

Surviving (& Thriving) during & after cancer

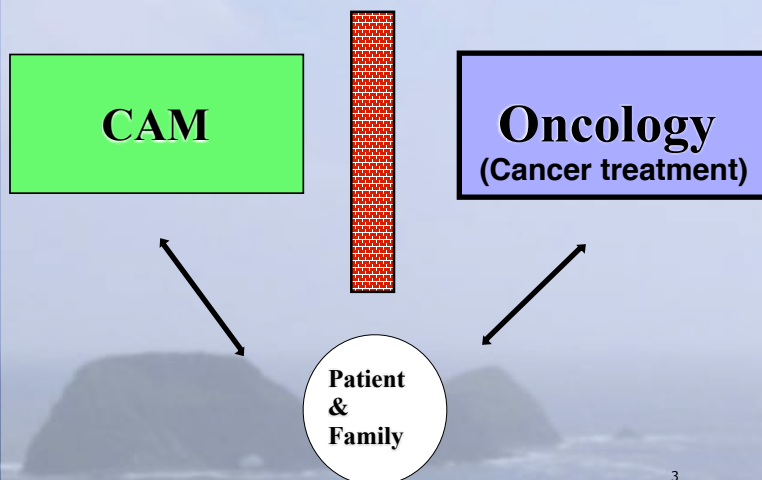
Paul Reilly, N.D., L. Ac., FABNO
Salish Cancer Center
Fife, WA

Salish Cancer Center



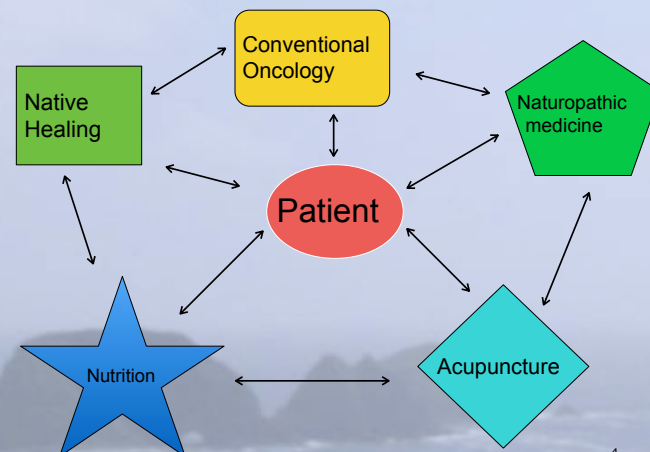
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What is Integrative Oncology?



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What is integrative medicine?



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Integration = Communication



Goals of integrative treatments

- Increase tumor kill from any treatment
- Reduce Side effects of any treatment



Supporting Chemotherapy

- Meta-analysis of 21 clinical trials found combining melatonin with chemotherapy decreased 1 yr mortality, and reduces asthenia, leukopenia, nausea, vomiting, thrombocytopenia. RR of 1 yr mortality was 0.63.
Integr Cancer Ther. 2012 Dec;11(4):293-303.

- Adding 20 mg melatonin to standard therapy for stage 4 cancer doubled response to tx and doubled survival at 1 yr
 - Eur. J. Ca 1999;35:1688

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Supporting Chemotherapy

- VITAMIN D
 - Pretreatment with 1,25 dihydroxy vitamin D led to approx 75% enhancement of action of dox against ca cells. (Ca Res. 1999;59:862)
 - Improving vitamin D levels significantly improved outcomes and survival in lymphoma pts receiving R-CHOP chemotherapy (ASCO 2013 -post 103)
 - Enhances response to taxotere in advanced prostate cancer (ASCO 2002)

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Supporting Cancer Care

- At least 5 studies show Ashwaganda to increase benefits of radiation therapy
- A mouthwash made from Yarrow helped chemotherapy-induced mucositis more than the usual formulation



