Module 6, Lesson 1 Handout:

Pro-Inflammatory and Anti-Inflammatory Foods

Prolonged, chronic inflammation is a trademark sign of autoimmune disease. Clients who are struggling with autoimmune symptoms can greatly benefit from ditching foods that might be exacerbating inflammation and focusing on foods shown to fight inflammation. Let's go through which specific foods and nutrients have proven anti-inflammatory effects and should be added into the diet, and which foods might be triggering inflammation and should be avoided as much as possible.

Anti-inflammatory Nutrients: Foods to Focus On

Anthocyanins are a type of polyphenol in the flavonoid family. They're found in the blue and purple colored foods. Research has found anthocyanins can protect against inflammation, reduce gut permeability and improve colon health. Studies have found because of these factors, these compounds are especially beneficial in managing autoimmune diseases. Anthocyanins are found in foods including:

- Berries
- Red apples
- Red grapes
- Black plums

Cinnamaldehyde is the active compound found in cinnamon. Research has shown this compound to be effective in reducing gastric inflammation by blocking a nuclear factor called NF-k B, which is involved in the production of proinflammatory cytokines.

Curcumin is the active component of turmeric and its anti-inflammatory properties have been widely studied. Lab research has found curcumin can prevent elevation of proinflammatory compounds such as NF-k B and interleukin-1β and that curcumin may be useful as a complementary therapy in several chronic diseases.

Omega-3 fatty acids have been proven to have anti-inflammatory benefits in countless research studies including lab work and human trials. One review that specifically looked at the role of omega-3 fatty acids in the treatment of autoimmune diseases found these fats to be beneficial in managing symptoms in arthritis, Crohn's disease, ulcerative colitis, psoriasis, lupus, multiple sclerosis and migraine headaches. Omega-3's are found in foods including:

- Anchovies
- Bluefish
- Chia seeds

- Cod liver
- Flaxseeds and flaxseed oil
- Herring
- North Atlantic or Chub Mackerel
- Salmon
- Sardines in sardine oil
- Trout (freshwater)
- Tuna
- Walnuts

Organosulfur compounds are sulfur containing compounds found in onions and garlic. Research shows these compounds have an antiinflammatory effect by inhibiting enzymes involved in inflammation such as cyclooxygenase and nitric oxide synthase.

Phenolic compounds in honey have proven anti-inflammatory effects. Studies have found honey is able to counteract chronic inflammatory processes and that it may have a beneficial effect in fighting inflammation associated with different cancers and diabetes.

Polyphenols is a broad term for antioxidant compounds found in plants. It's well known that eating diets high in plant foods and rich in plant polyphenols can help protect against developing chronic disease. These compounds reduce inflammation through several different pathways. In general, any plant food is going to contain polyphenols, including:

- Fruits and vegetables
- Legumes (kidney beans, black beans, lentils)
- Nuts (almonds, walnuts, brazil nuts)
- Seeds (flax, chia, sunflower)
- Dark chocolate (no added sugar; >70% cocoa)
- Red wine
- Tea

Vitamin C has well established antioxidant properties and one of its main functions is to protect cells from damage by free radicals and reactive oxygen species. Higher intake of vitamin C has been linked to lower levels of CRP, a marker of inflammation. Great sources of vitamin C include:

- Broccoli
- Citrus fruits
- Red peppers
- Strawberries
- Tomatoes

Inflammatory Foods (Foods to Avoid or Be Cautious of):

These are the foods that are linked with inflammation and can exacerbate symptoms in autoimmune diseases. To cut to the chase, most of these foods fall under the packaged processed category, which as we know are linked to so many negative health consequences.

High Sodium Foods

- Canned soups
- Deli meats
- Packaged breads
- Packaged snack foods
- Potato chips
- Processed foods

High Sugar Foods

- Candy
- Cookies
- Fruit juices
- Pastries
- Processed foods
- Sugar sweetened beverages
- Sugar sweetened foods
- White bread
- White rice

Trans Fat Foods*

- Commercially baked goods
- Fast food
- Fried foods
- Partially hydrogenated oils (as ingredient)
- Margarine
- Packaged snack foods
- Vegetable shortening

**Artificial trans fats are not recognized as safe by the FDA and were banned from the food supply in 2018 so you won't see them on labels. Some trans fat occurs naturally in meat and dairy products and in some oils due to processing. Also, companies can petition the FDA for specific uses of certain partially hydrogenated oils (trans fats), so they are not completely gone. Look for partially hydrogenated oils on labels.*

Inflammation is a major cause of chronic illness and food can play a powerful role in either fighting or adding to inflammation in the body. It's imperative that clients consume healthful foods that contain specific powerful nutrients to help prevent chronic inflammation and reduce risk of disease. In general, eating a mostly unpackaged diet and focusing on fresh, plant based foods will offer the greatest protection with anti-inflammatory compounds. On the flip side, eating a diet laden with packaged processed foods will only make inflammation worse. Help clients make simple swaps to get rid of the packaged and bring in the fresh. That said, there is a place for some packaged foods in a Nutritious Life and not all packaged foods are created equally, so help clients learn how to read ingredients lists and nutrition panels so they're choosing the best options possible when they're shopping in the middle of the store.