



Choose Joyful Health

Move well. Feel good. Do what matters.

What to Eat, Short and Sweet

Step Four: Reduce Inflammation

You're already reading the labels, and you are eating real food, including 2.5 cups of vegetables most days. You stopped drinking calories. You cut out the crap and stopped the sugar! You are making huge progress. Here's the next step:

- Eat wild-caught cold water fish like salmon, tuna, herring, mackerel, and sardines, 2-3 times per week. These fish are rich in Omega-3 fatty acids, specifically EPA and DHA, that are good for your heart, brain, joints, and mood.
- Eat bright and dark-skinned plants and eat the skins! Examples include eggplant, tomato, bell peppers, dark grapes, all berries. Eat herbs and spices such as ginger, turmeric, cinnamon, basil. Drink black and green tea. All these foods have polyphenols which are highly-beneficial plant compounds proven to reduce inflammation.
- Replace Omega 6 and inflammatory oils with organic butter, ghee, coconut oil, and extra-virgin olive oil.

Here's what you need to know about inflammation:

Inflammation is a natural state for our bodies, for the short-term

You can recognize inflammation through PRISH

- Pain
- Redness
- Immobility (Loss of Function)
- Swelling
- Heat

Those things are normal when we have an injury, a cold, or a short-term problem that requires white blood cells and an alarm state for the body. Systemic Inflammation is the kind that sticks around too long, chronically affecting the systems of the body.



Choose Joyful Health

Move well. Feel good. Do what matters.

It is also found in the loss of proper function of our glands, tissues, organs and organ systems. It's the root of allergies and all problems that end in -ITIS.

- Arthritis
- Bronchitis
- Colitis
- Gastritis
- Sinusitis
- Pancreatitis
- Tendonitis
- Bursitis

Inflammation is also present in chronic diseases like:

- Cancer
- Autoimmune disorders
- Alzheimer's
- Pulmonary disease
- Neurological disease
- Diabetes

Inflammation is typically measured with blood tests of C–Reactive Protein and white blood cells. If you are concerned, ask for these tests from your medical doctor.

Here's what you need to know about Omega Fatty Acids:

Our modern-day diet is very high in Omega 6 fatty acids and low in Omega 3. This imbalance leads to inflammation which leads to disease. Eliminate these Omega 6 oils to improve your bottom line ratio.

- Safflower
- Grapeseed
- Poppy Seed
- Sunflower
- Corn (GMO)
- Cottonseed (GMO)
- Soybean (GMO)
- Walnut
- Sesame
- Vegetable oil

Visit www.choosejoyfulhealth.com for more healthy lifestyle tips & tools.

© Joan Craig 2016



Choose Joyful Health

Move well. Feel good. Do what matters.

That doesn't mean it's bad to eat walnuts, sesame seeds, or sunflower seeds. In fact, those are great foods to eat! Even though they have Omega 6 in them, they also have protein, fiber and nutrients. When heat-processed into oil, the fatty acid composition changes and becomes oxidized (damaged).

More about oils...

Saturated Fatty Acids (SFA) are generally stable at higher temps and can be used for cooking up to 350-400 range: coconut, butter, ghee, tallow, lard. Choose organic animal products.

Polyunsaturated (PUFA) oils should not be used at any high temps because of oxidation damage. This includes many of the Omega 6 oils already described.

Monounsaturated (MUFA) oils (olive, sesame, peanut) can handle moderate temperatures in the 200 degree range without damage.

Many oils are combinations of MUFAs and PUFAs. Even canola oil, which is widely recommended for its high-heat stability, has 35% PUFA.

For optimum nutrition, the only oils I feel comfortable eating/recommending are:

- Organic, cold pressed unrefined olive oil in a glass jar (only light heating)
- Animal fats from sustainably, organically raised animals (ok for cooking), such as organic butter and organic ghee (clarified butter).
- Organic cold pressed coconut oil (ok for cooking)
- Organic cold pressed flaxseed oil for no heat because of its desirable Omega 3 content.

In almost every other case, I would just eat the food instead of the oil (avocados, walnuts, sesames, hemp, peanuts, hearts of palm).