Safe, basic support during most chemotherapy

- Melatonin
- Vitamin D
- Glutamine
- Fish oil
- Multivitamin
- Green tea
- Vit. C & Immune support

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Goals of integrative treatments

- Increase tumor kill from any treatment
- Reduce Side effects of any treatment
- **Inhibit metastasis (distant spread)**
- **ID & correct tumor "drivers"**
- **Improve immunity**
- **Improve overall health**
- **Long term secondary prevention**

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Aftercare - (Surviving & Thriving)

- Prevent return of original cancer
- Prevent other types of cancer
- Prevent or tx long term effects of cancer treatment
- Identify individual risk factors
- Overall wellness promotion
- Health, Happiness, Balance

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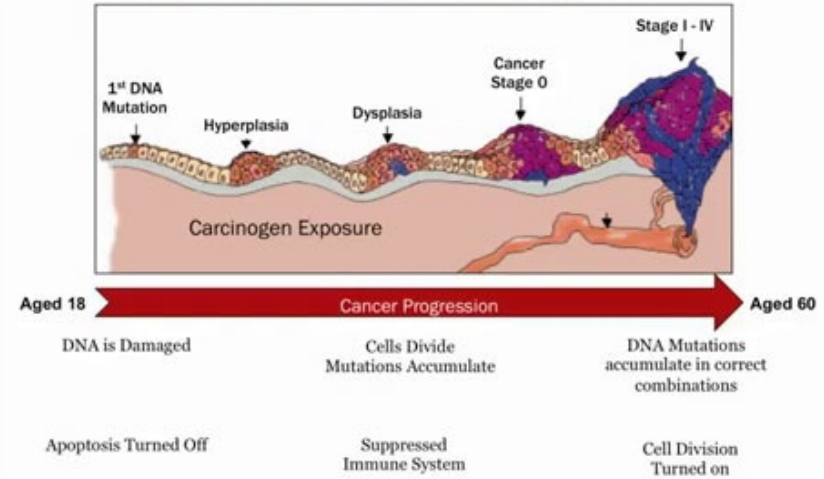
Take Home Tip #1

If you need cancer treatment, integrative medicine can improve:

- response to treatment
- quality of life
- survival.

What is cancer?

