

# Winter 2012 Healthy Aging Modules

Week 1: Dr. Surprising Ways to Live Longer	
Content Outline	Suggested teaching Strategies
<p>1. Eat eggs</p> <p>A. Eggs are a powerful source of protein and cost just pennies. Many people have been led to believe that eating eggs increases blood cholesterol, but that's simply not true.</p> <ol style="list-style-type: none"> <li>1) Eggs contain choline, a B vitamin shown to reduce inflammation in the brain, which may lessen the chance of developing Alzheimer's disease</li> <li>2) Eating two eggs comprises 26% of your daily protein intake, yet contains less than 10% of your recommended calories for the day. Thus eggs can help shed pounds.</li> <li>3) These protein powerhouses protect your bones and fight frailty.</li> <li>4) Antioxidants and other nutrients in egg yolks help prevent macular degeneration, the leading cause of blindness; they also protect the retina for UV sun damage.               <ol style="list-style-type: none"> <li>(i) Tip: Boil a half-dozen eggs in the beginning of the week. Eat one a day and you're on the road to making a dramatic difference in your health.</li> </ol> </li> </ol> <p>2. Take Chromium Polynicotinate</p> <p>A. By 2050, experts predict that 1 in 3 Americans will be diabetic. To help this chronic condition, chromium polynicotinate has proven to be a potentially life-saving supplement. Studies show that this trace mineral helps regulate insulin production, reducing blood sugar levels and preventing damaging effects.</p> <ol style="list-style-type: none"> <li>1) Tip: Take 200 micrograms of chromium polynicotinate a day.</li> </ol> <p>3. Check your heart rate daily</p> <p>A. By checking your heart rate every day, you can protect yourself against having a heart attack or stroke.</p> <p>B. It's simple: Place your index and middle fingers on your wrist bone, directly under your thumb. Press gently to feel your pulse. Count the beats for 10 seconds. Then multiply by 6 to get your resting heart rate. For example, if you get 6 beats in 10 seconds and multiply by 6, that's 36 beats per minute.</p> <p>C. The average resting heart rate for adults is between 60-80 bpm. If you're a woman and your resting heart rate is above 90, you are at a 3 times greater risk of dying of heart disease. A new study shows that if your heart rate keeps going up more than 10 beats a month, your risk for heart disease increases by 16%.</p> <p>D. Tip: Take your resting heart rate before you get out of bed every morning. If it is high or keeps going up every month see your doctor.</p>	<p>Lecture</p> <p>Discussion</p> <p>Handouts</p>

4. Add Beets to your diet

- A. You know to eat your greens, but you have to eat your reds, too. Beets offer much more than just their lovely hue. They help dilate blood vessels, which improves blood flow throughout the body. They're also packed with iron, which helps deliver oxygen throughout the body and wards off anemia.
- B. Tip: You can drink your beets daily in a nutrient-packed beverage that also contains carrots, parsley and apples. 1 beet, 1 large carrot, fresh parsley to taste, and 1 apple. Put all ingredients into blender or juicer.

5. De-stress with self-massage

- A. Stress can damage every part of your body and lead to chronic disease. Many people, especially women, hold stress and tension in their head and in their face. Here's a massage you can actually perform on yourself to fight stress:
  - 1) Position both hands as if you were giving 2 thumbs-up. Reposition your thumbs-up horizontally and place your thumbs, on the sides of the bridge of your nose, beneath your brow bone. Press firmly for 8-10 seconds, and breathe.
  - 2) Then place your thumbs and index fingers slightly above and on the opposite ends of your eyebrows. Gently squeeze for 8-10 seconds and breathe.
  - 3) Tip: Practice the above self-massage technique throughout the day, such as when you've been sitting for a long time at the computer.

## Week 1: Surprising Ways to Live Longer Handout

### 1. Eat Eggs

Eggs are a powerful source of protein and cost just pennies. Many people have been led to believe that eating eggs increases blood cholesterol, but that's simply not true.

- Eggs contain choline, a B vitamin shown to reduce inflammation in the brain, which may lessen the chance of developing Alzheimer's disease.
- Eating two eggs comprises 26% of your daily protein intake, yet contains less than 10% of your recommended calories for the day. Thus eggs can help you shed pounds.
- These protein powerhouses protect your bones and fight frailty.
- Antioxidants and other nutrients in egg yolks help prevent macular degeneration, the leading cause of blindness; they also protect the retina from UV sun damage.

**Under-a-Minute Tip:** Boil a half-dozen eggs in the beginning of the week. Eat one a day and you're on the road to making a dramatic difference in your health.

### 2. Take Chromium Polynicotinate

By 2050, experts predict that 1 in 3 Americans will be diabetic. To help prevent this chronic condition, chromium polynicotinate has proven to be a potentially life-saving supplement. Studies show that this trace mineral helps regulate insulin production, reducing blood sugar levels and preventing damaging effects.

**Under-a-Minute Tip:** Take 200 micrograms of chromium polynicotinate a day.

### 3. Check Your Heart Rate Daily

By checking your heart rate every day, you can protect yourself against having a heart attack or stroke. It's simple: Place your index and middle fingers on your wrist bone, directly under your thumb. Press gently to feel your pulse. Count the beats for 10 seconds. Then multiply by 6 to get your resting heart rate. For example, if you get 6 beats in 10 seconds and multiply by 6, that's 36 beats per minute.

The average resting heart rate for adults is between 60-80 beats per minute. If you're a woman and your resting heart rate is above 90, you are at a 3 times greater risk of dying of heart disease.

A new study shows that if your heart rate keeps going up more than 10 beats a month, your risk for heart disease increases by 16%.

**Under-a-Minute Tip:** Take your resting heart rate before you get out of bed every morning. If it is high or keeps going up every month, see your doctor.

### 4. Add Beets to Your Diet

You know to eat your greens, but you have to eat your reds, too. Beets offer much more than just their lovely hue. They help dilate blood vessels, which improves blood flow throughout the body. They're also packed with iron, which helps deliver oxygen throughout the body and wards off anemia.

**Under-a-Minute Tip:** You can drink your beets daily in a nutrient-packed beverage that also contains carrots, parsley and apples. It's easy and inexpensive to make.

### 5. De-stress With Self-Massage

Stress can damage every part of your body and lead to chronic disease. Many people, especially women, hold stress and tension in their head and in their face. Here's a massage you can actually perform on yourself to fight stress:

- Position both hands as if you were giving 2 thumbs-up. Reposition your thumbs-up horizontally and place your thumbs, on the sides of the bridge of your nose, beneath your brow bone. Press firmly for 8-10 seconds, and breathe.
- Then place your thumbs and index fingers slightly above and on the opposite ends of your eyebrows. Gently squeeze for 8-10 seconds and breathe.

**Under-a-Minute Tip:** Practice the above self-massage technique throughout the day, such as when you've been sitting for a long time at the computer.

Week 2: Tea's to fight disease

Content Outline	Suggested teaching Strategies
<p>1. Tea has been regarded for thousands of years in the East as the key to happiness and wisdom. Now, the west is in awe of the health benefits tea has to offer.</p> <p>A. Black Tea to prevent diabetes</p> <ol style="list-style-type: none"> <li>1) Studies show the polysaccharides in black tea have glucose-inhibiting properties – meaning that black tea can help prevent diabetes. It also has more caffeine than other teas. Black tea has different types of flavors, from sweet to strong.</li> </ol> <p>B. White tea to prevent colon cancer</p> <ol style="list-style-type: none"> <li>1) White tea is less processed than other forms of tea, therefore the polyphenols, a type of antioxidant, are extra potent. Research indicates that these benefits may protect against colon cancer, among other cancers. White tea's flavor ranges from delicate to bold.</li> </ol> <p>C. Green tea to prevent Alzheimer's</p> <ol style="list-style-type: none"> <li>1) Green tea creates chemicals during digestion that work against the key triggers of Alzheimer's. Studies show that drinking green tea may potentially prevent the onset or slow the progression of dementia.</li> </ol> <p>2. Hidden Benefits of Tea</p> <p>A. For centuries, tea has been used in alternative medicine to cure everything from cancer to bad breath. Some hidden health benefits of tea include:</p> <ol style="list-style-type: none"> <li>1) Mood: Sage Tea               <ol style="list-style-type: none"> <li>(i) Though sage is most commonly used in cooking, sage tea has been shown to boost alertness and mood, while decreasing anxiety. It also has flavanoids that reduce inflammation. To enhance the flavor, mix it with black tea, brew for 5-10 minutes and add a pinch of honey.</li> </ol> </li> <li>2) Skin: Wormwood Tea               <ol style="list-style-type: none"> <li>(ii) The high levels of antioxidants and polyphenols found in wormwood can help relieve itching and irritation from contact dermatitis, a form of eczema. The fantastic flavor of the tea is enhanced the longer it brews. After brewing, drain the water and place the leaves directly on your face for 10 minutes to leave your skin looking and feeling refreshed.</li> </ol> </li> <li>3) Allergies: Nettle Tea               <ol style="list-style-type: none"> <li>(iii) The tea from this prickly plant helps to prevent hay fever and allergy attacks by blocking the histamines in your body. Nettle tea is dense, so brew it for 15-20 minutes. Make a larger pot during allergy season and keep in the fridge. Add lime to freshen taste.</li> </ol> </li> <li>4) Weight-Loss: Oolong Tea</li> </ol>	<p>Lecture</p> <p>Discussion</p> <p>Handouts</p>

(iv) Oolong tea boosts metabolism, helping you burn fat faster. Studies have shown that drinking oolong tea has led to sustained weight loss and a smaller waist size. Be careful not to drown your tea in sugar, which will negate the benefits.

5) Migraines: Ginger Tea

(v) Ginger tea works as an anti-inflammatory agent. Ginger blocks prostaglandins – the chemical messengers that cause a slight swelling in the brain. Drink ginger tea at the onset of your headache. This is when it's most effective in blocking pain.

6) Libido: Ginseng Tea

(vi) This tea boosts sexual arousal and combats erectile dysfunction. Ginseng tea contains compounds called ginsenosides that affect gonadal tissue, increasing sperm count as well as sexual performance for both women and men.

## Week 2: Teas to Fight Disease Handout

Tea has been regarded for thousands of years in the East as the key to happiness and wisdom. Now, the West is in awe of the health benefits tea has to offer. You may think that if you've tried one tea, you've tried them all, but that's not the case. Within every type of tea is a range of rich flavors and powerful preventative health benefits. See how each of the following delicious teas can help prevent disease.

### Black Tea to Prevent Diabetes

Studies show the polysaccharides in black tea have glucose-inhibiting properties – meaning that black tea can help to prevent diabetes. It also has more caffeine than other teas. Black tea has different types of flavors, from sweet to strong.



### White Tea to Prevent Colon Cancer

White tea is less processed than other forms of tea, therefore the polyphenols, a type of antioxidant, are extra potent. Research indicates that these benefits may protect against colon cancer, among other cancers. White tea's flavor ranges from delicate to bold



### Green Tea to Prevent Alzheimer's

Green tea creates chemicals during digestion that work against the key triggers of Alzheimer's. Studies show that drinking green tea may potentially prevent the onset or slow the progression of dementia. See the different flavors of green tea below:



Week 3: Best Natural Anti-Depressants

Content Outline	Suggested teaching Strategies
<ol style="list-style-type: none"> <li>1. Over 160 million antidepressant prescriptions are written annually, despite the fact that a 2010 study in the Journal of American Medical Association revealed antidepressants to be no more effective than placebos in most cases of depression. Antidepressants are shown to be helpful in the minority of very severely depressed cases, and should be used when needed for these cases.               <ol style="list-style-type: none"> <li>A. Studies also show that antidepressants can cause a laundry list of side effects, including sexual side effects, fertility problems, increased weight gain and diabetes risk, blood pressure problems, increased heart attack risk, heart defects in unborn children, and even increased desire to commit suicide.</li> </ol> </li> <li>2. The Naturopathic Advantage for Depression               <ol style="list-style-type: none"> <li>A. While conventional medicine focuses only on neurotransmitters, naturopathic and holistic medicines are at an advantage to treat the many factors that contribute to depression:                   <ol style="list-style-type: none"> <li>(1) Sleep and lifestyle issues</li> <li>(2) Lack of exercise</li> <li>(3) Poor diet choices and poor digestion</li> <li>(4) Inflammation in the body and the brain</li> <li>(5) Hormonal imbalances</li> <li>(6) Stress and spiritual issues</li> <li>(7) Nutrient and healthy oil deficiencies</li> <li>(8) Environmental toxicity</li> </ol> </li> </ol> </li> <li>5. Nutrients and Herbs for Depression. There are many wonderful and safe nutrients and botanical medicines (herbs) that can help with low mood.               <ol style="list-style-type: none"> <li>A. St. John Wort for low level depression                   <ol style="list-style-type: none"> <li>(1) St. John's wort is the most studied herb of all time. Studies have shown St. John's wort to be quite useful in treating depression illness. St. John's wort has many effects on both the brain and the body. St. John's wort is known to help digestion, act as an antiviral, has anti-inflammatory properties, and supports thyroid function. It also gently balances the neurotransmitters GABA, norepinephrine, serotonin and dopamine.</li> <li>(2) You can take St. John's wort in capsule, as a tea, or as a liquid extract, which is a concentrated form of the herb. It usually dosed in capsule form at 900mg to 1800mg a day in divided doses.</li> </ol> </li> <li>B. Saffron: Spice up depression and help digestion                   <ol style="list-style-type: none"> <li>1) Saffron is a well-known Persian spice used for its ability to help the digestive tract, this might be the reason saffron has been shown in studies to elevate low mood.</li> <li>2) As the most expensive spice, it is high in carotenoids and B vitamins. In studies, saffron has been compared to both Prozac and Imipramine, and found to work at least as well, or better, with fewer side effects.</li> </ol> </li> </ol> </li> </ol>	<p>Lecture</p> <p>Discussion</p> <p>Handouts</p>

<p>3) While the petal is the expensive part of the herb, you can also take capsules of the stigma part of the plant, which is less expensive, but still contains the powerful mood-enhancing ingredients. Studies use a dose of 15mg twice per day.</p> <p>C. 5-HTP for depression with anxiety</p> <ol style="list-style-type: none"><li>1) 5-hydroxytryptophan (5-HTP) is an amino acid found in low amounts in foods like turkey and bananas. 5-HTP is the molecule the body uses to make serotonin, a molecule that helps elevate mood. While many antidepressants artificially stop the production of enzymes that breakdown serotonin, 5-HTP gives the body more of the raw materials it needs to make more serotonin.</li><li>2) 5-HTP is very good at crossing the blood brain barrier, which means it is a molecule that can get into the brain to help achieve a needed change in brain chemistry.</li><li>3) 5-HTP is best used with someone who has both depression and anxiety. It is also an effective choice for people who have insomnia and cannot stay asleep.</li><li>4) While there are no known toxicities of 5-HTP, some people can get a little nausea when taking 5-HTP, so it helps to take it with some carbohydrate, like a slice of apple, which will also help its absorption. Usual dose is 100mg twice a day up to 200mg three times per day.</li></ol> <p>6. SAME for depression with aging and pain</p> <p>A. SAME stands for S-adenosylmethionine, and is a naturally occurring chemical in the body based on the amino acid methionine; it helps boost a number of neurotransmitters. SAME also helps with healthy nerve conduction as well. It also has been shown to be helpful with patients who have arthritis and joint pain.</p> <ol style="list-style-type: none"><li>1) SAME tends to work quickly, often lifting mood within days rather than weeks, whereas most other supplements and drugs take longer.</li><li>2) It has been shown to be very useful for Parkinson's disease patients with depression, and some studies suggest it may be most beneficial in the senior population. Other studies show it to be safe for children too, and preliminary research shows it may be safe in pregnancy.</li><li>3) Dosing for SAME starts slowly, Usually 200mg twice daily for the first day, then increase to 200mg twice daily on day three, then to 400mg three times daily on day 10, and finally to the full dose of 400mg four times daily.</li></ol> <p>7. Conclusion – There are many natural options for depression from the natural medicine world. Addressing underlying lifestyle, diet, digestive and psychological causes are very important for long-term results. Using St. John's wort, saffron, 5-HTP or SAME can be healthful and effective part of healing from depression.</p>	
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## **Week 3: Best Natural Anti-Depressants Handout**

There are many wonderful and safe nutrients and botanical medicines (herbs) that can help with low mood. For this article, we are going to focus on a few nutrients that we have seen to be very useful, and sometimes miraculous to help our patients who are suffering from depression.