Sesame is a mix of MUFA and PUFA, but the PUFA is Omega 6.

Avocado is MUFA, but why bother using the oil when avocados taste so good? Just put the avocado in the recipe.

Palm oil seems OK as it's mainly SFA and MUFA, but it is typically harvested in ways that damage the rain forest.

Palm kernel oil is SFA, but it can only be extracted with chemicals. Bad news.



Choose Joyful Health

Move well. Feel good. Do what matters.

Expeller-pressed oils have likely been exposed to high heat through the pressing process, and also treated with chemicals after pressing. It's better to get cold-pressed. If it doesn't say "cold-pressed" on the label, it was likely chemically-processed.

Canola is the name for hybridized rapeseed with low erucic acid. "On paper" canola has a good nutritional profile and can withstand high heat - it's mostly MUFA with 35% PUFA. Unfortunately, that 35% is Omega 6 (inflammatory). And 90% of canola in the US is genetically modified.

The Good News:

- To improve your health and the ratio of Omega 3 to Omega 6, eat wild-caught or sustainably-farmed cold water fish like salmon, tuna, herring, mackerel, and sardines, 2-3 x per week.
- All fruits and vegetables are good for you! Choose the bright and colorful rainbow. Choose organic when possible, and eat the skins.
- Almost all herbs and spices have medicinal properties, and some are proven to reduce inflammation. These include ginger, turmeric (found in curry), cayenne, cinnamon, and basil.
- Black and green teas reduce inflammation. Look for water-decaffeinated brands to avoid excess caffeine. Drink with lemon for even more nutritive value.
- Keep reading labels and minimizing packaged foods. Use your ChooseJoyfulHealth Shopping Guide which lists inflammatory oils.

Strategies for Success – Restaurants

Step Four is the level when you really start asking a lot of questions! Once I understood the harmful effects of oils that are Omega 6, heat/chemically-extracted, or damaged by the heat in food processing, I was no longer tempted by certain foods. Now I view those foods as toxic and dangerous for my health, so I am just not willing to eat them.

Most restaurants cook with processed vegetable oils because they've been told it's healthier by outdated health information, and because those oils are cheap. They don't have organic butter because it's more expensive than butter from factory cows.

If you eat out more than two times a week, you need to be very picky. Ask for your food steamed and topped with olive oil after cooking. Ask what oil is used in the salad dressing and the sauces, and what oil is used to cook your food. If they don't know, or if it's not olive oil, skip it. Ask for olive oil, vinegar, salt and pepper and dress it yourself.

Visit www.choosejoyfulhealth.com for more healthy lifestyle tips & tools.

© Joan Craig 2016



Choose Joyful Health

Move well. Feel good. Do what matters.

MEAL PLANNING - Prepare quickly or make ahead on the weekend. The more you prep, the more variety you can have during the week. That's up to you, how much you like to cook, and your tolerance for eating the same foods.

This week we focus on reducing inflammation by eating lots of bright and dark-skinned fruits and vegetables, herbs and spices, polyphenol-rich teas, and fish rich in Omega 3 fatty acids.

Weekend Prep

- Grocery Shopping with list
- Wash all fruit and place on counter/table.
- Prep veg snacks – Wash/chop carrots, celery, sugar snap peas, bell peppers and any veggies. Bag in zip-lock bags. For longer storage, store end-up in a short glass of water.
- Wash and prep salad and cooking vegetables in bite-size pieces.
- Make bags with $\frac{1}{4}$ cup of assorted raw or dry-roasted nuts.
- Make salad dressing in blender: 1 cup olive oil + $\frac{1}{2}$ cup apple cider vinegar + 1 tbsp Dijon mustard + 1 garlic clove + salt and pepper. Store in fridge and take some of it to work.
- Boil eggs for easy breakfasts, snacks or salad toppings.
- Each night after work, prep your lunch bag and put nuts and fruit in your workbag.