Current View of Cancer Progression

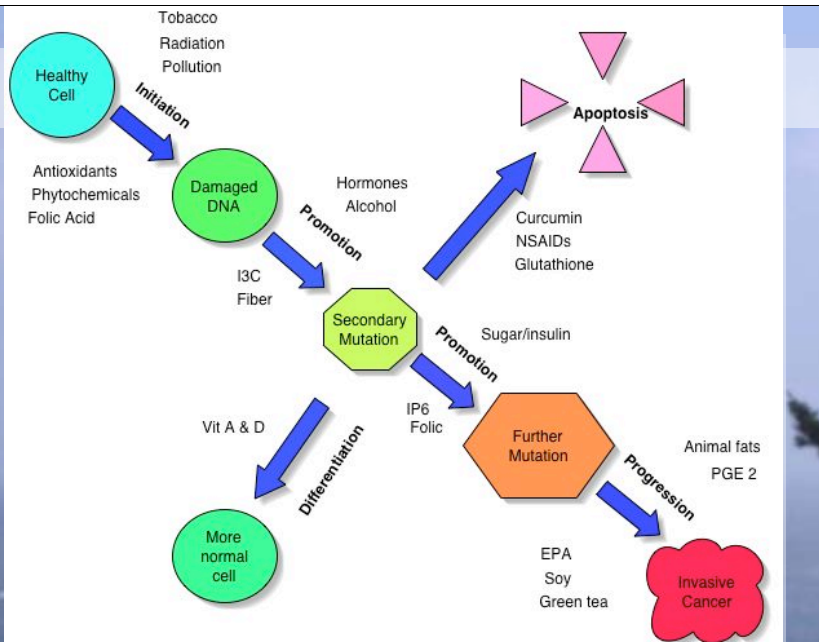


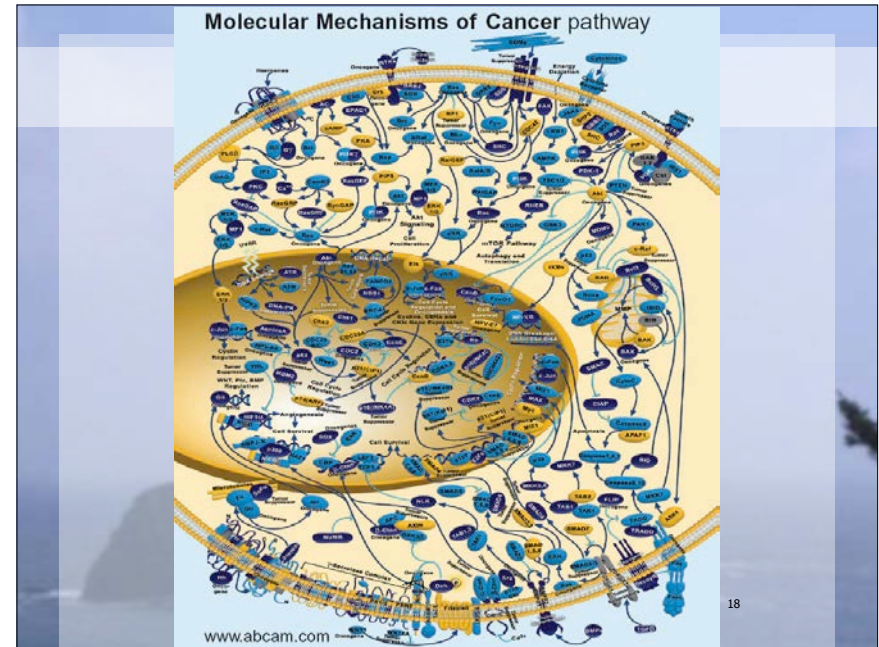
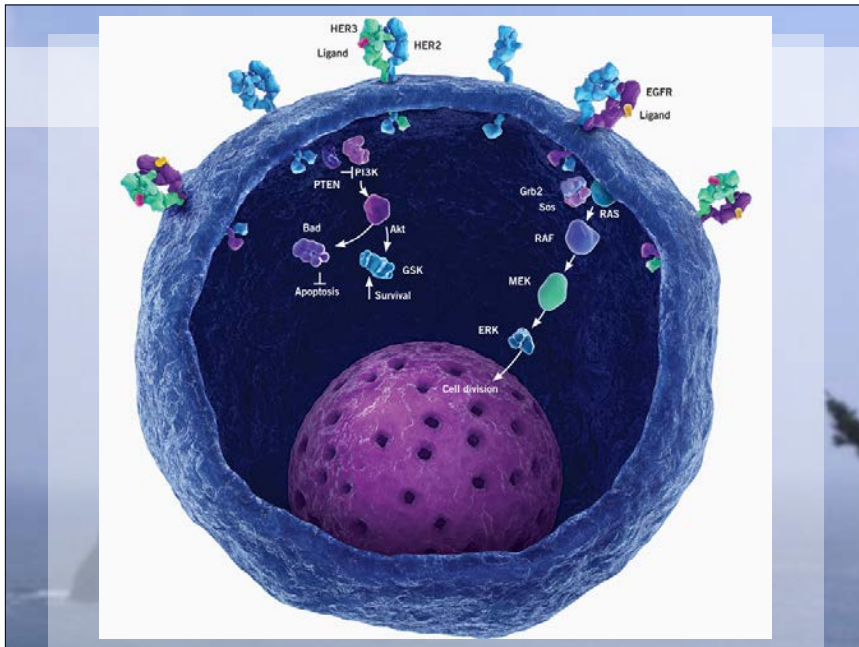
Another Way of Thinking