### **St. John's Wort for Low Level Depression**

- St. John's wort is the most studied herb of all time. Rigorous studies have shown St. John's wort to be quite useful in treating depression illness. St. John's wort is known to help digestion, act as an antiviral, has anti-inflammatory properties, and supports thyroid function. It also gently balances the neurotransmitters GABA, norepinephrine, serotonin and dopamine.
- Depression sufferers who have a long-term chronic type of depression called dysthymia often do the best with this herb. If you can get out of bed and function at a job, but are just generally still low in mood, self-esteem and zest for life, this may be a good herb for you.
- You can take St. John's wort in capsule, as a tea, or as a liquid extract, which is a concentrated form of the herb. It is usually dosed in capsule form at 900mg to 1800mg a day in divided doses. Please note St. John's wort can affect the effectiveness of other medications. Two studies show it can help the drug Plavix work better in people for whom it did not initially work. Other studies show it can lower the effects of birth control pills and immune suppressants. So, if you are taking medications, check with your doctor or pharmacist before using St. John's wort.

### **Saffron: Spice Up Depression and Help Digestion**

- Saffron is a well-known Persian spice used for its ability to help the digestive system heal. Because most neurotransmitters are made in the digestive tract, this might be the reason saffron has been shown in studies to elevate low mood. As the most expensive spice, it is high in carotenoids and B vitamins. In studies, saffron has been compared to both Prozac and Imipramine, and found to work at least as well, or better, with fewer side effects.
- While the petal is the expensive part of the herb, you can also take capsules of the stigma part of the plant, which is less expensive, but still contains the powerful mood-enhancing ingredients. Studies use a dose of 15mg twice a day. No toxicity has been shown when taking saffron in therapeutic amounts or in cooking.

### **5-HTP for Depression With Anxiety**

- 5-hydroxytryptophan (5-HTP) is an amino acid found in low amounts in foods like turkey and bananas. 5-HTP is the molecule the body uses to make serotonin, a molecule that helps elevate mood. While many antidepressants artificially stop the production of enzymes that breakdown serotonin, 5-HTP gives the body more of the raw materials it needs to make more serotonin. 5-HTP is very good at crossing the blood brain barrier, which means it is a molecule that can get into the brain to help achieve a needed change in brain chemistry.
- 5-HTP is best used with someone who has both depression and anxiety. It is also an effective choice for people who have insomnia and cannot stay asleep. While there are no known toxicities of 5-HTP, some people can get a little nausea when taking 5HTP, so it helps to take it with some carbohydrate, like a slice of apple, which will also help its absorption. We often dose it at 100mg twice a day, up to 200mg three times a day.

### **SAMe for Depression With Aging and Pain**

- SAMe stands for S-adenosylmethionine, and is a naturally occurring chemical in the body based on the amino acid methionine; it helps boost a number of neurotransmitters. SAMe also helps with healthy nerve conduction as well. It also has been shown to be helpful with patients who have arthritis and joint pain.
- We love SAMe as it tends to work quickly, often lifting mood within days rather than weeks, whereas most other supplements and drugs take longer.
- It has been shown to be very useful for Parkinson's Disease patients with depression, and some studies suggest it may be most beneficial in the senior population. Other studies show it to be safe for children too, and preliminary research shows it may be safe in pregnancy, though more research is needed.
- Dosing for SAMe starts slowly. Usually, we recommend a dosage of 200mg twice daily, for the first day, then increase to 400mg twice daily on day three, then to 400mg three times daily on day 10, and finally to the full dose of 400mg four times daily.

Week 4: A New Omega-3: Krill Oil

Content Outline	Suggested teaching Strategies
<ol style="list-style-type: none"> <li>1. For years, research has demonstrated that Omega-3 fatty acids help lower and individual's risk for heart attack, stroke, certain cancers, depression and overall inflammation. Type of omega-3s to take, however, has not always been clear. Omega-3s are broken down into three main components:               <ol style="list-style-type: none"> <li>A. ALA (alpha-linolenic acid)                   <ol style="list-style-type: none"> <li>1) Found in plant-based foods such as walnuts, algae and soybeans. It's a great source, especially for vegetarians, but may not be as well-absorbed as their marine counterparts.</li> </ol> </li> <li>B. EPA (eicosapentaenoic acid)                   <ol style="list-style-type: none"> <li>1) Found in marine sources and are the best absorbed forms of omega-3 fatty acids.</li> </ol> </li> <li>C. DHA ( docosahexaenoic acid)                   <ol style="list-style-type: none"> <li>1) Found in marine sources and are the best absorbed forms of omega-3 fatty acids.</li> </ol> </li> </ol> </li> <li>2. Although the oils found in fatty fish such as tuna and salmon have been widely popular, many individuals are concerned about other toxins contained in the oils extracted from the farmed versions of these fish.</li> <li>3. Krill oil has emerged as the next leader in the wonderful world of omega-3s. Just like fish oil krill oil contains long-chain polyunsaturated fatty acids of the omega-3 family, EPA and DHA.               <ol style="list-style-type: none"> <li>A. In contrast to fish oil, EPA and DHA from krill oil comes attached to phospholipids, mostly phosphatidylcholine. That structural difference leads to better absorption and delivery of DHA to the brain.</li> <li>B. Krill oil contains a potent carotenoid antioxidant, astaxanthin, that may prevent EPA and DHA oxidation.</li> </ol> </li> <li>4. Uses of Krill Oil               <ol style="list-style-type: none"> <li>A. A 2007 study in the <i>Journal of the American College of Nutrition</i> found that 300mg daily supplementation of krill oil resulted in significant decreases in inflammation and arthritic symptoms in cardiac and arthritis patients.</li> <li>B. High cholesterol. Developing research shows that taking 1-1.5grams of a specific krill oil product daily reduces total cholesterol and "bad" low-density lipoprotein (LDL) cholesterol, and increases "good" high-density lipoprotein (HDL) cholesterol in patients with high cholesterol. Higher doses of 2-3 grams daily also appear to significantly reduce levels of triglyceride, another type of blood fat.</li> <li>C. Premenstrual syndrome (PMS). There is some evidence that taking 2 grams of a specific krill oil product daily might reduce symptoms of PMS; but some experts question these findings because they believe the study was not well designed.</li> <li>D. Arthritis. Some researchers suggests that people with arthritis who take 300 mg of a specific drill oil product daily have less pain and</li> </ol> </li> </ol>	<p>Lecture</p> <p>Discussion</p> <p>Handouts</p>

stiffness and function better after 30 days of treatment.

- E. High blood pressure
  - F. Stroke
  - G. Cancer
  - H. Depression
  - I. Other conditions
5. Side Effects of krill oil
- A. Krill oil seems to be safe for most adults when used appropriately for a short amount of time (up to three months). Research on krill oil has not adequately evaluated its safety or possible side effects. However, it is likely that krill oil can cause some side effects similar to fish oil such as bad breath, heartburn, fishy taste, upset stomach, nausea, and loose stools.
  - B. Pregnancy and breast-feeding: not enough is known about the use of krill oil during pregnancy and breast-feeding.
  - C. Seafood allergy: some people who are allergic to seafood might also be allergic to krill oil supplements. There is no reliable information showing how likely people with seafood allergy are to have an allergic reaction to krill oil; however, until more is known, avoid using krill oil or use it cautiously if you have a seafood allergy.
  - D. Surgery: because krill oil can slow blood clotting, there is concern that it might increase the risk of bleeding during and after surgery. Stop using krill oil at least 2 weeks before a scheduled surgery.
6. Interactions of krill oil
- A. Medications that slow blood clotting. Taking krill oil along with medications that also slow clotting might increase the chances of bruising and bleeding.
  - B. Orlistat used for weight loss prevents dietary fats from being absorbed from the gut. There is some concern that orlistat (Zenical, Alli) might also decrease absorption of krill oil when they are taken together.
7. Where is Krill oil found?
- A. Krill oil is found in tiny crustaceans, similar to shrimp, and is the main food source for whales in the Antarctic Ocean. It is found to be a more sustainable source of omega-3s because it's extracted at the bottom of the food chain and is located in one of the cleanest oceans due to its low occurrence of commercial fishing. These two factors make for an omega-3 source that is virtually free of toxins, metals and PCBs.
8. What is the recommended dosage of krill oil?
- A. The appropriate dose of krill oil depends on several factors such as the user's age, health, and several other conditions. At this time there is not enough scientific information to determine an appropriate range of doses for krill oil. Keep in mind that natural products are not always necessarily safe and dosages can be important. Be sure to follow relevant directions on product labels and consult your pharmacist or physician or other healthcare professional before using.

## Week 4: A New Omega-3: Krill Oil Handout

### KRILL OIL

#### Other Names:

*Aceite de Krill, Antarctic Krill Oil, DHA, Docosahexanoic Acid, EPA, Euphausia Superba Oil, Euphausiids Oil, Huile de Krill, Marine Protein Concentrate, n-3 Fatty Acids, Omega 3, Omega-3 Fatty Acids, Omega-3, Omega-3 Fatty Acids, Omega-3 Oil, Polyunsaturated Fatty Acids, W-3 Fatty Acids.*

#### KRILL OIL OVERVIEW INFORMATION

Krill oil is oil from a tiny, shrimp-like animal. Baleen whales, mantas, and whale sharks eat primarily krill. In Norwegian, the word "krill" means "whale food." People extract the oil from krill, place it in capsules, and use it for medicine. Some brand name krill oil products indicate that they use Antarctic krill. This usually refers to the species of krill called *Euphausia superba*.

Krill oil is used for heart disease, high levels of certain blood fats (triglycerides), high cholesterol, high blood pressure, stroke, cancer, osteoarthritis, depression, premenstrual syndrome (PMS), and painful menstrual periods.

#### How does it work?

- Krill oil contains fatty acids similar to fish oil. These fats are thought to be beneficial fats that decrease swelling, lower cholesterol, and make blood platelets less sticky. When blood platelets are less sticky they are less likely to form High cholesterol. Developing research shows that taking 1-1.5 grams of a specific krill oil product (Neptune Krill Oil, Neptune Technologies & Bioresources, Inc) daily reduces total cholesterol and "bad" low-density lipoprotein (LDL) cholesterol, and increases "good" high-density lipoprotein (HDL) cholesterol in patients with high cholesterol. Higher doses of 2-3 grams daily also appear to significantly reduce levels of triglyceride, another type of blood fat.
- Premenstrual syndrome (PMS). There is some evidence that taking 2 grams of a specific krill oil product (Neptune Krill Oil, Neptune Technologies & Bioresources, Inc) daily might reduce symptoms of PMS; but some experts question these findings because they believe the study was not well designed.
- Arthritis. Some research suggests that people with arthritis who take 300 mg of a specific krill oil product (Neptune Krill Oil, Neptune Technologies & Bioresources, Inc.) daily have less pain and stiffness and function better after 30 days of treatment.
- High blood pressure.
- Stroke.
- Cancer.
- Depression.
- Other conditions.

Krill oil seems to be safe for most adults when used appropriately for a short amount of time (up to three months). Research on krill oil has not adequately evaluated its safety or possible side effects. However, it is likely that krill oil can cause some side effects similar to fish oil such as bad breath, heartburn, fishy taste, upset stomach, nausea, and loose stools.

#### Special Precautions & Warnings:

**Pregnancy and breast-feeding:** Not enough is known about the use of krill oil during pregnancy and breast-feeding. Stay on the safe side and avoid use.

**Seafood allergy:** Some people who are allergic to seafood might also be allergic to krill oil supplements. There is no reliable information showing how likely people with seafood allergy are to have an allergic reaction to krill oil; however, until more is known, avoid using krill oil or use it cautiously if you have a seafood allergy.

**Surgery:** Because krill oil can slow blood clotting, there is concern that it might increase the risk of bleeding during and after surgery. Stop using krill oil at least 2 weeks before a scheduled surgery.