Breakfasts/Snacks

Raspberry Gazpacho – Drink it from your travel coffee mug on the way to work. In blender: $\frac{1}{2}$ cup water, 4 tomatoes, 1.5 cups raspberries, 1 cup sweet red pepper, $\frac{1}{2}$ peeled cucumber, 1.5 tsp. thyme, 2 chopped scallions, 2 tbsp. red wine vinegar, $\frac{1}{4}$ tsp salt and pepper, 2 tbsp. olive oil. Chill for 2 hours. (From *Runner's World Magazine*)

Green Tea Smoothie – Replace or minimize need for coffee and black tea by replacing with green tea. The night before, brew 1.5-2 cups of green tea for no longer than 3 minutes. Use hot water that is not boiling, as too-hot water will give green tea a bitter taste. Chill the tea. In the morning, blend with grapes, 2 cups baby spinach, and $\frac{1}{2}$ avocado. Add more fruit for more sweetness.

Overnight Chocolate Chia Seed Pudding – Whisk in bowl to make 4 servings: 1.5 cups unsweetened almond milk, $\frac{1}{3}$ cup chia seeds, $\frac{1}{4}$ cup unsweetened cocoa powder, 2 tbsp. honey or maple syrup, $\frac{1}{2}$ tsp. cinnamon, $\frac{1}{4}$ tsp salt, $\frac{1}{2}$ tsp vanilla extract. (from *Minimalistbaker.com*). Chill in fridge overnight and serve topped with fruit or nuts.

Visit www.choosejoyfulhealth.com for more healthy lifestyle tips & tools.

© Joan Craig 2016



Choose Joyful Health

Move well. Feel good. Do what matters.

Lunches & Dinners

Wild Salmon Burger with Sesame Miso Spread:

Makes 2 patties. Mix in bowl – 1 can wild-caught salmon, 1 beaten egg, $\frac{1}{4}$ cup flax and/or chia seeds, 1.5 tsp. Dijon mustard, 2 chopped scallions/green onions, salt, black pepper and dill to taste. Form into patties. Warm organic ghee or butter on the skillet and cook each burger 3-5 minutes per side or until browned.

For spread, whisk in bowl 3 tbsp. tahini (sesame seed paste) with $\frac{1}{4}$ cup unseasoned rice vinegar and 2 tbsp. miso paste. This will make enough spread that you use it to dip vegetables or add to other sauces/toppings during the week.

Vitality Boosting Yellow Lentil Soup

Bring all ingredients to a boil, then reduce heat and cook until beans are soft: 1 cup split yellow mung beans (also called yellow dal), 3-3.5 cups water, $\frac{1}{2}$ tsp each turmeric, coriander, ginger, cumin, salt. Serve with spinach (folded in at the last minute before serving) and lemon juice (Adapted from *Essential Ayurveda*) – *serve soup with steamed beets*

Steamed Rainbow Beets with Avocado Yogurt Dressing

Scrub and chop 3-4 beets. Steam for 25-30 minutes or until soft. Remove from heat and rinse with cold water and let cool.

Mix in blender: 1 cup water, 1 cup kefir or yogurt (yogurt will make dressing much thicker), 1 avocado, $\frac{1}{2}$ green bell pepper, $\frac{1}{2}$ cucumber, 2 scallions, 1 garlic clove, $\frac{1}{2}$ jalapeno or to taste, juice of $\frac{1}{2}$ lime, $\frac{1}{2}$ tsp salt, 2 tbsp. olive oil. This will also make enough dressing for you to use on other veggies or fish for a couple of days before avocado browns. You can also use this to mix with a can of tuna fish.



Choose Joyful Health

Move well. Feel good. Do what matters.

Sources and Resources – More reading to scare and inspire you

The Gene Smart Diet by Floyd (Ski) Chilton, PhD outlines diet and lifestyle to reduce inflammation.