- Cancer is a defect in regulation
- Cancer cells are mostly normal
- The imbalance is potentially reversible
- Using killing strategies alone may be counterproductive
- Host response is critical
- Cancer growth rates are variable, depending on the regulatory balance

• ref: Schipper et al J. Clinical Oncology 1995;13:801

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More good news

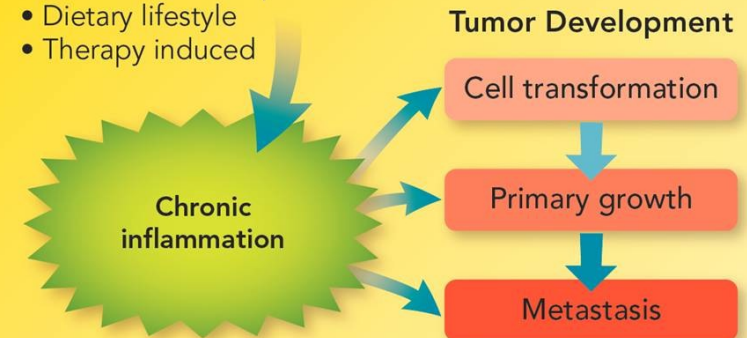
The environment surrounding a tumor cell can promote or discourage tumor growth independent of tumor genetics (Tumor suppressor or promoter genes)

Int. J. Cancer 2003;107:688

JNCI 2002;94:1494

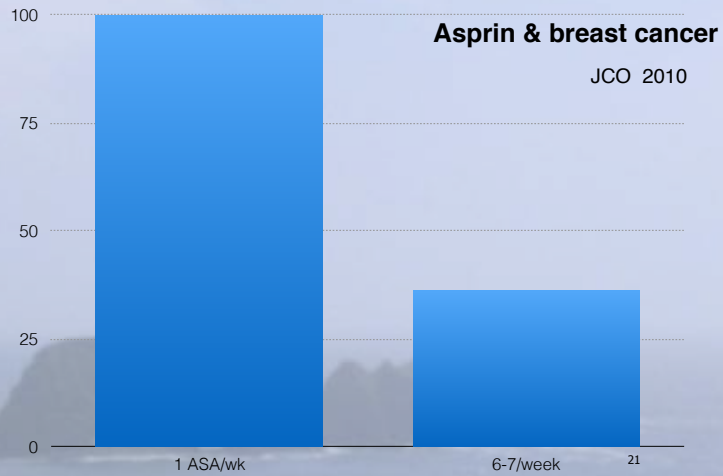
Role of chronic inflammation in cancer development

- Microbial pathogens
- Environmental exposure
- Dietary lifestyle
- Therapy induced



Chronic inflammation initiates and impacts all major stages of tumor progression, from cell transformation to widespread metastasis.