Week 5: Nurses' Healing Remedies

Content Outline	Suggested teaching Strategies
<ol style="list-style-type: none"> <li>1. Remedy for cuts and bruises: Cabbage               <ol style="list-style-type: none"> <li>A. Next time you don't have anything in your medicine cabinet to clean out a wound, try using cabbage.</li> <li>B. To get the best results, wrap a refrigerated leaf over the injured area with gauze to cool and clean on contact, and make sure to redress the wound regularly.</li> </ol> </li> <li>2. Remedy for Colds: Salt Water               <ol style="list-style-type: none"> <li>A. Often, colds last so long because your body can't get all the germs out of its system.                   <ol style="list-style-type: none"> <li>1) Mix 3 teaspoons of kosher salt with 1 teaspoon of baking soda in 1 quart of water. Stir until the ingredients dissolve. Then, using a bulb syringe, gently squeeze the hypertonic saline solution into one nostril as you tilt your head to the side over the sink, letting the liquid exit through the other nostril.</li> <li>2) For kids, use this solution without the pressure of a bulb syringe; try a dropper instead. This home remedy is especially great for those who suffer from chronic sinusitis.</li> </ol> </li> </ol> </li> <li>3. Remedy for hangovers: Pedialyte               <ol style="list-style-type: none"> <li>A. We all know the best way to prevent hangovers is to hydrate, hydrate, hydrate. However, sometimes, water alone won't do the trick. Pedialyte is a great way to replenish your electrolytes and rehydrate your body after a night out on the town.</li> </ol> </li> <li>4. Remedy for mild burns: Whole Milk               <ol style="list-style-type: none"> <li>A. The next time you have a mild burn, try running whole milk instead of tap water over the area. The proteins and lipids in the milk promote healing, so the condition of your skin will improve faster.</li> <li>B. Try soaking a towel with milk to make a cold compress; hold it on the injured area for around 15 minutes. Make sure to wash your hands and the towel afterward to prevent bad odors.</li> </ol> </li> <li>5. Remedy for itches: Mint tea               <ol style="list-style-type: none"> <li>A. For itchy skin you shouldn't scratch, try applying mint tea to the affected area. The menthol in mint has both anesthetic and anti-inflammatory properties. Mint also contains muriatic acid, which is an anti-inflammatory that is easily absorbed into the skin.</li> <li>B. To try this home remedy, boil 2 cups of water and steep one ounce of dried mint leaves. Then, let the tea cool, and saturate a clean cloth to use as a compress on the itchy skin.</li> </ol> </li> </ol>	<p>Lecture</p> <p>Discussion</p> <p>Handouts</p>

## *Week 5: Nurses' Healing Remedies Handout*

Nurses know the healing process more intimately than nearly any other profession. Learn from their expertise as nurses from around the country share their secret remedies for common ailments.

You can be the health expert at home with these five easy treatments for treating common conditions.

### **Remedy for Cuts and Bruises: Cabbage**

Next time you don't have anything in your medicine cabinet to clean out a wound, try using cabbage. Nurse Paula Jean Greer uses this leafy vegetable to removing unwanted fluids from a cut or scrape. To get the best results, wrap a refrigerated leaf over the injured area with gauze to cool and clean on contact, and make sure to redress the wound regularly.

### **Remedy for Colds: Salt Water**

Often, colds last so long because your body can't get all the germs out of its system. Mix 3 teaspoons of kosher salt with 1 teaspoon of baking soda in 1 quart of water. Stir until the ingredients dissolve. Then, using a bulb syringe, gently squeeze the hypertonic saline solution into one nostril as you tilt your head to the side over the sink, letting the liquid exit through the other nostril. For kids, use this solution without the pressure of a bulb syringe; try a dropper instead. This home remedy is especially great for those who suffer from chronic sinusitis.

### **Remedy for Hangovers: Pedialyte**

We all know the best way to prevent hangovers is to hydrate, hydrate, hydrate. However, sometimes, water alone won't do the trick. Drink Pedialyte to prevent those morning headaches. This drink is a great way to replenish your electrolytes and rehydrate your body after a night out on the town.

### **Remedy for Mild Burns: Whole Milk**

The next time you have a mild burn, try running whole milk instead of tap water over the area. The proteins and lipids in the milk promote healing, so the condition of your skin will improve faster. Soak a towel with milk to make a cold compress; hold it on the injured area for around 15 minutes. Make sure to wash your hands and the towel afterward to prevent bad odors.

### **Remedy for Itches: Mint Tea**

For itchy skin you shouldn't scratch, try applying mint tea to the affected area. The menthol in mint has both anesthetic and anti-inflammatory properties. Mint also contains muriatic acid, which is an anti-inflammatory that is easily absorbed into the skin. To try this secret home remedy, boil 2 cups of water and steep one ounce of dried mint leaves. Then, let the tea cool, and saturate a clean cloth to use as a compress on the itchy skin.

Week 6: Benefits of Meditation

Content Outline	Suggested teaching Strategies
<p>1 The effectiveness of meditation comes from deep relaxation. When we are deeply relaxed, the body and mind are refreshed and revitalized. This brings many benefits that are both immediate and long lasting.</p> <p>2 Some major health benefits of regular meditation include:</p> <ul style="list-style-type: none"> <li>A Lower blood pressure</li> <li>B Better sleep</li> <li>C Less anxiety</li> <li>D Faster healing</li> <li>E Decreased use of drugs, alcohol and cigarettes</li> <li>F Lower cholesterol</li> <li>G Stronger immune response</li> </ul> <p>3 Reduction of stress hormones brings many benefits</p> <ul style="list-style-type: none"> <li>A Researchers have found that meditation lowers levels of stress hormones. In fact, by decreasing the level of one such hormone epinephrine – meditation has been shown to reduce the amount of cholesterol in the blood and therefore help arteries to remain clear. Reduction of stress hormones also supports the healthy functioning of the immune system.</li> </ul> <p>4 Alpha waves and deep relaxation</p> <ul style="list-style-type: none"> <li>A This reduction in stress hormones may be explained by the relaxed state that comes about through meditation.</li> <li>B Electroencephalograph (EEG) studies of the brain in those who are meditating show that meditation boosts the intensity of alpha waves associated with quiet, receptive states – to levels not seen even during sleep. This relaxed state combats anxiety, and this is confirmed by research which has found lowered levels of lactic acid in the blood. (High levels of lactic acid are associated with anxiety).</li> <li>C Another effect of meditation is that breathing slows, so the body uses less oxygen.</li> </ul> <p>5 Meditation helps the heart</p> <ul style="list-style-type: none"> <li>A Meditation has been found to be particularly helpful for the heart. Meditators have been found to have improved blood circulation, as well as a lowered heart rate, which places less demands on the heart.</li> <li>B A 1998 study published in Psychosomatic Medicine showed that people who practiced transcendental meditation™ had lower levels of lipid peroxide than those who didn't. Lipid peroxide can contribute to atherosclerosis and other chronic diseases associated with aging.</li> <li>C A 1999 study published in the same journal showed that people who practiced TM had lower blood pressure immediately after meditating than did the control group.</li> </ul> <p>6 Help for Fibromyalgia, Psoriasis, IBS, and More</p> <ul style="list-style-type: none"> <li>A A 1998 study in Alternative Therapies showed that meditation helped decrease symptoms such as pain and sleeplessness in patients with fibromyalgia, a disease characterized by muscle pain, fatigue, and mild-to-moderate depression.</li> </ul>	<p>Lecture</p> <p>Discussion</p> <p>Handouts</p>



<p>B In a 1998 study at the University of Massachusetts Medical Center, psoriasis patients who listened to a mindfulness meditation audiotope during their ultraviolet light therapy experienced faster healing than those who had the light therapy alone.</p> <p>7 Meditation has also been associated with a longer life span, better quality of life, fewer hospitalizations, and reduced health-care costs. It has also shown promise as an adjunct therapy in relieving mild depression, insomnia, tension headache, irritable bowel syndrome, and premenstrual syndrome (PMS), as well as in controlling substance abuse.</p>	
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## Week 6: Benefits of Meditation Handout

**The effectiveness of meditation comes from deep relaxation.** When we are deeply relaxed, the body and mind are refreshed and revitalized. This brings many benefits that are both immediate and long lasting.

### **Some major health benefits of regular meditation include:**

- Lower blood pressure
- Better sleep
- Less anxiety
- Faster healing
- Decreased use of drugs, alcohol and cigarettes
- Lower cholesterol
- Stronger immune response

### **Reduction of stress hormones brings many benefits**

The results above have been demonstrated in many rigorous scientific studies, a few of which are mentioned below. Researchers have found that meditation lowers levels of stress hormones. In fact, by decreasing the level of one such hormone – epinephrine — meditation has been shown to reduce the amount of cholesterol in the blood and therefore help arteries to remain clear. Reduction of stress hormones also supports the healthy functioning of the immune system.

### **Alpha waves and deep relaxation**

This reduction in stress hormones may be explained by the relaxed state that comes about through meditation. Electroencephalograph (EEG) studies of the brain in those who are meditating show that meditation boosts the intensity of alpha waves – associated with quiet, receptive states — to levels not seen even during sleep. This relaxed state combats anxiety, and this is confirmed by research which has found lowered levels of lactic acid in the blood. (High levels of lactic acid are associated with anxiety.) Another effect of meditation is that breathing slows, so the body uses less oxygen.

### **Meditation helps the heart**

Meditation has been found to be particularly helpful for the heart. Meditators have been found to have improved blood circulation, as well as a lowered heart rate, which places less demands on the heart. A 1998 study published in *Psychosomatic Medicine* showed that people who practiced transcendental meditation (TM) had lower levels of lipid peroxide than those who didn't. Lipid peroxide can contribute to atherosclerosis and other chronic diseases associated with aging. A 1999 study published in the same journal showed that people who practiced TM had lower blood pressure immediately after meditating than did the control group.

### **Help for Fibromyalgia, Psoriasis, IBS, and More**

A 1998 study in *Alternative Therapies* showed that meditation helped decrease symptoms such as pain and sleeplessness in patients with fibromyalgia, a disease characterized by muscle pain, fatigue, and mild-to-moderate depression.

In a 1998 study at the University of Massachusetts Medical Center, psoriasis patients who listened to a mindfulness meditation audiotape during their ultraviolet light therapy experienced faster healing than those who had the light therapy alone.

Meditation has also been associated with a longer life span, better quality of life, fewer hospitalizations, and reduced health-care costs. It has also shown promise as an adjunct therapy in relieving mild depression, insomnia, tension headache, irritable bowel syndrome, and premenstrual syndrome (PMS), as well as in controlling substance abuse.

Week 8: Balance problems/concerns

Content Outline	Suggested teaching Strategies
<ol style="list-style-type: none"> <li>1. About balance problems               <ol style="list-style-type: none"> <li>A. As people age they may have difficulty with their balance.</li> <li>B. 8 million American adults report having a chronic problem with balance.</li> <li>C. 2.4 million American adults report having a chronic problem with dizziness alone.</li> </ol> </li> <li>2. Causes of balance problems               <ol style="list-style-type: none"> <li>A. Fear of falling                   <ol style="list-style-type: none"> <li>1) 40-73% of elderly that have experienced a recent fall acknowledge they have a fear of falling again.</li> <li>2) 20-46% of elderly that have not had a fall acknowledge a fear of falling.</li> <li>3) Fear of falling increases with age and is greater among women.</li> <li>4) Fear of falling is associated with decreased satisfaction with life, increased frailty, depressed mood, decreased mobility, decreased social activities, and recent experience of falls.</li> <li>5) Fear of falling impacts negatively on the mental health and overall well-being of older adults.</li> <li>6) Fear of falling can lead to a debilitating spiral marked by loss of confidence and reduced activity, resulting ultimately in a loss of independence, and a greater risk of falling.</li> </ol> </li> <li>B. Benign paroxysmal positional vertigo                   <ol style="list-style-type: none"> <li>1) You experience a brief intense feeling of vertigo that occurs when you change the position of your head.</li> <li>2) In BPPV, small calcium stones in the inner ear become displaced, causing a person to feel dizzy.</li> <li>3) May be caused by an inner ear</li> </ol> </li> </ol> </li> </ol>	<p>Lecture</p> <p>Discussion</p> <p>Handouts</p>

infection, head injury or aging.

C. Labyrinthitis

- 1) Causes dizziness and loss of balance.
- 2) Usually caused by an infection or inflammation of the inner ear, the labyrinth is the organ in your inner ear that helps you maintain your balance.

D. Meniere's Disease

- 1) Meniere's disease is a balance disorder.
- 2) Symptoms include vertigo, hearing loss that comes and goes, tinnitus (a ringing or roaring in the ears), and a feeling of fullness in the ear.

3. Symptoms and diagnosis of balance problems
4. Prevention of balance problems
5. Treatment and research

## Week 8: Balance Problems/Concerns Handout

### Falls and fall injuries:

- Are more common than strokes and can be just as serious in their consequences
- Are the most preventable cause of needing nursing home placement
- Lead to problems with daily activities like dressing, bathing, and walking around
- Among adults 70 years and older:
  - 3 in 10 fall each year
- 2 in 10 who need home health care after being in the hospital will fall during the first month after coming home
- 1 in 10 suffer a serious fall injury such as a broken bone or head injury
- 5 in 10 have problems getting up without help after they have fallen
- Falls cause over 90% of broken hips; only half of those who break their hip will get around like they did before their broken hip
- In the United States, 16 percent of all Emergency Department visits and almost 7 percent of all hospitalizations are for fall-related injuries

### \*The common health problems for falling are:

- Problems walking or moving around
- 4 or more medications
- foot problems, unsafe footwear
- blood pressure drops too much on standing up/dizzy
- problems with seeing
- tripping hazards in your home

While some factors that increase risk of falling, such as age and previous falls, cannot be changed, there are a number of important ones that can be - problems walking or moving around, taking 4 or more medications, foot problems or unsafe footwear, blood pressure dropping too much on getting up, problems seeing, and tripping hazards at home. [Research](#) has shown that treating and correcting these specific health problems reduces the rate of falling by more than 30%. The table below shows how an older person with fall risk factors can benefit from treatment of those factors.

