Food for Cancer patient

Nutritional Therapy

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Cancer therapy

Six Established Rx Modalities:

- Surgery
- Radiotherapy
- Chemotherapy
- Endocrine therapy
- Immunotherapy
- Targeted therapy

Current multi-modality therapy including intervention with

- Complementary therapy
- Nutrition therapy
- Lifestyle and diet changes
Cancer Treatment side effects that affect eating:

- Anorexia (loss of appetite)
- Mouth sores / Dry mouth / Trouble swallowing
- Nausea / Vomiting
- Diarrhea / Constipation
- Depression & Anxiety
- Pain
## Malnutrition in Cancer

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>Incidence of malnutrition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Testicles</td>
<td>25%</td>
</tr>
<tr>
<td>Breast</td>
<td>36%</td>
</tr>
<tr>
<td>Sarcoma</td>
<td>39-66%</td>
</tr>
<tr>
<td>Colon</td>
<td>54-60%</td>
</tr>
<tr>
<td>Prostate</td>
<td>56%</td>
</tr>
<tr>
<td>Lungs</td>
<td>60-66%</td>
</tr>
<tr>
<td>Esophagus</td>
<td>79%</td>
</tr>
<tr>
<td>Gastric</td>
<td>83%</td>
</tr>
<tr>
<td>Pancreas</td>
<td>83%</td>
</tr>
<tr>
<td>Head &amp; Neck</td>
<td>72%</td>
</tr>
<tr>
<td>Diffuse Lymphoma</td>
<td>55%</td>
</tr>
</tbody>
</table>

Source: Laviano & Meguid, 1996
Cancer cachexia

• Cancer cachexia is a wasting syndrome
• Affects more than 80% of advanced cancer patients
• The cause of death in more than 20% of all cancer patients

Clinical Manifestations of cancer cachexia are:
• Muscle & weight loss
• Anorexia (the loss of appetite or desire to eat)
• Asthenia (lack or loss of strength and energy; weakness)
• Anemia (low red blood cells count)
• Considerable alterations in metabolism: Patients remain in a hypermetabolic state as the tumor burden increases.
WEIGHT LOSS

Weight loss over the last 6 months

- Colon: 14% 14%
- Prostate: 10% 10%
- Lungs: 14% 20%
- Non-small cell lung: 15% 21%
- Pancreas: 26% 28%
- Gastric Not measured: 32% 30%
- Gastric Measured: 29% 30%

% Patients with weight loss

5-10% >10%

DeWys et al., Am J Med. 1980;69:491
Nutritional Therapy in cancer treatment

Goals of Nutritional Therapy:

• Prevent or treat nutrition problems, including preventing muscle and bone loss.
• Decrease side effects of cancer treatment and problems that affect nutrition.
• Keep up the patient's strength and energy.
• Help the immune system fight infection.
• Help the body recover and heal, keep up or improve the patient's quality of life.
Nausea

Cancer treatments cause Nausea

How to control nausea:
• Eat before cancer treatments.
• Rinse out the mouth before and after eating.
• Eat foods that are bland, soft & easy-to-digest.
• Eat small meals several times a day rather than heavy meals.
• Stay away from spicy foods, greasy foods & foods that have strong odours.
• Sit up or lie with the upper body raised for one hour after eating.
## Nutritional Therapy for Anorexia & Nausea

<table>
<thead>
<tr>
<th>Nutriceutical Foods</th>
<th>Herbal Remedies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ginger</td>
<td><em>Herba Pogostemonis</em></td>
</tr>
<tr>
<td></td>
<td>霍香</td>
</tr>
<tr>
<td>Cinnamon</td>
<td><em>Pericarpium Citri Reticulatae</em></td>
</tr>
<tr>
<td></td>
<td>橘皮</td>
</tr>
<tr>
<td>Pepper</td>
<td><em>Evodia rutaecarpa</em></td>
</tr>
<tr>
<td></td>
<td>吴茱萸</td>
</tr>
</tbody>
</table>

### Herbal Drink for Nausea

**Licorice Ginger Tea** 甘草姜茶:
- Fresh ginger 生姜 25克
- Honey-fried licorice root 炙甘草 3克
Low Blood Count:
Side effect of cancer treatment

- Decreased WBCs: Infection
- Decreased RBCs: Body receives less oxygen
- Decreased Platelets: Impaired clotting
Low White Blood Cell Counts: low immunity, infection risk

- Caused by radiation therapy, chemotherapy, or the cancer itself.
- Patients who have a low white blood cell count have an increased risk of infection.