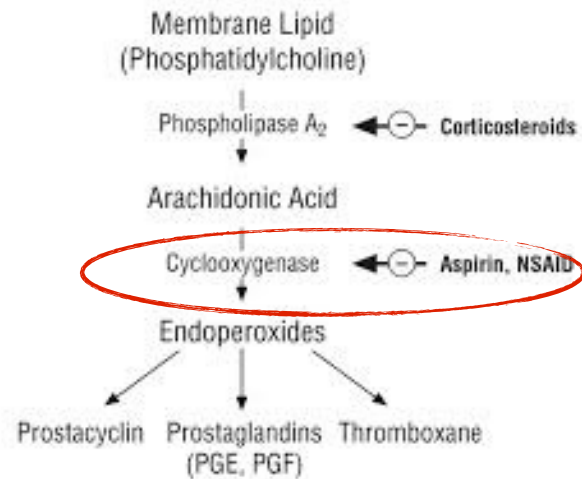
Inflammation & Cancer



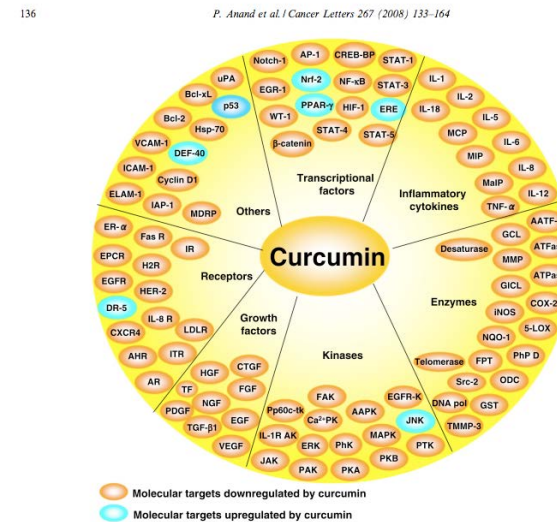
Curcumin

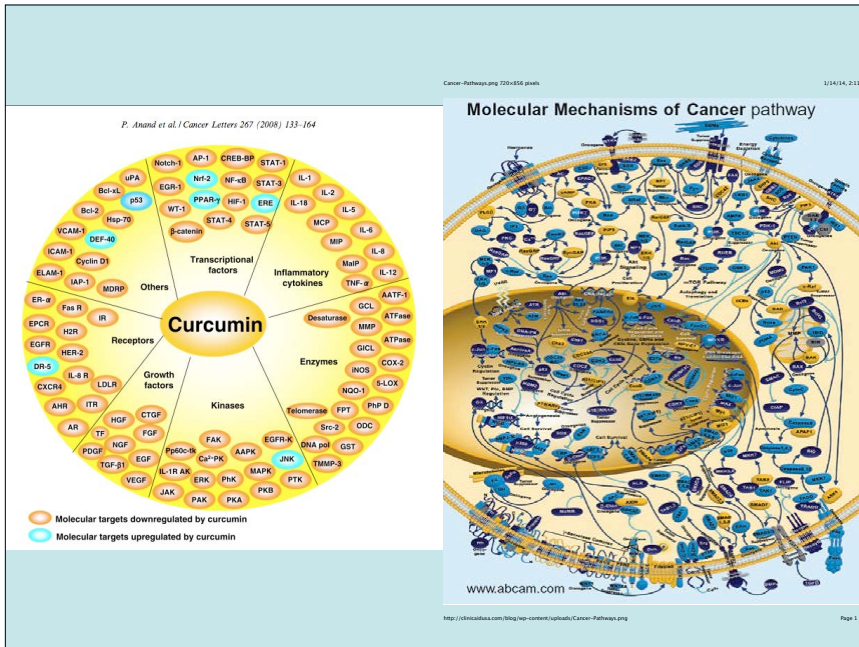


How aspirin works



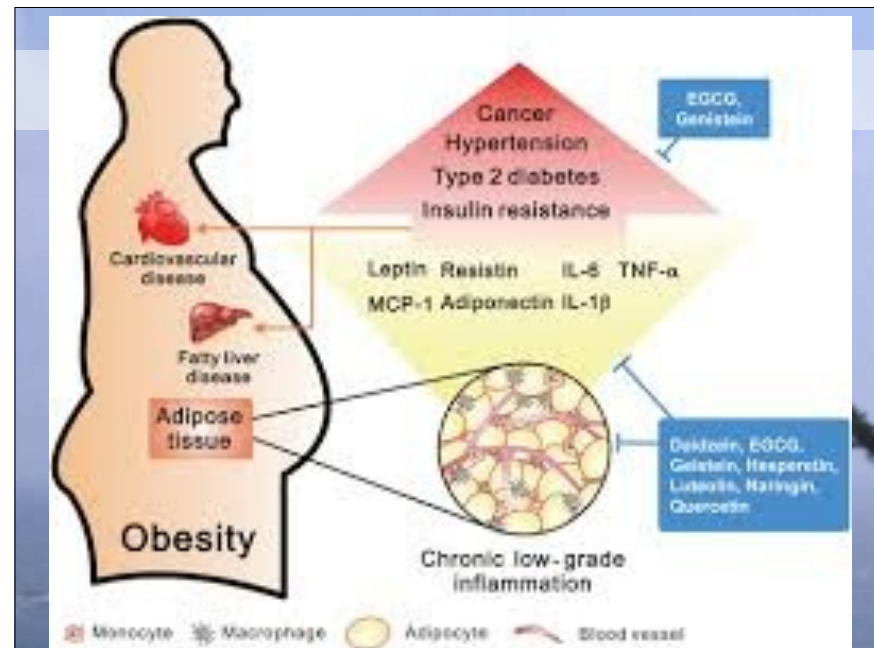
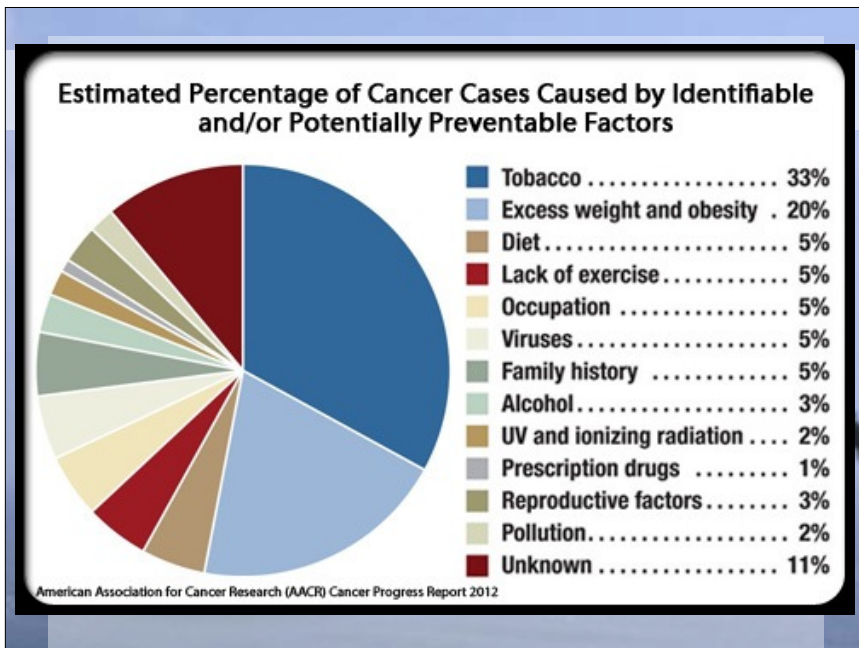