**Falls Risk Reduction Table**

<b>If she has</b>	<b><i>The chance she will suffer a serious fall in the next year is</i></b>	<b><i>Treating risk factors reduces this risk about 1/3 to</i></b>
<b>Fallen in past year</b>	<b>50% (5 in 10)</b>	<b>30% (3 in 10)</b>
<b>No falls in past year but even minor problems with walking or movements</b>	<b>30% (3 in 10)</b>	<b>20% (2 in 10)</b>
<b>Any 1 of 6 the risk factors below</b>	<b>20% (2 in 10)</b>	<b>10% (1 in 10)</b>
<b>Any 2 of the 6 risk factors below</b>	<b>30% (3 in 10)</b>	<b>20% (2 in 10)</b>
<b>Any 3 of the 6 risk factors below</b>	<b>60% (6 in 10)</b>	<b>40% (4 in 10)</b>
<b>4 or more of the 6 risk factors</b>	<b>80% (8 in 10)</b>	<b>50% (5 in 10)</b>

*The known treatable risk factors include:*

1. *any problems with walking or movements [see below]*
2. *postural hypotension*
3. *use of 4 or more medications or any psychoactive medications*
4. *unsafe footwear or foot problems*
5. *visual problems*
6. *environmental hazards*

Week 9: Health Benefits of Resistance Training for Older Adults

Content Outline	Suggested teaching Strategies
<ol style="list-style-type: none"> <li>1. Why should older adults' strength train?               <ol style="list-style-type: none"> <li>A. Research has shown that strengthening exercises are both safe and effective for women and men of all ages, including those who are not in perfect health.</li> <li>B. Strength training, particularly in conjunction with regular aerobic exercise, can also have a profound impact on a person's mental and emotional health.</li> </ol> </li> <li>2. Benefits of strength training               <ol style="list-style-type: none"> <li>A. It can be very powerful in reducing the signs and symptoms of numerous diseases and chronic conditions.                   <ol style="list-style-type: none"> <li>1) Arthritis                       <ol style="list-style-type: none"> <li>a) Strength training has shown to decrease pain in individuals suffering from arthritis.</li> <li>b) Increased muscle strength and general physical performance, can improve clinical signs and symptoms of arthritis, and decrease disability.</li> </ol> </li> <li>2) Diabetes                       <ol style="list-style-type: none"> <li>a) Strength training can produce dramatic improvements in glucose control that are comparable to taking diabetes medication.</li> <li>b) Strength training improves insulin sensitivity and blood glucose control.</li> </ol> </li> <li>3) Osteoporosis                       <ol style="list-style-type: none"> <li>a) Strength training increases bone density and reduces the risk for fractures.</li> </ol> </li> <li>4) Obesity                       <ol style="list-style-type: none"> <li>a) Strength training is crucial to weight control, because individual who have more muscle mass have a higher metabolic rate.</li> <li>b) Muscle is active tissue that</li> </ol> </li> </ol> </li> </ol> </li> </ol>	<p>Lecture</p> <p>Discussion</p> <p>Handouts</p>

consumes calories while stored fat uses very little energy.

c) Strength training can provide up to a 15% increase in metabolic rate.

5) Balance

a) Strength training can help with balance at any age thus reducing falls and long recovery times, by strengthening muscles and improving coordination.

6) Depression

a) Strength training provides improvements in depression as anti-depressant medications.

b) Strength training improves self-confidence and self-esteem which has a strong impact on their overall quality of life.

## **Week 9: Health Benefits of Resistance Training for Older Adults Handout**

**Why strength training?** Research has shown that strengthening exercises are both safe and effective for women and men of all ages, including those who are not in perfect health. In fact, people with health concerns—including heart disease or arthritis—often benefit the most from an exercise program that includes lifting weights a few times each week. Strength training, particularly in conjunction with regular aerobic exercise, can also have a profound impact on a person's mental and emotional health.

### **Benefits of Strength Training:**

**Arthritis Relief** - Tufts University recently completed a strength-training program with older men and women with moderate to severe knee osteoarthritis. The results of this sixteen-week program showed that strength training decreased pain by 43%, increased muscle strength and general physical performance, improved the clinical signs and symptoms of the disease, and decreased disability. The effectiveness of strength training to ease the pain of osteoarthritis was just as potent, if not more potent, as medications. Similar effects of strength training have been seen in patients with rheumatoid arthritis.

**Restoration of Balance and Reduction of Falls** - As people age, poor balance and flexibility contribute to falls and broken bones. These fractures can result in significant disability and, in some cases, fatal complications. Strengthening exercises, when done properly and through the full range of motion, increases a person's flexibility and balance, which decreases the likelihood and severity of falls. One study in New Zealand in women 80 years of age and older showed a 40% reduction in falls with simple strength and balance training.

**Strengthening of Bone** - Post-menopausal women can lose 1-2% of their bone mass annually. Results from a study conducted at Tufts University, which were published in the *Journal of the American Medical Association* in 1994, showed that strength training increases bone density and reduces the risk for fractures among women aged 50-70.

**Proper Weight Maintenance** - Strength training is crucial to weight control, because individuals who have more muscle mass have a higher metabolic rate. Muscle is active tissue that consumes calories while stored fat uses very little energy. Strength training can provide up to a 15% increase in metabolic rate, which is enormously helpful for weight loss and long-term weight control.

**Improved Glucose Control** - In addition to being at greater risk for heart and renal disease, diabetes is also the leading cause of blindness in older adults. Fortunately, studies now show that lifestyle changes such as strength training have a profound impact on helping older adults manage their diabetes. In a recent study of Hispanic men and women, 16 weeks of strength training produced dramatic improvements in glucose control that are comparable to taking diabetes medication. Additionally, the study volunteers were stronger, gained muscle, lost body fat, had less depression, and felt much more self-confident.

**Healthy State of Mind** - Strength training provides similar improvements in depression as anti-depressant medications. Currently, it is not known if this is because people feel better when they are stronger or if strength training produces a helpful biochemical change in the brain. It is most likely a combination of the two. When older adults participate in strength training programs, their self-confidence and self-esteem improve, which has a strong impact on their overall quality of life.

**Sleep Improvement** - People who exercise regularly enjoy improved sleep quality. They fall asleep more quickly, sleep more deeply, awaken less often, and sleep longer. As with depression, the sleep benefits obtained as a result of strength training are comparable to treatment with medication but without the side effects or the expense.

**Healthy Heart Tissue** - Strength training is important for cardiac health because heart disease risk is lower when the body is leaner. One study found that cardiac patients gained not only strength and flexibility but also aerobic capacity when they did strength training three times a week as part of their rehabilitation program.



Week 10: Glaucoma

Content Outline	Suggested teaching Strategies
<p>1. What is Glaucoma?</p> <p>A. Glaucoma is a group of eye diseases that gradually steal sight without warning.</p> <p>B. Groups at higher risk for developing glaucoma</p> <ul style="list-style-type: none"><li>1) African-Americans<ul style="list-style-type: none"><li>a) Glaucoma is the leading cause of blindness among African-Americans. It is 6 to 8 times more common in African-Americans than in Caucasians.</li></ul></li><li>2) People over 60<ul style="list-style-type: none"><li>a) Glaucoma is much more common among older people. You are 6 times more likely to get glaucoma if you are over 60 years old.</li></ul></li><li>3) Family member with Glaucoma<ul style="list-style-type: none"><li>a) The most common type of glaucoma, primary open-angle glaucoma is hereditary. If members of your family have glaucoma, you are at a much higher risk than the rest of the population. Family history increases risk of glaucoma four to nine times.</li></ul></li><li>4) Hispanics in older age groups<ul style="list-style-type: none"><li>a) Studies indicate that the risk for Hispanic populations is greater than those of European ancestry.</li></ul></li><li>5) Asians<ul style="list-style-type: none"><li>a) People of Asian Descent appear to be at some risk for angle closure glaucoma.</li></ul></li><li>6) Steroid Users<ul style="list-style-type: none"><li>a) Some evidence links steroid use to glaucoma.</li></ul></li><li>7) Eye injury<ul style="list-style-type: none"><li>a) Injury to the eye may cause secondary open-angle glaucoma. This type of glaucoma can occur immediately after the injury or years later.</li></ul></li></ul>	<p>Lecture</p> <p>Discussion</p> <p>Handouts</p>

2. Types of Glaucoma?

- A. Primary open-angle Glaucoma
- B. Angle-closure Glaucoma
- C. Normal Tension Glaucoma
- D. Secondary Glaucoma
- E. Pediatric Glaucoma

3. Two main types of glaucoma are primary open-angle glaucoma (POAG), and angle-closure glaucoma. These are marked by an increase of intraocular pressure (IOP), or pressure in the eye.

## Week 10: Glaucoma Facts and Stats Handout

### **Four Key Facts About Glaucoma**

1. Glaucoma is a leading cause of blindness. Glaucoma can cause blindness if it is left untreated. And unfortunately approximately 10% of people with glaucoma who receive proper treatment still experience loss of vision.
2. There is no cure (yet) for glaucoma. Glaucoma is not curable, and vision lost cannot be regained. With medication and/or surgery, it is possible to halt further loss of vision. Since glaucoma is a chronic condition, it must be monitored for life. Diagnosis is the first step to preserving your vision.
3. Everyone is at risk for glaucoma. Everyone is at risk for glaucoma from babies to senior citizens. Yes, older people are at a higher risk for glaucoma but babies can be born with glaucoma (approx. 1 out of every 10,000 babies born in the U.S.). Young adults can get glaucoma, too. African-Americans in particular are susceptible at a younger age.
4. There may be no symptoms to warn you. With open angle glaucoma, the most common form, there are virtually no symptoms. Usually, no pain is associated with increased eye pressure. Vision loss begins with peripheral or side vision. You may compensate for this unconsciously by turning your head to the side, and may not notice anything until significant vision is lost. The best way to protect your sight from glaucoma is to get tested. If you have glaucoma, treatment can begin immediately.

### **Some statistics about Glaucoma**

- It is estimated that over 4 million Americans have glaucoma but only half of those know they have it.
- Approx. 120,000 are blind from glaucoma, accounting for 9% to 12% of all cases of blindness in the U.S.
- About 2% of the population ages 40-50 and 8% over 70 have elevated IOP (Inter-Ocular Pressure).
- Glaucoma is the second leading cause of blindness in the world.
- Glaucoma is the leading cause of blindness among African-Americans.
- African-Americans ages 45-65 are 14 to 17 times more likely to go blind from glaucoma than Caucasians with glaucoma in the same age group.
- The most common form, Open Angle Glaucoma, accounts for 19% of all blindness among African-Americans compared to 6% in Caucasians.
- Other high-risk groups include: people over 60, family members of those already diagnosed, diabetics, and people who are severely nearsighted. Estimates put the total number of suspected cases of glaucoma at around 65 million worldwide.

Week 11: Stress

Content Outline	Suggested teaching Strategies
<p>1. Causes of stress in older adults.</p> <ul style="list-style-type: none"> <li>A. A serious illness (ie. Cancer, alzheimers)</li> <li>B. Multiple medial conditions (ie. Heart disease, diabetes, arthritis)</li> <li>C. Physical limitations, such as not being able to walk around the block or drive a car.</li> <li>D. Chronic Pain</li> <li>E. Retirement</li> <li>F. Financial concerns, such as learning to live on a limited income or coping with today's struggling economy.</li> <li>G. Cognitive changes, such as responsibility for a loved one's care.</li> <li>H. Changing life situations, such as moving to a new residence.</li> <li>I. Loss of loved ones and grief.</li> </ul> <p>3. Signs of stress</p> <ul style="list-style-type: none"> <li>A. Stress may come with one or more of the following symptoms: <ul style="list-style-type: none"> <li>1) Worry, anxiety, or panic attacks.</li> <li>2) Sadness or depression.</li> <li>3) Feeling pressured and hurried.</li> <li>4) Irritability and moodiness.</li> <li>5) Difficulty concentrating and making decisions.</li> <li>6) Physical symptoms, such as stomach problems, headaches, or chest pain.</li> <li>7) Allergic reactions, such as a skin rash or asthma.</li> <li>8) Problems sleeping.</li> <li>9) Feeling overwhelmed and helpless.</li> <li>10) Drinking too much alcohol, smoking, or misusing drugs.</li> <li>11) Eating too much or not enough.</li> </ul> </li> </ul> <p>2. Tips for preventing and coping with stress and anxiety.</p> <ul style="list-style-type: none"> <li>A. Participate in social and community activities. <ul style="list-style-type: none"> <li>1) Social interaction and a sense of giving to your community enhance self-esteem and reduce stress.</li> </ul> </li> <li>B. Take care of yourself. <ul style="list-style-type: none"> <li>1) Get regular exercise, eat nourishing</li> </ul> </li> </ul>	<p>Lecture</p> <p>Discussion</p> <p>Handouts</p>

<p>food, and maintain a healthy weight.</p> <ul style="list-style-type: none"><li>C. Participate in activities you enjoy.</li><li>D. Stay focused on positive things.</li><li>E. Connect with the people who are most meaningful to you.</li><li>F. Remember stressful events that you successfully coped with in the past and repeat what worked before.</li><li>G. Focus on addressing your problems instead of feeling helpless about them.</li><li>H. Learn and use relaxation techniques and meditation.</li><li>I. Make use of support and education groups.</li></ul>	
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## Week 11: Stress Handout

### *Relaxation Techniques: RELAXATION RESPONSE*

*The following is a simple, brief activity that can be used to allow the physical changes of a stress reaction to subside and return to a non-stress state.*

1. Sit (or lie) in a comfortable position in a quiet environment with eyes closed.
2. Begin with your feet and relax each muscle group moving up to the head—calf, thigh, waist, stomach, arms, chest, neck, face, and forehead.
3. Breathe in through your nose gently pushing your stomach out.
4. Breathe out through your mouth and let your stomach relax.
5. Continue for 10-20 minutes. Open your eyes as need to check time, but do not set a time.
6. When finished, open your eyes but remain seated for a couple of minutes.

### *PROGRESSIVE RELAXATION*

*The following is a physical activity that can be used for releasing muscle tension triggered as a response to stress.*

1. Lie flat on a soft surface or floor with your eyes closed and knees bent.
2. Beginning with your right foot, press foot firmly to the floor for five seconds, relax for five seconds; repeat with the left foot.
3. Straighten legs out and press back of lower right leg firmly to the floor for five seconds, relax for five seconds; repeat with left leg.
4. Press each of the following areas firmly to the floor for 5 seconds, relax for five seconds (one at a time):
  - Back of thighs and buttocks
  - Lower back and shoulder blades
  - Arms
  - Back of head
5. Breathe normally as you press and relax.