Personal Nutrition, 6th ed, Boyle & Anderson, Thomas/Wadsworth, 2007

National Oceanic and Atmospheric Administration Website
http://www.nmfs.noaa.gov/aquaculture/faqs/faq_feeds.html

Typical Fatty–Acid Compositions of Some Common Fats (adapted from Gunstone, F. *Fatty Acid and Lipid Chemistry*; Blackie: London, 1996, and other sources)
<http://web.pdx.edu/~wamserc/C336S12/fat.pdf>

Nine Herbs and Spices that Fight Inflammation

[http://www.foodmatters.com/article/9-herbs-and-spices-that-fight-inflammation?vero_conv=dnT8jR-](http://www.foodmatters.com/article/9-herbs-and-spices-that-fight-inflammation?vero_conv=dnT8jR-If8l1wxgHF44mlIExnPyuQgyyXcHvROiVAqOpha_cWnMOeoJGrfrSL7bi7Aos9GWk7yszfMH_aHT0mlp22rhGuQWo&vero_id=joan%40joyfulhealthcompany.com)

[If8l1wxgHF44mlIExnPyuQgyyXcHvROiVAqOpha_cWnMOeoJGrfrSL7bi7Aos9GWk7yszfMH_aHT0mlp22rhGuQWo&vero_id=joan%40joyfulhealthcompany.com](http://www.foodmatters.com/article/9-herbs-and-spices-that-fight-inflammation?vero_conv=dnT8jR-If8l1wxgHF44mlIExnPyuQgyyXcHvROiVAqOpha_cWnMOeoJGrfrSL7bi7Aos9GWk7yszfMH_aHT0mlp22rhGuQWo&vero_id=joan%40joyfulhealthcompany.com)

Attya M, Benabdelkamel H, Perri E, et al. Effects of conventional heating on the stability of major olive oil phenolic compounds by tandem mass spectrometry and isotope dilution assay. *Molecules*. 2010 Dec 1;15(12):8734-46.

- Cicerale S, Conlan XA, Barnett NW, et al. Influence of heat on biological activity and concentration of oleocanthal--a natural anti-inflammatory agent in virgin olive oil. *J Agric Food Chem* 2009;57:1326-30.
<http://www.ncbi.nlm.nih.gov/pubmed/19166297>

Nutr Res. 2015 Oct;35(10):930-8. doi: 10.1016/j.nutres.2015.05.022. Epub 2015 Jun 3.
<http://www.ncbi.nlm.nih.gov/pubmed/26094213>

Monitoring of Quality and Stability Characteristics and Fatty Acid Compositions of Refined Olive and Seed Oils during Repeated Pan- and Deep-Frying Using GC, FT-NIRS, and Chemometrics
Akram Zribi[†], Hazem Jabeur[†], Felix Aladedunye[§], Ahmed Rebai[#], Bertrand Matthäus[§], and Mohamed Bouaziz^{*†‡}

Laboratoire d'Électrochimie et Environnement, École Nationale d'Ingénieurs de Sfax, Université de Sfax, B.P. 1173, 3038 Sfax, Tunisia

<http://pubs.acs.org/doi/abs/10.1021/jf503146f>

Visit www.choosejoyfulhealth.com for more healthy lifestyle tips & tools.

© Joan Craig 2016



Choose Joyful Health

Move well. Feel good. Do what matters.

Department for Safety and Quality of Cereals, Working Group for Lipid Research, Max Rubner-Institut (MRI), , Schützenberg 12, D-32756 Detmold, Germany

Laboratoire de Microorganismes et Biomolécules, Équipe des Procédés de Criblage Moléculaires et Cellulaires, Centre de Biotechnologie de Sfax, B.P. 1177, 3018, Sfax, Tunisia

† Institut Supérieur de Biotechnologie de Sfax, Université de Sfax, B.P. 1175, 3038, Sfax, Tunisia
J. Agric. Food Chem., 2014, 62 (42), pp 10357–10367

DOI: 10.1021/jf503146f

Publication Date (Web): September 29, 2014

Copyright © 2014 American Chemical Society

Quality control of refined oils mixed with palm oil during repeated deep-frying using FT-NIRS, GC, HPLC, and multivariate analysis

1. Akram Zribi¹,
2. Hazem Jabeur¹,
3. Bertrand Matthäus² and
4. Mohamed Bouaziz^{1,3,*}

Version of Record online: 7 JUL 2015

DOI: 10.1002/ejlt.201500149

<http://onlinelibrary.wiley.com/doi/10.1002/ejlt.201500149/abstract;jsessionid=36EBE671C4C7F674245E9C3A3FB232FC.f04t01>