How curcumin works



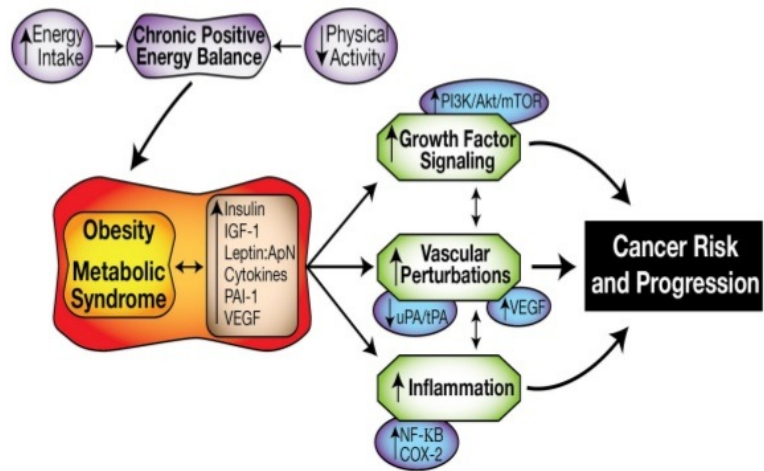


Take Home Tip #2

- Cancer Biology is extremely complex.
- No simple answers
- Natural therapies can modify multiple steps in cancer growth.
- Bonus tip: To reduce inflammation throughout the body- use curcumin