Week 9: Fibromyalgia

Content Outline	Suggested teaching Strategies
<p>1 Fibromyalgia is an arthritis related condition characterized by widespread muscle pain and the presence of tender points, or areas of the body that are particularly sensitive to pressure.</p> <p>a) Fibromyalgia affects 3% to 6% of Americans, mostly women. Its exact cause is not known.</p> <p>2 Who gets fibromyalgia?</p> <p>a) Fibromyalgia affects more than 3.7 million Americans, the majority of whom are women between the ages of 40 and 75, but it also affects men, young women and children as well.</p> <p>i) People with other rheumatic diseases, such as rheumatoid arthritis may also develop fibromyalgia, although no one knows why.</p> <p>3 Symptoms of Fibromyalgia</p> <p>a) The two key symptoms of fibromyalgia are widespread body pain (meaning it affects both sides of the body and above and below the waist) and tender points, or areas of the body that are particularly sensitive to pressure.</p> <p>i) Other symptoms may include sleep disturbances, severe fatigue, depression and anxiety, cognitive difficulties, headaches, bladder irritability and spasms, irritable bowel syndrome, jaw problems and painful menstruation.</p> <p>4 What causes Fibromyalgia?</p> <p>a) No one knows what causes fibromyalgia, although there are a number of theories.</p> <p>i) Some studies show that an injury or trauma, physical or emotional, may affect the central nervous system's response to pain.</p> <p>ii) Some scientists theorize that trauma leads to biochemical changes in the muscles and, later, the central nervous system, leading to chronic pain, or that injury to the central nervous system interferes with brain wave patterns.</p> <p>iii) Other researchers believe hormonal changes or infections, such as a flu virus, may trigger fibromyalgia.</p> <p>iv) Some scientists suspect that lack of exercise and changes in muscle metabolism may play a key role in fibromyalgia or that the opposite, muscle overuse, may be the key.</p> <p>v) Sleep disturbance may also be a cause. Sleep disturbance lowers the production of a growth hormone crucial to the repair of muscles.</p> <p>vi) An established link exists between fibromyalgia and depression, but no one knows if depression is a cause or effect of fibromyalgia.</p> <p>5 Finding a Doctor for Fibromyalgia</p>	<p>Lecture</p> <p>Discussion</p> <p>Handouts</p>

- a) The best fibromyalgia doctor is a rheumatologist, a physician who specializes in treating people with fibromyalgia and related diseases.
  - i) If possible, you'll want to find a rheumatologist with a special interest in the condition.
  - ii) Asks friends with the condition if they can recommend their fibromyalgia doctors.

6 What is Fibro Fog?

- a) Fibro fog – also known as fibromyalgia fog and brain fog – is a term commonly used for the cognitive difficulties that can occur with fibromyalgia.
- b) Cognitive difficulties that can occur include confusion, lapses in memory , word mix-ups and difficulty concentrating.
- c) New research shows that chronic pain itself may affect the brain. A technology called functional MRI found that in people with chronic pain, a front region of the brain mostly associated with emotion is constantly active. The affected areas fail to “shut off” when they should, wearing out neurons and disturbing the balance of the brain as a whole.

7 How is Fibromyalgia Treated?

- a) There is presently no cure for fibromyalgia, but there are several treatments available that can help to reduce the pain and fatigue and bring other symptoms under control, leading to a more active life.
- b) In treating fibromyalgia, most physicians combine medications with non-pharmacologic treatments, such as maintaining a healthy sleep and exercise regimen. The importance of getting sufficient sleep and exercise cannot be overlooked.
- c) Several interventions, such as exercise and acupuncture, can help alleviate fibromyalgia symptoms without any medications.
- d) No single therapy stands out as the most effective. These alternative therapies –whether hypnosis or biofeedback, exercise or acupuncture require your willingness to incorporate them into daily life.
  - i) For instance to truly benefit from fitness training, you must exercise at least three times per week. If you stop exercising after three or six months, you will lose any ground gained.

8 Medication for Fibromyalgia

- a) There are now several FDA approved medications for the treatment of fibromyalgia that have been shown to be effective at reducing pain and improving function.
  - i) Cymbalta
  - ii) Lyrica
  - iii) Savella
- b) Non-steroidal Anti-Inflammatory Drugs (NSAIDs), including aspirin, ibuprofen, and naproxen sodium are used to treat inflammation and pain.

9 Will Fibromyalgia get better with time?

- a) Fibromyalgia is a chronic condition, meaning it lasts a long time – possibly a lifetime. However, it is not a progressive disease. It is never fatal and it won't cause damage to your joints, muscles, or internal organs. In many people the condition does improve over time.



## Week 9: Fibromyalgia Handout

Fibromyalgia is a common syndrome in which a person has long-term, body-wide pain and tenderness in the joints, muscles, tendons, and other soft tissues. Fibromyalgia has also been linked to fatigue, sleep problems, headaches, depression, and anxiety.

### Causes

The cause is unknown. Possible causes or triggers of fibromyalgia include:

- Physical or emotional trauma
- Abnormal pain response - areas in the brain that are responsible for pain may react differently in fibromyalgia patients
- Sleep disturbances
- Infection, such as a virus, although none has been identified

The following conditions may be seen with fibromyalgia or mimic its symptoms:

- Chronic neck or back pain
- Chronic fatigue syndrome
- Depression
- Hypothyroidism (underactive thyroid)
- Lyme disease
- Sleep disorders

### Symptoms

Pain is the main symptom of fibromyalgia. It may be mild to severe. Painful areas are called tender points. Tender points are found in the soft tissue on the back of the neck, shoulders, chest, lower back, hips, shins, elbows, and knees. The pain then spreads out from these areas. The pain may feel like a deep ache, or a shooting, burning pain. The joints are not affected, although the pain may feel like it is coming from the joints. People with fibromyalgia tend to wake up with body aches and stiffness. For some patients, pain improves during the day and gets worse at night. Some patients have pain all day long. Pain may get worse with activity, cold or damp weather, anxiety, and stress. Fatigue, depressed mood, and sleep problems are seen in almost all patients with fibromyalgia. Many say that they can't get to sleep or stay asleep, and they feel tired when they wake up.

Other symptoms of fibromyalgia may include:

- Irritable bowel syndrome (IBS)
- Memory and concentration problems
- Numbness and tingling in hands and feet
- Palpitations
- Reduced ability to exercise
- Tension or migraine headaches

## Exams and Tests

To be diagnosed with fibromyalgia, you must have had at least 3 months of widespread pain, and pain and tenderness in at least 11 of 18 areas, including

- Arms (elbows)
- Buttocks
- Chest
- Knees
- Lower back
- Neck
- Rib cage
- Shoulders
- Thighs

## Treatment

The goal of treatment is to help relieve pain and other symptoms, and to help a person cope with the symptoms. The first type of treatment may involve:

- Physical therapy
- Exercise and fitness program
- Stress-relief methods, including light massage and relaxation techniques

If these treatments do not work, your doctor may prescribe an antidepressant or muscle relaxant. The goal of medication is to improve sleep and pain tolerance. Medicine should be used along with exercise and behavior therapy. Duloxetine (Cymbalta), pregabalin (Lyrica), and milnacipran (Savella) are medications that are approved specifically for treating fibromyalgia.

However, many other drugs are also used to treat the condition, including:

- Anti-seizure drugs
- Other antidepressants
- Muscle relaxants
- Pain relievers
- Sleeping aids

**Cognitive-behavioral therapy is an important part of treatment.** This therapy helps you learn how to:

- Deal with negative thoughts
- Keep a diary of pain and symptoms
- Recognize what makes your symptoms worse
- Seek out enjoyable activities
- Set limits
- Support groups may also be helpful.

**Other recommendations include:**

- Eat a well-balanced diet
- Avoid caffeine
- Practice good sleep routines to improve quality of sleep
- Acupressure and acupuncture
- Severe cases of fibromyalgia may require a referral to a pain clinic.

## Outlook (Prognosis)

Fibromyalgia is a long-term disorder. Sometimes, the symptoms improve. Other times, the pain may get worse and continue for months or years.

## When to Contact a Medical Professional

Call your health-care provider if you have symptoms of fibromyalgia.

## Prevention

There is no known prevention.

Week 10: Facts of Fiber

Content Outline	Suggested teaching Strategies
<p>1) Dietary fibers are indigestible complex carbohydrates found in walls of plant cells.</p> <ul style="list-style-type: none"> <li>a) Fiber is resistant to the body's digestive enzymes.</li> <li>b) Fiber supplies no nutrients or calories, fiber perform many important biological functions.</li> </ul> <p>2) Types of Fiber</p> <ul style="list-style-type: none"> <li>a) There are two type of dietary fiber:           <ul style="list-style-type: none"> <li>i) Insoluble fiber is not soluble in water. Components include lignin, cellulose, and hemicelluloses.</li> <li>ii) Soluble fiber is soluble in water, and components include pectin, gum, and mucilage.</li> </ul> </li> </ul> <p>3) Sources of Fiber</p> <ul style="list-style-type: none"> <li>a) Fiber is found in plant foods, including fruits, vegetables, whole grains, and beans.</li> <li>b) Many products list total dietary fiber in grams, which includes both insoluble and soluble fiber.</li> <li>c) Most foods have more insoluble (50-60%) then soluble fiber (25-30%).           <ul style="list-style-type: none"> <li>i) Oat bran, barley, kidney beans, and black-eyed peas contain more soluble fiber than foods such as wheat bran, brown rice, lettuce and spinach.</li> </ul> </li> </ul> <p>4) Positive effects of Fiber</p> <ul style="list-style-type: none"> <li>a) Soluble fiber decreases blood cholesterol levels, and therefore reduces the risk of heart disease.           <ul style="list-style-type: none"> <li>i) Research indicates that soluble fiber binds to bile acids in the intestines, causing them to be eliminated. Since fewer bile acids are available, the liver draws cholesterol from the bloodstream to make more. Thus reduces the level of blood cholesterol.</li> </ul> </li> <li>b) A diet high in fiber is usually low in fat, which helps prevent heart disease.</li> <li>c) Soluble fiber can help stabilize blood sugar levels in persons with diabetes by delaying stomach emptying. This slows the rate of carbohydrate absorption, improves regulation of blood sugars, and lowers insulin requirements.</li> <li>d) The water-holding capacity of fiber helps soften stools and prevents constipation, provided that you drink enough fluids. The amount of fiber required to prevent constipation varies among individuals.</li> <li>e) Fiber, particularly insoluble fiber, may decrease the risk of colon cancer by increasing the speed of elimination. This reduces the amount of time harmful carcinogens (cancer causing substances) are in contact with the intestinal cells. Also, stool contents, including carcinogens, become diluted and less harmful.</li> </ul>	<p>Lecture</p> <p>Discussion</p> <p>Handouts</p>

- f) Fiber increases satiety (the feeling of fullness) by adding bulk to foods without additional calories. This may reduce the risk of obesity and the severity of diabetes.
- g) A high-fiber diet may reduce the risk of diverticulosis by decreasing the pressure within the colon and the formation of diverticulosis.
- h) A high-fiber diet may reduce the risk of hemorrhoids by decreasing the straining associated with stool elimination.

5) Recommended Intake of Fiber

- a) The average American intake of total dietary fiber is 12-18 grams per day for women and men respectively. The recommended dietary fiber intake is 14g per 1000 calories consumed. This can be achieved by eating more beans, vegetables, fruits, and whole grain breads and cereals. A gradual increase is recommended to minimize the side effects of fiber, such as intestinal gas. Remember also to increase your fluid intake as you increase your fiber intake.

## **Week 10: Facts on Fiber Handout**

### **WHAT YOU NEED TO KNOW ABOUT FIBER**

Health professionals agree that we need to increase our fiber intake. Begin by making gradual changes in your diet. Try substituting whole grain breads and cereals for white bread and refined cereals. Also, select at least two servings of fruits and three servings of vegetables daily. As with other health-related issues, there is controversial data associated with fiber. Some of these topics and issues are presented below.

#### **Oat Bran**

Oat bran has received a lot of attention recently for its positive health effects. The fact is that oat bran is beneficial, not because it has magical properties, but because it is an excellent source of fiber. 50% of the fiber in oat bran is soluble, which is the type of fiber that helps lower blood cholesterol levels. Most foods have only 25% of their fiber in soluble form and, therefore, are not as effective in lowering cholesterol levels. Beans and other legumes, barley, and some fruits and vegetables are also excellent and inexpensive sources of soluble fiber.

#### **Fiber Supplements**

Many over-the-counter fiber supplements are available under a variety of different names. Originally promoted for reducing constipation, many are also now advertised as beneficial for reducing blood cholesterol levels. While these benefits from fiber supplements are attractive, the high cost and lack of nutritional value make them a second choice to a good diet. Most fiber pills actually contain little fiber and no other nutrients. It is much better to receive fiber from whole foods, which also provide vitamins, minerals, and phytochemicals. Also, fiber does bind with some minerals, and eating foods, instead of taking a supplement, replaces lost minerals.

#### **Side Effects**

Cramping, diarrhea, and intestinal gas are some of the problems associated with a sudden increase in fiber intake. Gradually increasing your fiber intake over a period of six to eight weeks can minimize undesirable effects. Some individuals may experience discomfort even with a gradual intake. These side effects usually disappear within a few days after the body has become accustomed to a high-fiber diet. Also, increasing your water intake can help reduce negative side effects. An excessive fiber intake can cause fiber to bind with certain essential minerals and cause them to be eliminated instead of absorbed into the bloodstream. While it is difficult to receive too much fiber from foods, an overuse of supplements could result in an extremely high and dangerous level of fiber intake.

#### **Fiber Content of Selected Foods**

The fiber content of foods is difficult to determine. Recently, methods have improved and data is slowly becoming available. The chart below lists the approximate fiber value (in grams) for some items. Please use this chart as a guide. Values may differ greatly depending on which books are referenced. Certain foods do not contain fiber, including meat, poultry, seafood, milk, and fats. Other foods contain various amounts of fiber. The recommended intake of total dietary fiber is 25-40 grams per day.

