Vitamins & Dietary Supplements
– Beyond Cancer to Wellness

NATUROPATHIC CANCER CARE

Chad D Aschtgen, ND, FABNO
Seattle Integrative Oncology
at Institute of Complementary Medicine
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New & Improved 2013!
Presentation Objectives

Upon completion of this activity, participants will be able to:

• Describe the **role of dietary supplements** within the context of the comprehensive survivor care plan.

• Identify a variety of **supplements that may help** to mitigate numerous **common post-therapy symptoms**.

• Identify numerous indicators of health that may be evaluated and addressed in an effort to **promote wellness and reduce risk** of new or recurrent disease.

• **Identify resources** to develop a comprehensive, safe and dynamic wellness plan.
Presentation Outline

- Survivorship Care Plan – *Creating Context*
- Focus on Health – *Promoting Wellness*
- Vitamins & Dietary Supplements
  - Symptom Management – *Quality of Life*

- Evaluating and Treating the Biological/Micro Terrain
  - Risk Reduction – *the Role of Supplements*
  - Dietary Supplement Considerations – *Quality*
  - Recommended Resources
Survivorship Care Plan – \textit{Creating Context}

- Medical Oncology Follow Up
  - Surveillance, evaluation and maintenance care
- Family/General Physician Care (PCP)
  - Screening for early intervention of other disease
  - Evaluation and treatment of injury and disease

**Health, Wellness & Quality of Life Focus**

- Promoting health/Preventing injury and disease
- Addressing pertinent lifestyle factors
- Dietary supplementation
Multi-Disciplinary / Integrative Approach

Active Oncology Treatment
- Chemotherapy
- Radiation
- Surgery

Wellness Care?

General Physician...
Multi-Disciplinary / Integrative Approach

Oncology Follow Up

Wellness Care!

General Physician
Multi-Disciplinary / Integrative Approach

General Physician

Wellness Care

Oncology Follow Up
Multi-Disciplinary / Integrative Approach

Wellness Care

- Oncology Follow Up
- General Physician
Focus on Health – Promoting Wellness

- Nutrition – *Primarily plant origin* ns
  - Vegetables\(^3-4\), Fruits\(^2-3\), Whole Grains, Herbs/Spices
  - Limit alcohol consumption (<1\(^F\) & <2\(^M\) /day)

- Physical Activity and Exercise – *Intensity*
  - Sweating & brief muscle soreness (75\(^H\)-150\(^M\)min/wk)

- Healthy Weight Management – BMI < 25 (or 23?)

- Sleep Management – 7-8 hours/night

- Stress Management & Psycho/Social Health

- Minimize/Eliminate Toxic Exposures
Promoting Wellness & Reducing Risk

2007 – 2nd Ed.

1. Healthy weight
2. Physical Activity
3.-5. Nutrition x3
6. Alcohol
7. Processed/preserved foods
8. Dietary supplements

SUMMARY
Food, Nutrition, Physical Activity, and the Prevention of Cancer: a Global Perspective
RECOMMENDATION 8

DIETARY SUPPLEMENTS

Aim to meet nutritional needs through diet alone\(^1\)

PUBLIC HEALTH GOAL

Maximise the proportion of the population achieving nutritional adequacy without dietary supplements

PERSONAL RECOMMENDATION

Dietary supplements are not recommended for cancer prevention

\(^1\) This may not always be feasible. In some situations of illness or dietary inadequacy, supplements may be valuable
Multivitamins Vs Food – Nutrition

From Anticancer: A New Way of Life – David Servan-Schreiber, MD
The research results are conflicting

Headlines are confusing:

“Taking Vitamin E Puts Men at Greater Risk for Prostate Cancer”

“Vitamin D Can Decrease Cancer by Up To 80%”

“Vitamin C Kills Cancer Cells”

“Vitamin C Supplements May be Harmful”
Vitamins & Dietary Supplements

The research results are conflicting

The New York Times

Headlines are confusing:

“Multivitamin Use Linked to Lowered Cancer Risk”

“Regimens: No Cancer Benefits Seen in Supplements”

“Vitamin E Found to Cut Cancer Risk For Prostate”

“Vitamin A Found to Inhibit Cancer”

“Vitamin D Deficiency Linked to Breast Cancer”
The Typical Adult Multivitamin

Food, Drug, Chemical or ‘Other’?