Obesity and Cancer: Emerging Mechanistic Targets



S. Hursting and M. Hursting.
Arterioscler Thromb Vasc Biol, 2012

Obesity, insulin & cancer

- Obesity could account for 14% of all cancer deaths in men and 20% in women (NEJM 2003;348:17)
- High insulin may be the best predictor of whether a woman's breast cancer recurs. (JCO 2002;20:42)
- 60% higher risk of colon cancer with higher levels of insulin. 90% increase with highest waist circumference (JNCI 1999;91:1147)



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Nature Medicine

- **Rather than trying to cure cancer by killing off every last cell, it makes more sense to control the disease by modifying factors which control cancer growth** (Lancet 1996;348:1149)

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Take Home Tip #3

Change the environment that supports cancer cell growth, and you change the outcome

” **LET FOOD BE THY MEDICINE
LET MEDICINE BE THY FOOD**

HIPPOCRATES



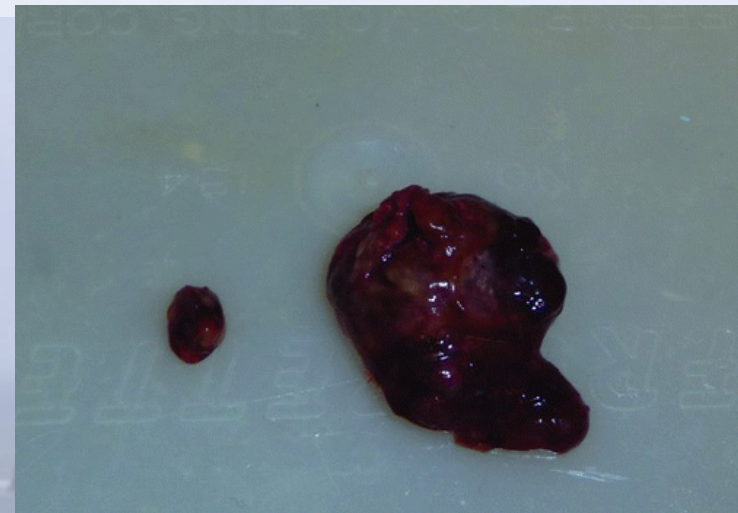
Protein



- Animal sources: Fish, eggs, free range poultry, non-fat yogurt, venison, bison
- Plant sources: Beans, peas, lentils, soy, quinoa, barley, protein powders, nuts and seeds,



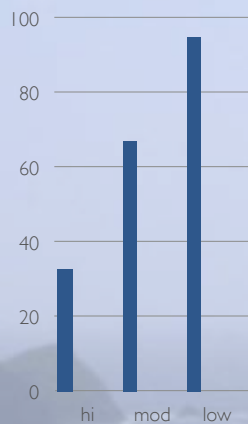
Walnuts & Cancer



Reiter et al. 2013, Cancer Investigation

Does diet really matter?

- Mice were injected with an aggressive mammary tumor and then placed on three diets.
- After 70 days:
 - 33% of mice on high sugar diet were alive.
 - 67% of moderate sugar diet mice
 - 95% of low sugar diet mice were alive.



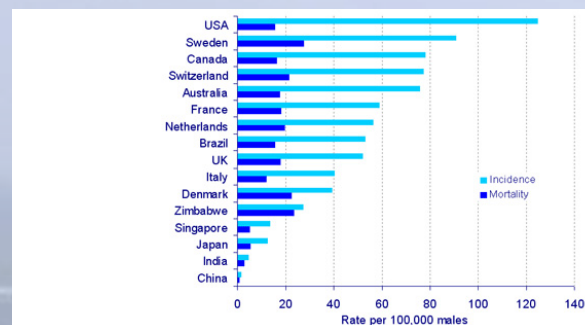
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Does diet really matter?