	<b>Portion Size</b>	<b>Total Dietary Fiber</b>	<b>Soluble Fiber</b>	<b>Insoluble Fiber</b>
<b>Fruits</b>				
Apple (with skin)	1 medium	2.8	1.0	1.8
Banana	1 small	2.0	0.4	1.6
Figs, dried	3	4.6	2.0	2.6
Orange	1 small	1.8	0.3	1.5
Pear	1 medium	4.1	1.0	3.1
Strawberries	1 cup	2.8	1.0	1.8
<b>Vegetables &amp; Legumes</b>				
Broccoli, cooked	1/2 cup	3.2	1.0	2.2
Carrots, cooked	1/2 cup	2.8	1.0	1.8
Corn, cooked	1/2 cup	3.9	1.5	2.4
Green Beans, cooked	1/2 cup	1.2	0.4	0.8
Kidney Beans, cooked	1/2 cup	7.0	3.0	4.0
Peanut Butter	2 Tbsp.	2.4	0.2	2.2
Peas, cooked	1/2 cup	4.3	2.0	2.3
Potato, baked (with skin)	1 medium	4.7	2.0	2.7
Potato Chips	1 oz.	0.6	0.1	0.5
<b>Grains</b>				
Bran Cereal	1/3 cup	8.5	3.0	5.5
Bread, white	1 slice	0.7	0.3	0.4
Bread, whole wheat	1 slice	1.5	0.3	1.2
Cornflakes	1 cup	2.7	0.2	2.5
Graham Crackers	2 each	2.8	0.5	2.3
Oat Bran, dry	1/3 cup	4.2	2.0	2.2
Oatmeal, cooked	2/3 cup	3.0	2.0	1.0
Raisin Bran	1 cup	4.0	1.0	3.0
Rice, brown	1 cup	2.4	0.4	2.0

Week 11: Glycemic Index

Content Outline	Suggested teaching Strategies
<p>1) Glycemic Index is a numerical system of measuring how fast carbohydrate triggers a rise in circulating blood sugar.</p> <p>a) The higher the blood sugar response.</p> <p>2) Why is Glycemic Index important?</p> <p>a) When blood sugar rises, a hormone called insulin is released. Insulin carries blood sugar into the body's cells where it can be stored or used for energy. Insulin's actions bring blood sugar back down to normal.</p> <p>b) When foods with very high Glycemic Index are eaten, blood sugar rises very quickly and insulin levels soar.</p> <p>i) People with diabetes or a pre-diabetic condition called insulin resistance are especially vulnerable to the negative effects of high GI foods because they already have high blood sugar and/or high insulin levels.</p> <p>ii) Eating foods with high GIs further aggravate these unhealthful conditions.</p> <p>iii) Chronically high blood sugar levels (as seen in diabetes) can eventually lead to heart disease, nerve damage, kidney failure, and blindness.</p> <p>iv) Chronically high blood insulin levels (as seen in insulin resistance) are associated with increased appetite, sugar cravings, fat storage, difficulty losing weight, high blood triglycerides, high blood pressure, heart disease, and eventually diabetes.</p> <p>c) When foods with a low to moderate FI are eaten, blood sugar levels rise and fall more slowly and steadily, and insulin release is blunted. As a result, you're likely to feel full longer after you've eaten, enjoy longer lasting energy, maintain steady blood sugar levels, and prevent the negative effects of excessive insulin in the blood.</p> <p>3) Is it "bad" to eat high GI foods?</p> <p>a) Many foods with high GIs are loaded with nutrients and disease-fighting phytochemicals (i.e. watermelon, raisins, and some whole grain breakfast cereals like Cheerios and Shredded Wheat).</p> <p>b) Other foods with high GIs may not be nutrient "powerhouses" but they sure taste good and provide an excellent source of carbohydrate energy.</p> <p>c) Keep in mind that individual foods do not necessarily need to be considered "good" or "bad". It's how you structure your overall eating plan that counts.</p> <p>i) For instance, if you eat a high GI food (like a baked potato) with protein (like grilled chicken), fiber, and fat (like a spinach salad with an oil based dressing), the overall glycemic effect of the meal is much lower.</p> <p>ii) Protein, fiber, and fat all slow digestion and delay blood sugar release.</p>	<p>Lecture</p> <p>Discussion</p> <p>Handouts</p>

Also remember that regular physical activity and maintaining a healthy weigh improves insulin sensitivity so that your body can handle high GI foods.

- 4) Are there certain times when it's "good" to eat high GI foods?
  - a) During and immediately after exercise, its actually desirable to consume foods/beverages with high GIs. In these situations, you want "fast-acting" carbohydrates that raise blood sugar levels quickly.
  - b) After exercise it's desirable to raise insulin levels as much as possible for optimal recovery.
    - i) Insulin facilitates repletion of muscle carbohydrate (glycogen), decreases muscle protein breakdown and increases muscle protein synthesis.
- 5) Most (but not all) high GI foods are highly processed carbohydrates (sugar and starch) with very little fiber and few nutrients.
  - a) By choosing an eating plan that consists mostly of low to moderate GI foods (vegetables, whole fruits, minimally processed whole grains, legumes, nuts, lean protein rich foods, and heart healthy oils), you'll benefit from the extra nutrients and also enjoy long-lasting energy and better health.
  - b) By staying active and maintaining a healthy weight, you can also include some high GI foods into your eating plan without fear of negative health effects.
  - c) Immediately after exercise is a good time to incorporate some of your favorite high GI foods into your eating plan.



## Week 11: Glycemic Index Handout

### ***What is it?***

The Glycemic Index (GI) is a numerical system of measuring how fast carbohydrate triggers a rise in circulating blood sugar – the higher the number, the higher the blood sugar response.

### **Why is GI important?**

When blood sugar rises, a hormone called insulin is released. Insulin carries blood sugar into the body's cells where it can be stored or used for energy. Insulin's actions bring blood sugar back down to normal. When foods with very high GIs are eaten, blood sugar rises very quickly and insulin levels soar. This hyper-secretion of insulin may cause a rapid drop in blood sugar (reactive hypoglycemia), which can make you feel dizzy, shaky, tired, light-headed, and hungry for more sugar shortly after you've eaten! People with diabetes or a pre-diabetic condition called insulin resistance are especially vulnerable to the negative effects of high GI foods because they already have high blood sugar and/or high insulin levels. Eating foods with high GIs further aggravate these unhealthful conditions. Chronically high blood sugar levels (as seen in diabetes) can eventually lead to heart disease, nerve damage, kidney failure, and blindness. Chronically high blood insulin levels (as seen in insulin resistance) are associated with increased appetite, sugar cravings, fat storage, difficulty losing weight, high blood triglycerides, high blood pressure, heart disease, and eventually diabetes. When foods with a low to moderate GI are eaten, blood sugar levels rise and fall more slowly and steadily, and insulin release is blunted. As a result, you're likely to feel full longer after you've eaten, enjoy longer lasting energy, maintain steady blood sugar levels, and prevent the negative effects of excessive insulin in the blood.

### **Is it "bad" to eat high GI foods?**

Not necessarily. Many foods with high GIs are loaded with nutrients and disease-fighting phytochemicals (i.e. watermelon, raisins, and some whole grain breakfast cereals like Cheerios and Shredded Wheat). Others may not be nutrient "powerhouses" but they sure taste good and provide an excellent source of carbohydrate energy.

Keep in mind that individual foods do not necessarily need to be considered "good" or "bad." It's how you build your meals and structure your overall eating plan that counts. For instance, if you eat a high GI food (like a baked potato) with protein (like grilled chicken), fiber, and fat (like a spinach salad with an oil-based dressing), the overall glycemic effect of the meal is much lower. Protein, fiber, and fat all slow digestion and delay blood sugar release.

Also, remember that regular physical activity and maintaining a healthy weight improves insulin sensitivity so that your body can better handle high GI foods.

### **Are there certain times when it's "good" to eat high GI foods?**

Yes! During and immediately after exercise, it's actually desirable to consume foods/beverages with high GIs. In these situations, you want "fast-acting" carbohydrates that raise blood sugar levels quickly. In addition, after exercise it's desirable to raise insulin levels as much as possible for optimal recovery. Insulin facilitates repletion of muscle carbohydrate (glycogen), decreases muscle protein breakdown, and increases muscle protein synthesis.

**Bottom Line:** Most (but not all) high GI foods are highly processed carbohydrates (sugar and starch) with very little fiber and few nutrients. By choosing an eating plan that consists mostly of low to moderate GI foods (vegetables, whole fruits, minimally processed whole grains, legumes, nuts, lean protein rich foods, and heart healthy oils), you'll benefit from the extra nutrients and also enjoy long-lasting energy and better health. By staying active and maintaining a healthy weight, you can also include some high GI foods into your eating plan without fear of negative health effects.

Immediately after exercise is a good time to incorporate some of your favorite high GI foods into your eating plan.

### Glycemic Index for Common Foods

	<b>Low (&lt; 40)</b>	<b>Moderate (40-60)</b>	<b>High (61-100)</b>
<b>Vegetables &amp; Legumes</b>	Soy beans (18) Most beans and lentils (29-39) Cooked carrots (39)	Canned beans (42-52) Green peas (48) Yam/Sweet potato (51-54) Sweet corn (55)	Fava beans (79) Mashed potato (70) French fries (75) Baked potato (85)
<b>Fruits</b>	Cherries (22) Grapefruit (25) Dried apricots (31) Pear (37) Apple, Plum (38-39)	Peach (42) Orange (44) Grapes (46) Banana (54) Mango (56)	Raisins (64) Cantaloupe (65) Pineapple (66) Watermelon (72) Dates (103)
<b>Breads, cereals, grains</b>	Barley, pearled (25) Whole wheat pasta (37)	White pasta (41) Bulgar wheat (48) Brown rice (55) White rice (58) All Bran (42) Oatmeal (49) Special K (54)	Cous Cous (65) Cornmeal (69) Instant rice (90) Life, Shredded Wheat Grape Nuts, (66-69)
		Bran Chex (58) Kelloggs' Just Right (59) Oat bran bread (48) Pumpernickel bread (50) White pita bread (57) Pound cake (54) Pastry (59)	Cream of Wheat (70) Cheerios, Total (74-76) Rice Krispies, Cornflakes, Rice Chex (82-89) Whole wheat bread (69) White bread, bagel, or Kaiser roll (71-73) French baguette (95) Muffins (62) Croissant (67) Donut, Waffles (76)
<b>Milk products</b>	Low fat yogurt, artificially sweetened (14) Soy milk (30) Fat free milk (32) Low fat fruit yogurt (33)		Ice cream (61) Non dairy tofu frozen dessert (115)
<b>Sweets &amp; Snacks</b>	Peanuts (15) Peanut M&Ms (32)	Snickers bar (40) Chocolate (49) Popcorn (55) Power Bar (57)	Stoned wheat thins (67) Skittles (69) Corn chips (74) Graham crackers (74) Rice cakes (77) Jelly beans (80) Pretzels (81)
<b>Beverages</b>	Soy milk (30) Fat free milk (32)	Apple juice (41) Grapefruit juice (48) Orange juice (52)	Gatorade (91) Soft drink (68)
<b>Sugars</b>	Fructose (22)	Lactose (46) Honey (58)	High fructose corn syrup (62) Sucrose (64) Glucose (96) Glucose tablets (102) Maltodextrin (105)

Week 12: MBT4SCHOOLS.COM

Content Outline	Suggested teaching Strategies
a) Information to be distributed by Mary at a later date	Lecture  Discussion  Handouts

Week 13: Diverticulitis

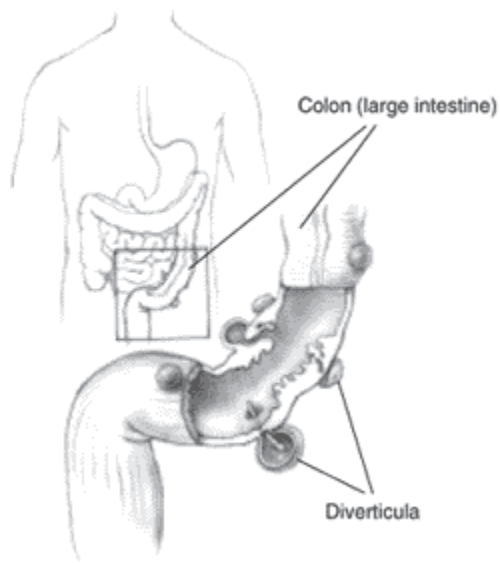
Content Outline	Suggested teaching Strategies
<p>1) What is diverticulitis?</p> <p>a) Diverticulosis happens when pouches form in the wall of the colon. If these pouches get inflamed or infected, it is called diverticulitis, and it can be very painful.</p> <p>2) What causes diverticulitis?</p> <p>a) Doctors aren't sure what causes diverticula in the colon (diverticulosis). But they think that a low-fiber diet may play a role.</p> <p>b) Without fiber to add bulk to the stool, the colon has to work harder than normal to push the stool forward. The pressure from this may cause pouches to form in weak spots along the colon.</p> <p>c) Diverticulitis happens when feces get trapped in the pouches (diverticula). This allows bacteria to grow in the pouches. This can lead to inflammation or infection.</p> <p>d) You may be more likely to develop diverticulitis if you have a family history or it.</p> <p>3) What are the symptoms?</p> <p>a) Symptoms of diverticulitis may last from a few hours to a week or more. Symptoms include:</p> <ul style="list-style-type: none"> <li>i) Belly pain, usually in the lower left side, that is sometimes worse when you move. This is the most common symptom.</li> <li>ii) Fever and chills</li> <li>iii) Bloating and gas</li> <li>iv) Diarrhea or constipation</li> <li>v) Nausea and sometimes vomiting</li> <li>vi) Not feeling like eating</li> </ul> <p>4) How is diverticulitis diagnosed?</p> <p>a) Your doctor will ask about your symptoms and will examine you. He or she may do tests to see if you have an infection or to make sure that you don't have other problems. Tests may include:</p> <ul style="list-style-type: none"> <li>i) Blood tests, such as a complete blood count (CBC)</li> <li>ii) Other tests, such as an X-ray or a CT scan</li> </ul> <p>5) How is it treated?</p> <p>a) The treatment you need depends on how bad your symptoms are and whether you have an infection. You may need to have only liquids at first, and then return to solid food when you start feeling better.</p> <p>b) For mild cramps and belly pain:</p> <ul style="list-style-type: none"> <li>i) Use a heating pad, set on low, on your belly</li> <li>ii) Relax. For example, try meditation or slow, deep breathing in a quiet room.</li> <li>iii) Take medicine, such as acetaminophen (Tylenol)</li> </ul> <p>c) You may need surgery only if diverticulitis doesn't get better with other</p>	<p>Lecture</p> <p>Discussion</p> <p>Handouts</p>

treatment, or if you have problems such as long-lasting (chronic) pain, a bowel obstruction, a fistula, or a pocket of infection (abscess).

- 6) How can you prevent diverticulitis?
  - a) You may be able to prevent diverticulitis if you drink plenty of water, get regular exercise, and eat a high fiber diet.
    - i) A high fiber diet includes whole grains, fresh fruits, and vegetables.
- 7) When to call a doctor
  - a) Call if the person has been bleeding from the anus and has signs of shock, which could indicate that a diverticular pouch is bleeding.
  - b) Call if you have pain in the abdomen that is in one spot (as opposed to general pain in the abdomen), especially if you also have:
    - i) Fever or chills
    - ii) Nausea and vomiting
    - iii) Unusual changes in your bowel movements or abdominal swelling
    - iv) Blood in your stool
    - v) Pain that is worse when you move
    - vi) Burning pain when you urinate
    - vii) Abnormal vaginal discharge
  - c) Call your doctor immediately if you have:
    - i) Severe pain in the abdomen that is getting worse
    - ii) Pain in the abdomen that becomes worse when you move or cough
    - iii) A stool that is mostly blood (more than a few streaks of blood on the stool). Blood in the stool may appear as reddish or maroon-colored liquid or clots or may produce a black stool that looks like tar.
    - iv) Shoulder pain (possibly from air in the abdomen due to a hole or perforation in the intestine).
    - v) Pass gas or stool from your urethra while urinating. This likely means that you have an opening (fistula) between the bowel and the urinary tract.