**Ingredients:** Calcium Carbonate, Potassium Chloride, Dibasic Calcium Phosphate, Magnesium Oxide, Ascorbic Acid (Vit. C), Microcrystalline Cellulose, dl-Alpha Tocopheryl Acetate (Vit. E), Pregelatinized Corn Starch, Modified Food Starch. **Contains < 2% of:** Acacia, Ascorbyl Palmitate, Beta-Carotene, BHT, Biotin, Boric Acid, Calcium Pantothenate, Calcium Stearate, Cholecalciferol (Vit. D₃), Chromium Picolinate, Citric Acid, Corn Starch, Crospovidone, Cupric Sulfate, Cyanocobalamin (Vit. B₁₂), FD&C Blue No. 2 Aluminum Lake, FD&C Red No. 40 Aluminum Lake, FD&C Yellow No. 6 Aluminum Lake, Folic Acid, Gelatin, Hydrogenated Palm Oil, Hypromellose, Lutein, Lycopene, Manganese Sulfate, Medium-Chain Triglycerides, Niacinamide, Nickelous Sulfate, Phytonadione (Vit. K), Polyethylene Glycol, Polyvinyl Alcohol, Potassium Iodide, Pyridoxine Hydrochloride (Vit. B₆), Riboflavin (Vit. B₂), Silicon Dioxide, Sodium Ascorbate, Sodium Benzoate, Sodium Borate, Sodium Citrate, Sodium Metavanadate, Sodium Molybdate, Sodium Selenate, Sorbic Acid, Sucrose, Talc, Thiamine Mononitrate (Vit. B₁), Titanium Dioxide, Tocopherols, Tribasic Calcium Phosphate, Vitamin A Acetate (Vit. A), Zinc Oxide. **May also contain < 2% of:** Maltodextrin, Sodium Aluminosilicate, Sunflower Oil.
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Food = Vitamins, Minerals & Phytonutrients

From Anticancer: A New Way of Life – David Servan-Schreiber, MD
Dietary Supplements as “Medicine”

Use supplements as you would any medicine—
for a targeted, therapeutic effect.

1. Symptom Management
2. Specific Health Promotion/
   Risk Reduction

Be conscious of the desired effects and potential risks

• Is the supplement safe for you?
• Is the supplement likely effective?
• Understand appropriate prioritization
• Heed general cautions- allergic rxn, drug interactions
<table>
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<tr>
<th>Common Post-Treatment Symptoms</th>
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<td>Anemia</td>
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</tbody>
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Common Post-Treatment Symptoms

Many symptoms will resolve on their own... Eventually
Common Post-Treatment Symptoms

**Fatigue**

- Sleep • 7-8 hrs/night
- Protein • 25g/ meal
- Hydration • 64oz/day (½oz/lb body wt)

Whey Protein – choose a highly concentrated product; 90% Pure Protein

L-carnitine – 4-6g twice daily

- well tolerated; odor, GI upset
- Caution: thyroid medication

Image credits – all molecular images from Wikimedia commons @ wikipedia.com
Common Post-Treatment Symptoms

**Fatigue** – What is the cause?

CoEnzyme Q\(_{10}\) – 100mg twice daily

- well tolerated; GI upset
- caution: warfarin, some heart medications

Ashwagandha – 500mg twice daily

- well tolerated
- caution: pregnancy, hyperthyroidism

Photo credit – cliff1066 @ flickr.com
Common Post-Treatment Symptoms

**Insomnia** – sleep hygiene

Melatonin (CR) – 0.5-3mg at bedtime
well tolerated; drowsiness, GI upset
cautions: nifedipine, sedatives, anti-depressants

Valerian root – 500mg at bedtime
well tolerated; drowsiness, GI upset
cautions: prior liver toxicity,
upcoming surgery

Photo credit – oKikos @ flickr.com
Common Post-Treatment Symptoms

**Mental fogginess** – ‘Chemo Brain’

See **Fatigue** and **Insomnia**

Acetyl L-Carnitine – 1.5-3g twice daily
- May cause GI upset, tart flavor (powder)
- caution: hemodialysis, attention deficit disorder

Rhodiola – 100mg 2-3x daily
- May cause irritability, insomnia, dry mouth
- caution: numerous potential drug interactions

Photo credit – Michael Wolf @ wikipedia.com
Common Post-Treatment Symptoms

Constipation

High fiber foods • 30-40g/d
Hydration • 64-96oz/day
Physical activity • walking 30-45m/day

Fiber supplement – 5-15g in 8-12oz water at bedtime
Pectin, inulin, psyllium, prune or beet powder
well tolerated; gas, bloating, loose stool, urgency