Keep Good Food Hygiene Habits help prevent infections:

- Stay away from:
  - Raw eggs or raw fish.
  - Food sold in open bins or containers.
  - Salad bars and buffets when eating out.
- Thaw foods in the refrigerator or microwave. Never thaw foods at room temperature. Cook foods immediately after thawing.
- Keep hot foods hot and cold foods cold.
- Cook all meat, poultry, and fish until well done.
# Nutritional therapy for Low White Blood Cells

## Functional Foods

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acai Berry</td>
<td></td>
</tr>
<tr>
<td>Elderberry</td>
<td></td>
</tr>
<tr>
<td>Grapefruit</td>
<td></td>
</tr>
<tr>
<td>Watermelon</td>
<td></td>
</tr>
<tr>
<td>Broccoli</td>
<td></td>
</tr>
<tr>
<td>Garlic</td>
<td></td>
</tr>
<tr>
<td>Mushrooms</td>
<td></td>
</tr>
<tr>
<td>Spinach</td>
<td></td>
</tr>
<tr>
<td>Sweet Potato</td>
<td></td>
</tr>
<tr>
<td>Tea</td>
<td></td>
</tr>
<tr>
<td>Low-Fat Yogurt</td>
<td></td>
</tr>
<tr>
<td>Wheat Germ</td>
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</tbody>
</table>

## Herbal Remedies

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Antrodia camphorata</td>
<td>樟芝</td>
</tr>
<tr>
<td>Coriolus versicolor</td>
<td>云芝</td>
</tr>
<tr>
<td>Phellinus linteus</td>
<td>桑黄</td>
</tr>
<tr>
<td>Cordyceps</td>
<td>冬虫夏草</td>
</tr>
<tr>
<td>Polyporus umbellatus</td>
<td>猪苓</td>
</tr>
<tr>
<td>Poria cocos</td>
<td>茯苓</td>
</tr>
<tr>
<td>Curcumin from Turmeric</td>
<td>姜黄素</td>
</tr>
<tr>
<td>Astragalus membranaceus</td>
<td>黄芪</td>
</tr>
</tbody>
</table>

## Health Supplements

### TCM Herbal Adjuvant:

- **Composition:**
  - Antrodia camphorata 樟芝
  - Coriolus versicolor PSP 云芝多糖肽
  - Phellinus linteus 桑黄
  - Curcumin from Turmeric 姜黄素
Low Red Blood Cell Count: Anemia & Fatigue

- Nearly 1/3 of patients with cancer develop anemia
- A common cause of Cancer Related Fatigue.

Symptoms:
- Fatigued, Weak
- Short of breath
- Increase in your heart rate
- Dizzy or lightheaded when you change positions quickly
- Chest pain
- Heart attack
Anemia & Fatigue

- Fatigue and anemia often go hand-in-hand in patients with cancer.
- Anemia is frequently a cause of fatigue.
- Both conditions may result from the cancer itself, from treatment, or from underlying causes.

**Current Pharmacologic Management of Fatigue is to treat cancer-related anemia**
# Nutritional Therapy for Anemia

<table>
<thead>
<tr>
<th>Functional Foods</th>
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</tr>
</thead>
</table>
| High Protein Diet: Beans ; Prunes | Rehmanna 熟地  
Paeonia lactiflora 白芍  
Angelica sinensis 当归 |
| Supplementation:  
• Iron supplement  
• Multivitamin | Astragalus membranaceus 黄芪  
Codonopsis pilosula 党参 |

### HemoHIM (四物湯-熟地):
当归3克，白芍3克，川芎3克

### TCM Herbal Adjuvant:
補血经典药方

四物湯
熟地12克；当归10克
白芍12克；川芎6克

- Baishoyao Radix (Paeonia lactiflora)
- Chuanxiong Rhizoma (Ligusticum chuanxiong Hort)
- Danggu Radix (Angelica sinensis)
- Shoudehuang Radix (Rehmannia glutinosa)
Low Platelets: Poor clotting, Bleeding

Symptom:
- Increased bruising or bleeding
- Spontaneous bleeding

Risk & complication:
- Dangerous internal bleeding can occur
- Can delay your treatment with chemotherapy or to have surgery
## Nutritional Therapy for Low Platelets

<table>
<thead>
<tr>
<th>Functional Foods</th>
<th>Herbal Remedies</th>
<th>Supplementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Papaya</td>
<td>Panax notoginseng</td>
<td>Vitamin K</td>
</tr>
<tr>
<td></td>
<td>三七 / 田七</td>
<td></td>
</tr>
<tr>
<td>Pomegranate</td>
<td>Bletilla striata</td>
<td></td>
</tr>
<tr>
<td></td>
<td>白芨</td>
<td></td>
</tr>
</tbody>
</table>

**TCM Herbal Adjuvant:**
散瘀止血经典药方
Powder of Panax notoginseng  三七粉

Vitamin K2 (MK7) from Natto
Cancer Treatment Side Effects: Fluid Retention

Chemotherapy drugs can cause fluid retention in the body

Other causes:
• Heart disease, Liver disease, or Kidney failure.
• Blockage of veins or lymph system.
• Malnutrition: diet deficient in protein.