## Week 13: Diverticulitis and Diverticulosis Handout

**Diverticulitis** is inflammation or infection of the large intestine. The most common symptom of diverticulitis is abdominal pain. The most common sign is tenderness around the left side of the lower abdomen. If



infection is the cause, fever, nausea, vomiting, chills, cramping, and constipation may occur as well. The severity of symptoms depends on the extent of the infection and complications. The colon, also called the large intestine, has small pouches that bulge outward through weak spots, like an inner tube that pokes through weak places in a tire. Each pouch is called a diverticulum. The condition of having diverticula is called **diverticulosis**. About 10% of Americans over the age of 40 have diverticulosis. The condition becomes more common as people age. About 1/2 of all people over the age of 60 have diverticulosis.

**Diverticulitis occurs when these pouches become infected or inflamed.** This occurs in 10-25% of people with diverticulosis. Diverticulosis and diverticulitis are also called **diverticular disease**. Most people with diverticulosis do not have any symptoms. However, symptoms may include mild cramps, bloating, and constipation. Other diseases such as irritable bowel syndrome (IBS)

and stomach ulcers cause similar problems, so these symptoms do not always mean a person has diverticulosis. You should visit your doctor if you have these troubling symptoms.

### Complications of Diverticulitis

Diverticulitis can lead to bleeding, infections, perforations or tears, or blockages. These complications always require treatment to prevent them from progressing and causing serious illness.

### Bleeding

Bleeding from diverticula is a rare complication. When diverticula bleed, blood may appear in the toilet or in your stool. Bleeding can be severe, but it may stop by itself and not require treatment. Doctors believe bleeding diverticula are caused by a small blood vessel in a diverticulum that weakens and finally bursts. **If you have bleeding from the rectum, you should see your doctor. If the bleeding does not stop, surgery may be necessary.**

### Abscess, perforation, and peritonitis

The infection causing diverticulitis often clears up after a few days of treatment with antibiotics. If the condition gets worse, an abscess may form in the colon. An abscess is an infected area with pus that may cause swelling and destroy tissue. Sometimes the infected diverticula may develop small holes, called perforations. These perforations allow pus to leak out of the colon into the abdominal area. If the abscess is small and remains in the colon, it may clear up after treatment with antibiotics. If the abscess does not clear up with antibiotics, the doctor may need to drain it. To drain the abscess, the doctor uses a needle and a small tube called a catheter. The doctor inserts the needle through the skin and drains the fluid through the catheter. This procedure is called percutaneous catheter drainage. Sometimes surgery is needed to clean the abscess and, if necessary, remove part of the colon. A large abscess can become a serious problem if the infection leaks out and contaminates areas outside the colon. Infection that spreads into the abdominal cavity is called peritonitis. Peritonitis requires immediate surgery to clean the abdominal cavity and remove the damaged part of the colon. Without surgery, peritonitis can be fatal.

## Causes of Diverticular Disease

Although not proven, the dominant theory is that a low-fiber diet is the main cause of diverticular disease. The disease was first noticed in the U.S. in the early 1900s. At about the same time, processed foods were introduced into the American diet. Many processed foods contain refined, low-fiber flour. Unlike whole-wheat flour, refined flour has no wheat bran. Diverticular disease is common in developed or industrialized countries—particularly the United States, England, and Australia—where low-fiber diets are common. The disease is rare in countries of Asia and Africa, where people eat high-fiber vegetable diets.

Fiber is the part of fruits, vegetables, and grains that the body cannot digest. Some fiber dissolves easily in water (soluble fiber). It takes on a soft, jelly-like texture in the intestines. Some fiber passes almost unchanged through the intestines (insoluble fiber). Both kinds of fiber help make stools soft and easy to pass. Fiber also prevents constipation. [Constipation](#) makes the muscles strain to move stool that is too hard. It is the main cause of increased pressure in the colon. This excess pressure might cause the weak spots in the colon to bulge out and become diverticula.

Diverticulitis occurs when diverticula become infected or inflamed. Doctors are not certain what causes the infection. It may begin when stool or bacteria are caught in the diverticula. An attack of diverticulitis can develop suddenly and without warning.

## Treatment of Diverticular Disease

A high-fiber diet and, occasionally, mild pain medications will help relieve symptoms in most cases. Sometimes an attack of diverticulitis is serious enough to require a hospital stay and possibly surgery.

## Diet for Diverticulosis

Increasing the amount of fiber in the diet may reduce symptoms of diverticulosis and prevent complications such as diverticulitis. Fiber keeps stool soft and lowers pressure inside the colon so that bowel contents can move through easily. The American Dietetic Association recommends 20 to 35 grams of fiber each day. The table below shows the amount of fiber in some foods that you can easily add to your diet.

### Amount of fiber in some foods\*

#### **Fruits**

*Apple*, raw, with skin, 1 medium = 3.3 grams  
*Peach*, raw, 1 medium = 1.5 grams  
*Pear*, raw, 1 medium = 5.1 grams  
*Tangerine*, raw, 1 medium = 1.9 grams

#### **Vegetables**

*Asparagus*, fresh, cooked, 4 spears = 1.2 grams  
*Broccoli*, fresh, cooked, 1/2 cup = 2.6 grams  
*Brussels sprouts*, fresh, cooked, 1/2 cup = 2 grams  
*Cabbage*, fresh, cooked, 1/2 cup = 1.5 grams  
*Carrot*, fresh, cooked, 1/2 cup = 2.3 grams  
*Cauliflower*, fresh, cooked, 1/2 cup = 1.7 grams  
*Romaine lettuce*, 1 cup = 1.2 grams  
*Spinach*, fresh, cooked, 1/2 cup = 2.2 grams  
*Summer squash*, cooked, 1 cup = 2.5 grams  
*Tomato*, raw 1 = 1 gram  
*Winter squash*, cooked, 1 cup = 5.7 grams

#### **Starchy vegetables**

*Baked beans*, canned, plain, 1/2 cup = 6.3 grams  
*Kidney beans*, fresh, cooked, 1/2 cup = 5.7 grams  
*Lima beans*, fresh, cooked, 1/2 cup = 6.6 grams  
*Potato*, fresh, cooked, 1 = 2.3 grams

#### **Grains**

*Bread*, whole-wheat, 1 slice = 1.9 grams  
*Brown rice*, cooked, 1 cup = 3.5 grams  
*Cereal*, bran flake, 3/4 cup = 5.3 grams  
*Oatmeal*, plain, cooked, 3/4 cup = 3 grams  
*White rice*, cooked, 1 cup = 0.6 grams

Week 14: Muscle Cramps

Content Outline	Suggested teaching Strategies
<ol style="list-style-type: none"> <li>1) A muscle cramp is a sudden and involuntary contraction of one or more of your muscles.               <ol style="list-style-type: none"> <li>a) Long periods of exercise or physical labor, particularly in hot weather, may lead to muscle cramps.</li> <li>b) Some medications and certain medical conditions also may cause muscle cramps.</li> </ol> </li> <li>2) Signs and symptoms of muscle cramps include:               <ol style="list-style-type: none"> <li>a) Sudden and sharp muscle pain (spasm, contraction), often in your legs.</li> <li>b) A hard lump of muscle tissue that you can feel or is visible beneath your skin.</li> </ol> </li> <li>3) What are some causes of muscle cramps?               <ol style="list-style-type: none"> <li>a) Overuse of a muscle, dehydration, muscle strain or simply holding a position for a prolonged period of time may result in a muscle cramp.</li> <li>b) Athletes who become fatigued and dehydrated while participating in warm-weather sports frequently develop muscle cramps.</li> <li>c) Another common type of muscle cramp is nocturnal cramps which occur in your calf muscles or toes during sleep.</li> <li>d) In many cases the exact of the cramp is unknown.</li> </ol> </li> <li>4) Although most muscle cramps are harmless, some may be related to an underlying medical condition such as:               <ol style="list-style-type: none"> <li>a) Inadequate blood supply. Narrowing of the arteries that deliver blood to your legs (arteriosclerosis of the extremities) can produce cramp-like pain in your legs and feet while you're exercising. These cramps usually go away soon after you stop exercising.</li> <li>b) Nerve compression. Compression of nerves in your spine (lumbar stenosis) also can produce cramp-like pain in your legs. The pain usually worsens the longer you walk. Walking in a slightly flexed position – such as you would employ when pushing a shopping cart ahead of you – may improve you symptoms.</li> <li>c) Mineral depletion. Too little potassium, calcium or magnesium in your diet can contribute to leg cramps. Some diuretic medications prescribed for high blood pressure cause loss of potassium.</li> <li>d) Muscle cramps are also part of certain conditions such as nerve, kidney, thyroid or hormone disorders; diabetes; hypoglycemia; and anemia.</li> </ol> </li> <li>5) When to see a doctor               <ol style="list-style-type: none"> <li>a) Muscle cramps usually disappear on their own and are rarely serious enough to require medical care. However, see your doctor if your cramps:</li> </ol> </li> </ol>	<p>Lecture</p> <p>Discussion</p> <p>Handouts</p>



<ul style="list-style-type: none"><li>i) Cause severe discomfort</li><li>ii) Happen frequently</li><li>iii) Don't improve with self-care</li><li>iv) Aren't associated with an obvious cause, such as strenuous exercise.</li></ul> <p>b) Preparing for your appointment with the DR.</p> <ul style="list-style-type: none"><li>i) Make an appointment with your doctor if you have muscle cramps that are severe, frequent and not getting better with self-care.</li><li>ii) When you see your Dr. bring a list of your key medical information, including any allergies or medical conditions, and the names of all the medications, vitamins and supplements you're taking.</li><li>iii) Your DR. is likely to ask a number of questions to help determine if you should have any tests or see a specialist</li></ul> <p>6) Prevention of cramps</p> <ul style="list-style-type: none"><li>a) Avoid dehydration. Drink plenty of liquids every day. The exact amount depends on what you eat, your sex, your level of activity, the weather, your health, your age and any medications you may be taking.</li><li>b) Fluids help your muscles contract and relax and keep muscle cells hydrated and less irritable. During the activity replenish fluids at regular intervals, and continue drinking water or other fluids after you're finished.</li><li>c) Stretch your muscles. Stretch before and after you use any muscle for an extended period. If you tend to have leg cramps at night, stretch before bedtime. Light exercise, such as riding a stationary bicycle for a few minutes before bedtime, also may help prevent cramps while you're sleeping.</li></ul> <p>7) Treatments and drugs</p> <ul style="list-style-type: none"><li>a) You can usually treat muscle cramps with self-care measures. Your Dr. can show you stretching exercises that can help you reduce your chances of getting muscle cramps. Making sure you stay well hydrated also can help.<ul style="list-style-type: none"><li>i) Stretch and massage. Stretch the cramped muscle and gently rub it to help it relax.</li><li>ii) For a calf cramp, put your weight on your cramped leg and bend your knee slightly. If you're unable to stand, try pulling the top of your foot on the affected side toward your head while your leg is in a straightened position. This will also help ease a back thigh (hamstring) cramp.</li><li>iii) For a front thigh (quadriceps) cramp, use a chair to steady yourself and try pulling your foot on the affected side up toward your buttock.</li></ul></li><li>b) Apply cold or heat. Use a cold pack to relax tense muscles. Use a warm towel or heating pad later if you have pain or tenderness, or take a hot bath.</li><li>c) For recurrent cramps that disturb your sleep, you Dr. may prescribe a medication to relax your muscles.</li></ul> <p>8) Alternative medicine</p> <ul style="list-style-type: none"><li>a) Taking vitamin B complex supplements may help manage leg cramps.</li></ul>	
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## Week 14: Muscle Cramps Handout

Cramping can be so frustrating, and as you said, uncomfortable. Unfortunately, no one fully understands what causes muscle cramps. Factors that contribute to cramping include dehydration, electrolyte imbalance, overexertion, and/or inadequate fitness/conditioning.

Is it possible that the sort of exercise you're doing is a cause? Think about your exercise routine and examine your patterns.

**Are you doing specific exercises that stretch the muscles in the buttocks? When so, how often and for how long do you participate in these exercises?** Could you change your regimens to see if it's the type or amount of exercise that can be causing your muscle distress? You might also try adding stretching routines before and after you exercise.

It is interesting that your nighttime calf cramps disappeared when you introduced a sports drink as a post workout strategy.

That could lend a possible explanation – perhaps you're dehydrated and/or have an electrolyte imbalance, specifically of sodium, potassium, and calcium.

A low sodium eating plan, coupled with high perspiration losses or with persistent vomiting/diarrhea, can deplete your body of sodium.

Potassium deficiency isn't likely to be the result of sweat loss; however, the result of both a sodium and potassium deficiency can be muscle cramping.

Some sports nutritionists will also cite a lack of calcium as a contributor to cramping.

Another approach might be to experiment with your consuming plan – perhaps increase your salt (pretzels, olives, nuts, salami), potassium (bananas, oatmeal, potatoes), and calcium (milk, yogurt, fortified orange juice) intake to see when you notice any changes.

Also attempt to stay hydrated. Drink plenty of water, especially in the hours leading up to a workout.

An easy way to check hydration is to notice the color of your urine. Clear, light urine reveals a more hydrated body than dark, orange urine. .

If these suggestions don't work, your condition gets worse, or it is severe enough to interfere with your daily life, it is probably time to consult your health care provider.

### **\*\*Homeopathic Leg Cramps Remedy:**

Drink a glass of tonic water before bed to relieve leg cramps.