- Swedish twins study
- Worldwide comparisons of ca rates

prostate-cancer-chart.jpg 430x315 pixels

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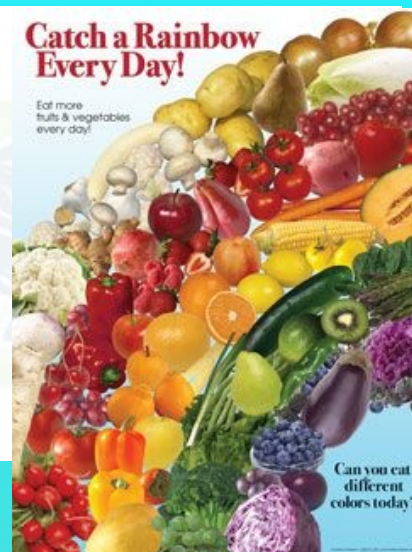
Alcohol & Cancer

Type Cancer	# studies	% increase per drink	Tobacco synergy
Breast	60	10%	
Colon	45	5%	
Rectal	45	5%	
Liver	25	20%	
Oral	>50	30%	Yes
Esophag.	30	30%	Yes

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Take Home Tip #4

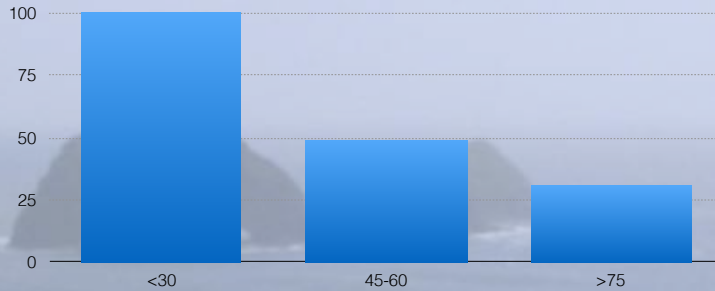
- Eat Half your plate as vegetables
- Eat a rainbow of foods
- Eat locally, organically and in season (when possible)
- Beans = inexpensive healthy protein
- Eat Nuts



Vitamin D

- **Reduces cancer rates at 16 sites** (Antica. Res. 2006;26:2687)
- **Lower Vitamin D is associated with more aggressive prostate cancer** (JCO 2016)
- **Vit. D reduces rates of breast cancer**

Carcinogenesis 2008;29:93



Herbs for Wellness



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Green tea



Herbs & Immune Support

- Cancer treatments, (even surgery) reduce immune function (Brit.J. Ca 2007;97:105)
- Supporting immunity improves survival in many cancers





Mushrooms

- Mushrooms do not kill tumors directly but act through the immune system (Appl Microbiol Biotechnol 2002;60:258) (Anticancer res 2000;20:4707)
- Reishi suppresses growth of breast cancer cells by reducing inflammation (Nutr Cancer 2004;49:209)
- Coriolus (turkey tail) stimulate NK cells



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Astragalus

- Red blood cell tonic
- Enhances activity of white blood cells.
- Increases NK cell activity
- Corrects T cell dysfunction in blood of cancer pts (J. Clin. Lab Immunol 1988;25:119)



Take Home Tip #5

- Take vitamin D for health
- Support immunity with mushrooms, echinacea, & astragalus
- Drink green tea

Exercise



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Exercise



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Putting it all together

- Don't smoke



Putting it all together

- Avoid risky behaviors



Putting it all together

- Don't smoke
- Avoid risky behaviors
- Healthy Diet
- Alcohol in moderation, (if any)
- Stay Active
- Maintain Healthy weight
- Take time for fun
- Sleep
- Take high quality vitamins



Putting it all together

- Simple changes like getting enough sleep can make everything work better
- Where you spend your mental and physical focus affects your health
- Take time for fun, laughter, joy, friends & family
- Give back to your community and family
- Live in accordance with your inner values
- Get out into nature

