differ** greatly in **type** and **amount** of fat they eat
- Two fatty acids strongly associated with **advanced PC**: **arachidonic acid** (omega 6) (2 $\frac{1}{2}$ -fold increased risk), **alpha linolenic acid** (omega 3 from plants) (3-fold increased risk)
- **Palmitic acid** stimulate PC even more

Bad Fats

- **Arachidonic acid** found in **red meat, pork, dairy fat, egg yolk**
- **Alpha Linolenic Acid (ALA)** found in many **vegetable oils** eg **canola oil** and esp **flaxseed oil**. Also in **walnuts, pecans**
- **Palmitic Acid** found in **coconut, palm oil**
- **Omega 6** fats stimulate, while **omega 3** fats (from fish) slow PC growth.
Increasing intake of these omega 3 fats helps negate effects of omega 6 fats

Cholesterol

- Men with elevated levels of **Cholesterol** at greater risk of developing **advanced prostate cancer**
- **Statins** reduce this risk. Also reduce risk of **recurrent PC** after radical therapy
- **CRPC** cells can **synthesize their own androgens** from circulating Cholesterol. Elevated levels of Cholesterol increase androgen production in PC cells

Diets that suppress PC growth

- **VEGAN DIET** **No fish, nuts or olive oil.**
Nutritionally **incomplete**, no proven health benefit. Hard to adhere to
- **VEGETARIAN DIET** Easier to adhere to, as includes **eggs, milk**, but these **not allowed** in PC
- **OKINAWAN DIET** good. **Lots of fish, fruit, vegetables, rice, and soy. Calorie restriction.**
Little red meat, eggs and dairy products

Diets that suppress PC growth

- **MEDITERRANEAN DIET** (Crete, not France). **Lots of fish, fruit, vegetables, grains, legumes, olive oil, nuts, red wine.**
Little red meat, eggs, dairy products
- Only diet **validated** by multiple RCTs
- Mediterranean diet more diverse, so **easiest to adhere to**
- World's **longest lived men** found in **Sardinia** (Med. Diet) and in **Okinawa**

HALE Project

- When > 2,000 **healthy** Europeans aged **70-90** adopted four healthy measures over ten years (**Mediterranean diet, brisk walking, moderate alcohol, no smoking**)
- **Risk of death from all cancers (incl. prostate) reduced by two-thirds!**
- **Risk of death from cardiovascular disease reduced by two-thirds!**

Lyon Diet Heart Study

- 600 admitted to ICU with **first heart attack**, randomised to **Mediterranean diet** or control diet
- After **only 4 years**, patients on **Mediterranean diet** had **60% fewer new cancers**, **50% fewer new heart attacks** and **50% fewer deaths**

Saxe Study

- Among a group of men with **recurrent PC** after prostatectomy, **Mediterranean diet** plus stress management **slowed PSADT by 2/3**
- This took them from a significant risk of death to a **much lower risk of death** within next 10 years

Mediterranean Diet

- **Not a low fat diet** (one third is fat)
- **Emphasizes good fats: omega 3 fats** (fish) and **monounsaturated fats** (olives, nuts)
- **Excludes bad fats: omega 6** (red meat, egg yolk, dairy fats) and **omega 3 fats from plants** (vegetable oils, eg canola and esp. flaxseed)
- Also rich in **antioxidants**

Diet must be Balanced

- Each meal should derive its calories **equally** from fat, protein, carbohydrate
- Best **fat** from fish, olive oil, avocado, nuts
- Best **protein** from fish, poultry, beans, egg white
- Must restrict **sugar** to 1/3 of total calories. Too much sugar forces body to produce too much **insulin**. Too much insulin will **stimulate PC** cell growth.

Meat

- No **red meat** or **pork**. Meat should not be **smoked** or **cured**
- Meat more dangerous when **burnt** (browned, blackened) as form chemicals that damage DNA. This may aggravate PC
- **Chicken** (all) and **turkey** (**breast**) safe, but must be **skinned** and **trimmed**
- **Avoid burning**, but DNA changes less troublesome with poultry (and fish)

“I’ll have the barbequed rump steak, with all the ramifications.”



Fish

- Fish eaten **twice** a week **reduced** risk of **recurrent** cancer following RP by **2/3**
- Fish eaten **four** times a week **reduced** risk of developing **metastatic PC** by **half**
- **Fish best eaten five** times per week*
- **Best grilled, baked or poached.** Benefits lost if fried in unsafe oil. If fried, use **olive, avocado** or **hazelnut oil**
- **Avoid heating till browns or blackens**

Fish

- **Wild, cold ocean fatty fish best eg herring, sardines, tuna, trout, salmon, cod.** They obtain healthy omega 3 fatty acids (**EPA, DHA**) from algae they eat
- Other fish fine but no special benefit for PC
- Trout and salmon **farmed** here. May be fed vegetable oil (**ALA**). **Trout** can convert this to EPA, DHA, but **salmon** can't
- So, **salmon** better **wild** than **farmed**

“Your meal will be out shortly. The salmon was a little wilder than anticipated.”