Senna based tea – one cup 1-2x daily
with licorice, fennel, ginger, etc

Photo credit – Ahmad Fuad Morad @ flickr.com
Common Post-Treatment Symptoms

Diarrhea

Probiotics – one capsule/tablet daily
use a high-potency product
containing numerous strains:
Lactobacilli & Bifidobacteria
well tolerated; possible GI upset

L-glutamine – 5g 2-3x/day
very well tolerated
mix in warm water to dissolve

Common Post-Treatment Symptoms

Hot flashes

Vitamin E – 400IU 2-3x/daily
warning: bleeding, GI upset, rash
cautions: blood thinners

Hesperidin Methyl Chalcone – 500mg 2-3x daily
well tolerated; GI upset, rash
cautions: blood thinners

Photo credit – Carla Zagni @ flickr.com
Common Post-Treatment Symptoms

Peripheral neuropathy

Alpha-lipoic acid – 600mg 2-3x/daily
very well tolerated; GI upset, hypoglycemia
Factors of Health – Individualized Care

- Inflammation
- Oxidative stress
- Glucose / Insulin balance
- Nutrient status – deficiency and/or excess
- Coagulation – components of clotting/ bleeding
- Hormone balance / Exposure
- Immune function
- Optimal/Adequate organ function
Evaluating the Biological Terrain

- Inflammation
  - Sedimentation Rate
  - C-reactive Protein
  - Interleukin-6

- Oxidative stress (hepatic)
  - Gamma-glutamyl Transferase

- Glucose / Insulin balance
  - Hemoglobin A1c/ Glycosylated Hemoglobin

- Nutrient status – deficiency and/or excess
  - Vitamin D
  - Essential fatty acid profile
Targeted Risk Reduction

- Fish oil – 2-5g daily
- Green tea – 500mg of EGCG 2-3x/d
- Curcumin – 3-6g daily; highly absorbable form
- Boswellia – 400-800mg twice daily
- Vitamin E succinate – 400IU daily
- Resveratrol – 175-200mg twice daily
- Vitamin D – 1,000-5,000IU daily as per results
- Coriolus mushroom – 600mg three times daily

*Hot water extracts only!*
Dietary Supplement Considerations

Quality & Purity is Important
Specific form of nutrients/botanicals matters
  • Vitamin D$_3$ vs D$_2$
  • Fish oil; cod liver oil vs whole fish vs concentrates
  • Root, leaf, flower

Raw material and finished product source matters
  • Purity, potency and microbial contamination

Of course “Natural” ≠ Safe or even effective

Just as Rx ≠ Safe

In the US medication errors have been rated as the fourth highest cause of death. Harm 1.5m annually (National Academies; incl. IOM)

Dietary Supplement Considerations

Various Certifications

- NSF: The Public Health and Safety Company
- FDA: U.S. Food and Drug Administration
- GMP Certified
- Natural Products Association: GMP certified
- USP: Dietary Supplement Verified

Recommended Resources

**Dietary Supplements:**

Specialty Pharmacies

- *Pharmacca* (x3 in Seattle & 1 in Redmond)
- *Randy’s Compounding Pharmacy* (Olympia)

*Bastyr Center for Natural Health*

Clinic Dispensaries

Health Food Stores

- *Rainbow Natural Remedies*
- Local Coop Facilities

**Online:**

*Emerson Ecologics (.com)*
Recommended Resources

Your Multidisciplinary Team:
- Medical Oncologist
- Primary Care Physician/ Family Doctor
- Integrative Medicine/Wellness Team

LIVE STRONG & Other Fitness Programs

Survivorship Programs

Support Organizations and Groups
- Gilda’s Club, CancerLifeline and more

Integrative Oncology Specialists
- Oncology Association of Naturopathic Physicians
Recommended Resources

Five to Thrive: Your Cutting Edge-Cancer Prevention Plan
Lise N. Alschuler, ND & Karolyn A. Gazella

Anticancer: A New Way of Life – David Servan-Schreiber, MD

Foods to Fight Cancer – R. Béliveau, PhD & D. Gingras, PhD

Life Over Cancer: Block Program Integrative Cancer Treatment
Keith I. Block, MD

The Cancer Fighting Kitchen – Rebecca Katz

The Journey Through Cancer – Jeremy R. Geffen, MD

Integrative Medicine: About Herbs, Botanicals & More

Memorial Sloan-Kettering Cancer Center website