*How it works: The water contains a natural form of quinine, which prevents cramps.*

Week 15: Kitchen Cupboard Cures

Content Outline	Suggested teaching Strategies
<p>1) Athlete's Foot</p> <ul style="list-style-type: none"> <li>a) Rub a clove of garlic on the affected area before going to bed.               <ul style="list-style-type: none"> <li>i) How it works: Garlic is a strong antifungal that will kill tinea fungus.</li> </ul> </li> </ul> <p>2) Burns, Cuts, and Grazes:</p> <ul style="list-style-type: none"> <li>a) Apply Manuka honey to burns, cuts, and grazers to prevent infection.               <ul style="list-style-type: none"> <li>i) How it works: Manuka honey contains substances that have a powerful antibacterial effect.</li> </ul> </li> </ul> <p>3) Stuffy Noses</p> <ul style="list-style-type: none"> <li>a) Spicy dishes or food containing curry or chili can relieve stuffy noses.               <ul style="list-style-type: none"> <li>i) How it works: The spice or curry will cause your nose to run, loosening the mucous and expelling viruses.</li> </ul> </li> </ul> <p>4) Coughs and Colds</p> <ul style="list-style-type: none"> <li>a) Dice an onion, place in a bowl and cover with honey. Leave for an hour to marinade, and then take as often as needed.               <ul style="list-style-type: none"> <li>i) How it works: The onion juice mixed with honey has a mild homeopathic effect and will sooth sore throats and loosen mucus.</li> </ul> </li> </ul> <p>5) Migraines and Pounding Headaches</p> <ul style="list-style-type: none"> <li>a) Put your feet in a bowl of hot water, and place an ice pack on your head.               <ul style="list-style-type: none"> <li>i) How it works: Pressure on sensitive nerves is relieved as the cold constricts blood vessels in your head while the heat draws blood down to the dilated vessels in your feet.</li> </ul> </li> <li>b) Brew one teaspoon of rosemary in a cup of water and cover. Let it steep for ten minutes, then strain and sip. Drink one cup three times a day.               <ul style="list-style-type: none"> <li>i) How it works: Rosemary dilates the blood vessels throughout the body, easing the pressure on vessels in the head which is responsible for the pain of headaches.</li> </ul> </li> </ul> <p>6) Mouth Ulcers</p> <ul style="list-style-type: none"> <li>a) Swish a spoon full of cold chamomile tea around in your mouth every few hours.               <ul style="list-style-type: none"> <li>i) How it works: Chamomile tea contains antibacterial and anti-inflammatory compounds that help mouth ulcers to heal.</li> </ul> </li> </ul> <p>7) Leg Cramps</p> <ul style="list-style-type: none"> <li>a) Drink a glass of tonic water before bed to relieve leg cramps.               <ul style="list-style-type: none"> <li>i) How it works: The water contains a natural form of quinine, which prevents cramps.</li> </ul> </li> </ul> <p>8) Nausea</p> <ul style="list-style-type: none"> <li>a) Take a small amount of powdered ginger before air, car or sea travel. Alternately, take a jar of candied ginger on your trip.               <ul style="list-style-type: none"> <li>i) How it works: Compounds in ginger contain anti-sickness properties</li> </ul> </li> </ul> <p>9) Urinary Tract Infections</p> <ul style="list-style-type: none"> <li>a) Drink a large glass of water mixed with a teaspoon of sodium bicarbonate three times a day at the first sign of infection.</li> </ul>	<p>Lecture</p> <p>Discussion</p> <p>Handouts</p>

- i) How it works: Bicarb will change the pH of acidic urine, discouraging infection and relieving the pain of cystitis.

10) Insect Bites and Stings

- a) Rub a slice of fresh-cut onion onto wasp stings to reduce swelling and speed healing.
  - i) How it works: Onion contains enzymes which reduce inflammation.
- b) Rub a drop of peppermint oil onto the center of a bite or sting for fast relief.
  - i) How it works: The peppermint will cool the bite and increase circulation to the area to quicken the healing.

11) Low Energy

- a) Increase the magnesium in your diet by eating almonds, hazelnuts, cashews and whole grains.
  - i) How it works: Nuts and grains are high in magnesium which plays a vital role in converting sugar to energy.

12) Plantar Warts

- a) Before going to bed each night, tape the fleshy side of a small piece of banana skin against the wart. Continue until the wart discolours and peels away easily – within one to eight weeks.
  - i) How it works: Enzymes within the banana skin kill the wart virus and separate the dead skin from the sole of the foot.

13) Heartburn

- a) Add turmeric to your meal of mix  $\frac{1}{4}$  to  $\frac{1}{2}$  teaspoon in water or juice and drink.
  - i) How it works: Turmeric aids digestion and prevents acid build-up by stimulating the movement of food along the digestive tract.

14) Toothache

- a) Dab the aching tooth and gum with oil of cloves or ground cloves. Alternatively, place a clove stem within the tooth cavity.
  - i) How it works: Clove contains a volatile oil called eugenol that has strong antibacterial and analgesic properties that deaden pain.
- b) Boil one part sesame seeds with three parts water until the liquid is reduced by half. Cool, and then apply directly to the aching tooth.
  - i) How it works: Sesame seed contain at least seven different pain-relieving compounds that relieve toothache.

15) Congested Throat

- a) Mix ground horseradish and honey together in a glass of water, and gargle.
  - i) How it works: Horseradish contains solvents that loosen and break up mucous in the throat and nose.

16) Hay fever

- a) Salt water sprayed or squirted into the nose, one nostril at a time, can reduce hay fever symptoms and relieve swelling. Make your own solution by mixing  $\frac{1}{4}$  teaspoon salt and  $\frac{1}{4}$  teaspoon baking soda with one cup of warm water.
  - i) How it works: the salt shrinks swollen nasal passages by drawing out fluid which then flushes away the viruses, bacteria and pollens causing the symptoms.

## Week 15: Kitchen Cupboard Cures Handout

# More! Kitchen Cupboard Cures



### Insect Bites and Stings

Rub a drop of peppermint oil onto the centre of a bite or sting for fast relief.

*How it works: The peppermint will cool the bite and increase circulation to the area to quicken the healing.*

### Low Energy

Increase the magnesium in your diet by eating almonds, hazelnuts, cashews and whole grains.

*How it works: Nuts and grains are high in magnesium which plays a vital role in converting sugar to energy.*

### Headaches

Brew one teaspoon of rosemary in a cup of water and cover. Let it steep for ten minutes, then strain and sip. Drink one cup three times a day.

*How it works: Rosemary dilates the blood vessels throughout the body, easing the pressure on vessels in the head which is responsible for the pain of headaches.*

### Thrush

A single clove of garlic placed in the vagina for 24 hours will clear most cases of thrush. Repeat if needed.

*How it works: Garlic is a natural antibiotic with strong antifungal properties that kill thrush.*

### Plantar Warts

Before going to bed each night, tape the fleshy side of a small piece of banana skin against the wart. Continue until the wart discolours and peels away easily - within one to eight weeks.

*How it works: Enzymes within the banana skin kill the wart virus and separate the dead skin from the sole of the foot.*

### Heartburn

Add turmeric to your meal or mix 1/4 to 1/2 teaspoon in water or juice and drink.

*How it works: Turmeric aids digestion and prevents acid build-up by stimulating the movement of food along the digestive tract.*

### Toothache (1)

Dab the aching tooth and gum with oil of cloves or ground cloves. Alternatively, place a clove stem within the tooth cavity.

*How it works: Clove contains a volatile oil called eugenol that has strong antibacterial and analgesic properties that deaden pain.*

### Toothache (2)

Boil one part sesame seeds with three parts water until the liquid is reduced by half. Cool, and then apply directly to the aching tooth.

*How it works: Sesame seed contain at least seven different pain-relieving compounds that relieve toothache.*

### Congested Throat

Mix ground horseradish and honey together in a glass of water, and gargle.

*How it works: Horseradish contains solvents that loosen and break up mucous in the throat and nose.*

### Hayfever

Salt water sprayed or squirted into the nose, one nostril at a time, can reduce hayfever symptoms and relieve swelling. Make your own solution by mixing 1/4 teaspoon salt and 1/4 teaspoon baking soda with one cup of warm water.

*How it works: the salt shrinks swollen nasal passages by drawing out fluid which then flushes away the viruses, bacteria and pollens causing the symptoms.*

If symptoms persist, please see your health care provider.



Week 16: Frozen Shoulder

Content Outline	Suggested teaching Strategies
<p>1) Frozen shoulder, causes pain and stiffness in the shoulder. Over time, the shoulder becomes very hard to move.</p> <ul style="list-style-type: none"> <li>a) Frozen shoulder occurs in about 2% of the general population.</li> <li>b) It most commonly affects people between the ages of 40 and 60, and occurs in women more often than men.</li> </ul> <p>2) Anatomy</p> <ul style="list-style-type: none"> <li>a) Your shoulder is a ball-and-socket joint made up of three bones: your upper arm bone (humerus), your shoulder blade (scapula), and your collarbone (clavicle).</li> <li>b) To help your shoulder move more easily, synovial fluid lubricates the shoulder capsule and the joint.</li> </ul> <p>3) Description</p> <ul style="list-style-type: none"> <li>a) In frozen shoulder, the shoulder capsule thickens and becomes tight. Stiff bands of tissue – called adhesions – develop. In many cases, there is less synovial fluid in the joint.</li> <li>b) The hallmark sign of this condition is begin unable to move your shoulder – either on your own or with the help of someone else.</li> <li>c) Frozen shoulder develops in three stages: <ul style="list-style-type: none"> <li>i) Freezing – In the freezing stage, you slowly have more and more pain. As the pain worsens, your shoulder loses range of motion. Freezing typically lasts from 6 weeks to 9 months.</li> <li>ii) Frozen – Painful symptoms may actually improve during this stage, but the stiffness remains. During the 4 to 6 months of the frozen stage, daily activities may be very difficult.</li> <li>iii) Thawing – Shoulder motion slowly improves during the thawing stage. Complete return to normal or close to normal strength and motion typically takes from 6 months to 2 years.</li> </ul> </li> </ul> <p>4) Cause</p> <ul style="list-style-type: none"> <li>a) The causes of frozen shoulder are not fully understood. There is no clear connection to arm dominance or occupation. A few factors may put you more at risk for developing frozen shoulder including: <ul style="list-style-type: none"> <li>i) Diabetes. Frozen shoulder occurs much more often in people with diabetes, affecting 10% to 20% of these individuals. The reason for this is not known.</li> <li>ii) Other diseases. Some additional medical problems associated with frozen shoulder include hypothyroidism, hyperthyroidism, Parkinson’s disease, and cardiac disease.</li> <li>iii) Immobilization. Frozen shoulder can develop after a shoulder has been immobilized for a period of time due to surgery, a fracture, or</li> </ul> </li> </ul>	<p>Lecture</p> <p>Discussion</p> <p>Handouts</p>

other injury. Having patients move their shoulders soon after injury or surgery is one measure prescribed to prevent frozen shoulder.

5) Symptoms

- a) Pain from frozen shoulder is usually dull or aching. It is typically worse early in the course of the disease and when you move your arm. The pain is usually located over the outer shoulder area and sometimes the upper arm.

6) Doctor Examination

a) Physical examination

- i) After discussing your symptoms and medical history, your DR. will examine your shoulder by moving your shoulder carefully in all directions to see if movement is limited and if pain occurs with the motion.
- ii) The range of motion when someone else moves your shoulder is called passive range of motion. Your DR. will compare this to the range of motion you display on your own (active range of motion)
- iii) People with frozen shoulder have limited range of motion both actively and passively.

b) Imaging tests

- i) Other tests that may help your DR. rule out other causes of stiffness and pain include:
  - (1) X-rays. Dense structures, such as bone, show up clearly on x-rays. X-rays may show other problems in your shoulder, such as arthritis.
  - (2) Magnetic resonance imaging (MRI) or ultrasound. These studies can create better images of problems with soft tissues, such as a torn rotator cuff.

7) Treatment

- a) Frozen shoulder generally gets better over time, although it may take up to 3 years. The focus of treatment is to control pain and restore motion and strength through physical therapy.

b) Nonsurgical treatment

- i) More than 90% of patients improve with relatively simple treatments to control pain and restore motion.
- ii) Non-steroidal anti-inflammatory medicines. Drugs like aspirin and ibuprofen reduce pain and swelling.
- iii) Steroid injections. Cortisone is a powerful anti-inflammatory medicine that is injected directly into your shoulder joint.
- iv) Physical therapy. Specific exercises will help restore motion. These may be under the supervision of a physical therapists or via a home program. Therapy includes stretching or range of motion exercises for the shoulder. Sometimes heat is used to help loosen the shoulder up before the stretching exercises.
- v) Surgical treatment. If your symptoms are not relieved by therapy and anti-inflammatory medicines, you and your DR. may discuss surgery.

## Week 16: Frozen Shoulder Handout

### Treatment

Frozen shoulder generally gets better over time, although it may take up to 3 years.

The focus of treatment is to control pain and restore motion and strength through physical therapy.

### Nonsurgical Treatment

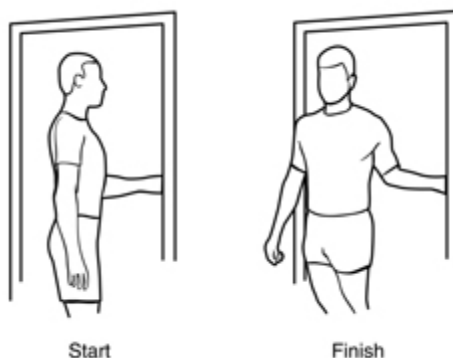
More than 90% of patients improve with relatively simple treatments to control pain and restore motion.

**Non-steroidal anti-inflammatory medicines.** Drugs like aspirin and ibuprofen reduce pain and swelling.

**Steroid injections.** Cortisone is a powerful anti-inflammatory medicine that is injected directly into your shoulder joint.

**Physical therapy.** Specific exercises will help restore motion. These may be under the supervision of a physical therapist or via a home program. Therapy includes stretching or range of motion exercises for the shoulder. Sometimes heat is used to help loosen the shoulder up before the stretching exercises. Below are examples of some of the exercises that might be recommended.

- **External rotation — passive stretch.** Stand in a doorway and bend your affected arm 90 degrees to reach the doorjamb. Keep your hand in place and rotate your body as shown in the illustration. Hold for 30 seconds. Relax and repeat.



External Rotation - Passive Stretch



- **Forward flexion — supine position.** Lie on your back with your legs straight. Use your unaffected arm to lift your affected arm overhead until you feel a gentle stretch. Hold for 15 seconds and slowly lower to start position. Relax and repeat.



Forward Flexion - Supine Position

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- **Crossover arm stretch.** Gently pull one arm across your chest just below your chin as far as possible without causing pain. Hold for 30 seconds. Relax and repeat.



Crossover Arm Stretch

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