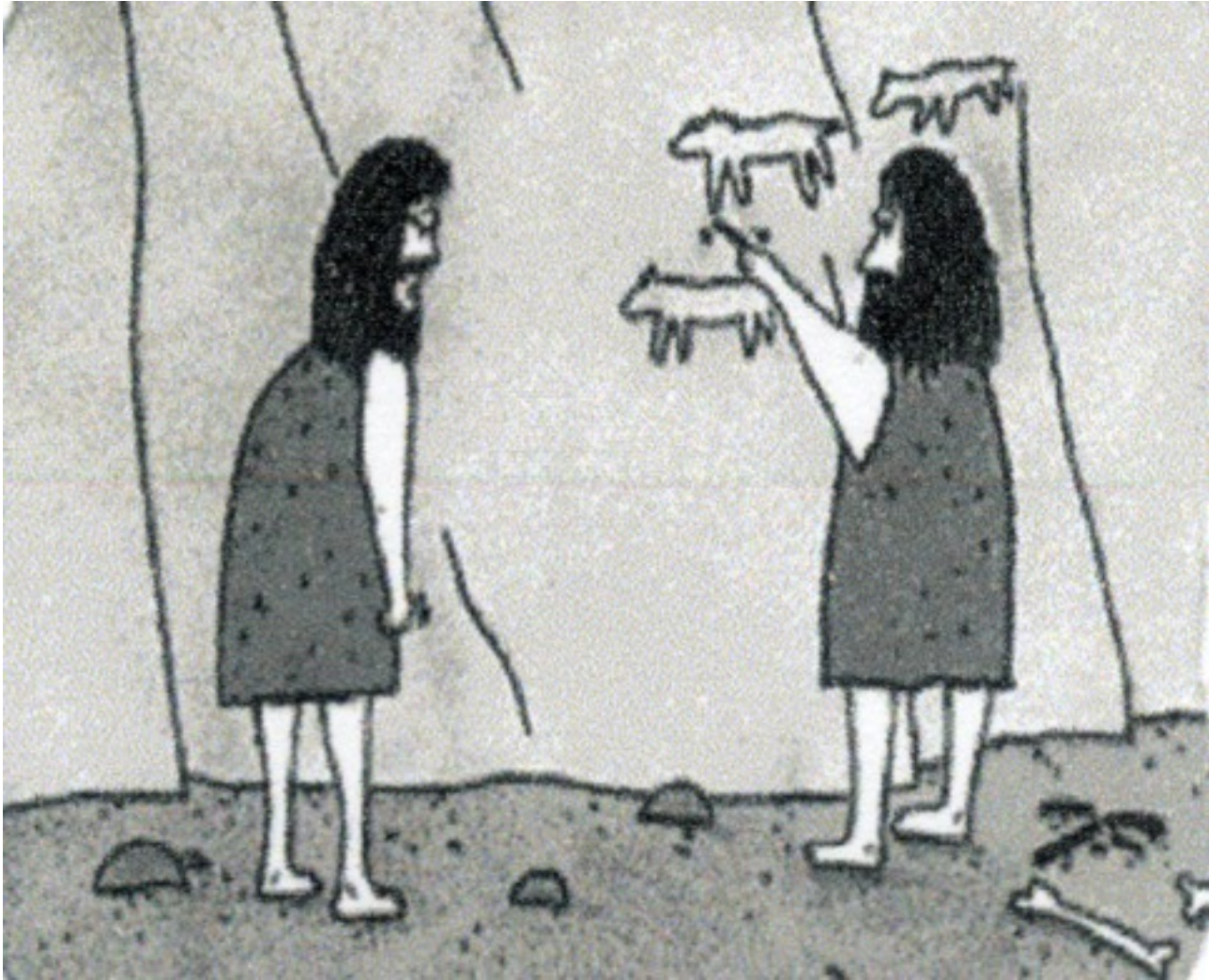
Fish Oil

- Fish oil (omega 3) **blocks** harmful effects of omega 6 fatty acids, **slows** PC growth
- Fish oil **supplements** not as good as fish
- Take **2,000 IU twice daily**, at least on **non-fish days**. Local brands fine
- Keep in **cool, dark** place and **refrigerate** once opened
- Avoid if has fishy odour

Fruit and Vegetables

- **Fruit and vegetables** very good. Reduce risk of **advanced PC**. Should form bulk of diet, esp. **olives, avocados, tomatoes** (tomatoes best as juice or cooked)
- **Dark red, blue, purple fruit** esp. good eg **dark grapes, berries, pomegranates**
- **Cabbage family** (best raw) very important: **cabbage, cauliflower, broccoli, brussel sprouts, onions, radish**

“My doctor says you should be drawing more fruit and vegetables.”