Symptom: swelling or puffiness in your face, hands, feet, or abdomen.
Nutritional therapy for Fluid Retention

<table>
<thead>
<tr>
<th>Nutraceutical Foods</th>
<th>Herbal Remedies</th>
</tr>
</thead>
</table>
| Limit salt intake; Eat Potassium rich foods | Chinese Barley 薏仁  
Poria cocos 茯苓  
Polyporus umbellatus 猪苓  
Astragalus membranaceus 黄芪  
Atractylodes macrocephala 白术 |

TCM Herbal Adjuvant:  
利水滲濕经典药方:  
五苓散 + 四君子湯

五苓散:  
豬苓9克，澤瀉15克，白朮9克，茯苓9克，桂枝6克

四君子湯:  
党参12克，白术12克，茯苓12克，炙甘草6克
Cancer Treatment Side Effects: 

Diarrhea

A Symptoms of Malabsorption

Causes:
• cancer treatments
• surgery on GI tract
• radiation treatment for abdominal cancers
• diseases of the pancreas
• emotional stress

Diarrhoea may lead to dehydration or low levels of salt and minerals needed by the body.
Nutritional therapy for Diarrhea

To control diarrhea:

- **Porridge / congee** are excellent source of anti diarrhea meal.
- Eat soups, bananas, and canned fruits to help replace salt and potassium lost by diarrhea. Sports drinks can also help.
- Drink plenty of fluids during the day.
- Liquids at room temperature may cause fewer problems than hot or cold liquids.
- Stay away from the following:
  - Greasy foods, caffeine drinks, Milk and milk products, Foods & beverages that cause gas such as peas, lentils, cruciferous
  - Sugar-free candies or gum made with sorbitol

### Nutriceutical Foods

<table>
<thead>
<tr>
<th>Nutriceutical Foods</th>
<th>Herbal Remedies</th>
<th>Supplementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Porridge.</strong></td>
<td>Coptis chinensis 黄连</td>
<td><strong>Probiotic</strong></td>
</tr>
<tr>
<td>Drink plenty of clear liquids</td>
<td>Poria cocos 茯苓</td>
<td>(minimum 15 -20 Billion/day)</td>
</tr>
<tr>
<td>Avoid caffeine and alcohol</td>
<td>Sophora flavescens 苦参</td>
<td></td>
</tr>
</tbody>
</table>
General supplementation for cancer patient

French oncology guidelines*: require systematic screening for malnutrition and recommendations include **oral supplementation** as well as “**immune-enhancing diets**”.


<table>
<thead>
<tr>
<th>Affected Organ system</th>
<th>Naturext Recommend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiotoxicity (Heart)</td>
<td>Cardio CPS</td>
</tr>
<tr>
<td>Hepatotoxicity (Liver)</td>
<td>AC Essence, Natto Essence</td>
</tr>
<tr>
<td>Nephrotoxicity (Kidney)</td>
<td>Immuno CPX, Chia Essence</td>
</tr>
<tr>
<td>Neurotoxicity (Nerves)</td>
<td>Palm Essence</td>
</tr>
</tbody>
</table>

**TCM Herbal Adjuvant**

癌症中药辅助

八珍汤：
熟地12克，当归10克，白芍12克，川芎6克

四物湯：
当归12克，白芍12克，川芎6克

四君尋汤：
党参12克，白术12克，茯苓12克，炙甘草6克
Cancer Nutrition Summary

Diet for Cancer patient

is NOT = Healthy Diet for Normal person

- A “healthy diet” as currently defined in our culture (i.e. low fat, high fiber) has no proven benefit for someone with advanced cancer / under treatment.
- Patients will typically eat more of the things they enjoy or find easiest to eat.
- Cancer causes metabolic change that suppresses appetite, these changes are out of the patient's control and should not serve as an indication of not trying to eat, emotional weakness or giving up.

- Successful nutritional intervention is essential as part of a multi-modality approach to address cancer cachexia and improve treatment outcome.
- Good nutrition continues to be important for patients who are in remission or whose cancer has been cured.
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Principal CAM Consultant, IABPI

Chief Scientist, CAM Pharmacologist & Nutraceutical Consultant

Areas of research interest includes:
- Naturopathic & Integrated Medicine
- Chemopreventive Therapy
- Transdermal Drug Delivery system.

OTC Product Specialist in Chronic Disease Management

Company focus on offering Breakthrough Bio-Medical Product Solutions in major areas of Aging Health Concerns that helps in the Prevention of Chronic Illnesses of Modern Society, Extending and Enhancing the Quality of Life.

Company sub specialized in providing Pharmacological Therapy product solutions for:
- Chronic disease management
- Critical illness recovery
- Complimentary chemotherapy
- High risk chemoprevention