Fruit and Vegetables

- Only vegetable to avoid is **corn**. Rich in omega 6 fatty acid, linoleic acid.
Corn stimulates PC growth
- Avoid **popcorn, corn meal, corn chips**
- Avoid fat, milk, egg yolk from **corn-fed animals** (esp a problem with dark meat in **turkey legs**, which can contain 50% fat)
- **Corn syrup, corn starch** OK, as have no fat, thus no linoleic acid

Grains, Legumes, Soy

- **Grains** good eg **bread, cereal, pasta, rice**.
Eat **in moderation** because of they have lots of calories
- **Legumes** good eg **beans, peas, lentils**
- **Soy** generally good, but in recent study, consumption of **miso soup** caused big increase in incidence of aggressive PC

Eggs and Dairy

- No **egg yolk** (incl. **mayonnaise**, most **cakes, biscuits**). **Egg white** excellent protein source
- No **dairy fat**, but **skim milk, very low fat cheese** and **ice cream (sorbet best)** fine
- No **butter** (dairy, incl. most cakes, biscuits) and **margarine** (ALA). **Olive oil, hummus, avocado** make healthy spreads
- No **milk chocolate**, **dark chocolate** good

Nuts and Oils

- **Almonds, cashews, hazelnuts, macadamias, pistachios** very good (contain **monounsaturated fats, antioxidants**). Don't skin or roast. Avoid **walnuts** and **pecans** (contain ALA)
- **Olive, avocado, almond** and **hazelnut oils** very good (contain **monounsaturated fats, antioxidants**), but avoid **vegetable oil** eg **canola** and esp. **flaxseed oil** (contain ALA)

Beverages

- One glass **red wine** a day **reduces** risk of **advanced PC** by **2/3**. **Resveratrol** most important ingredient
- 6 cups **coffee** a day **reduce** risk of **advanced PC** by **40%**. Decaffeinated coffee as good, so benefit from other ingredients
- **Green tea** may be of some benefit, but not in advanced prostate cancer
- Red wine, coffee, green tea **antioxidants**

Antioxidants

- **Oxidative damage** is a major factor in development of PC, and in time, **more aggressive disease**
- **Antioxidants** help **prevent PC** and **manage established disease**
- **Foods containing antioxidants:**
fruit, vegetables, nuts, olive oil, dark chocolate, red wine, coffee, green tea, pomegranate, resveratrol, curcumin

Important Message

- Patients who do **worse than expected** are often **obese, don't exercise** and/or **continue to eat the wrong food esp red meat**
- Patients who do **better than expected** are often **lean, exercise regularly** and follow a **healthy diet**



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In particular you must note Dr Enis' statements about drug interactions with Resveratrol and the need to discuss with your doctor.

Supplements

- Help control **Prostate Cancer** (and **Cardiovascular Disease**)
- **Vitamin D**
- **Pomegranate**
- **Resveratrol**
- **Curcumin**

Vitamin D3

- Vitamin D level **often low** in men with PC
- 2,000 IU Vitamin D3 daily for men who **relapsed** following surgery or r/therapy almost **doubled PSADT** (Vieth)
- Recommend **1,000 to 5,000 IU daily**. Need less if young, routine sun exposure
- Must monitor **blood levels**, aim for upper half therapeutic range. Many products contain little Vit D (I use local OsteVit-D)

Pomegranate

- Giving 250 ml **pomegranate juice** daily to men who **relapsed**, with **modest** disease, following surgery or radiotherapy, almost **quadrupled PSADT** (keep juice in cool, dark place and refrigerate once opened)
- **Strong antioxidant**
- Prefer Full Spectrum **pomegranate caps**, one twice daily (www.lef.com), as juice contains too much sugar, risk of diabetes

Resveratrol

- In grape skin, red wine (antioxidant)
- **Powerful** drug. In some, may be enough to **halt progress** of PC, or **maintain CR**
- Take 250 or 500 mg capsule daily (www.revgenetics.com) if safe
- **Low toxicity, but beware major drug interactions** - e.g. greatly enhances Warfarin, anti-hypertensive, anti-diabetic therapy. Interactions still not fully known (must discuss with a **doctor**)

Curcumin

- Found in **turmeric (antioxidant)**
- **Slows PSADT** in many, sometimes even after Taxotere chemotherapy has failed
- Very **safe**, no apparent drug interactions
- **Absorption** was a problem, solved with **Super Biocurcumin** (www.lef.com)
- Tailor dose to avoid only SE, **diarrhoea**. Start with one 400mg capsule a day, build up as tolerated (I take two twice a day)

“I drink six glasses of carrot juice a day
and it never turned my skin yellow”

