**Week 8 (March 1 to March 7) 2022**: **Evidence-based suggestions on what and when to eat, along with sleep and exercise**

Where we’ve been:

1)Many of the claims involving food – GMOs (now called ‘Genetic Engineered’) foods, BPA, phthalates, organic being superior to conventional – is not based by solid evidence. Ignore these issues. All food sold in the US, whether purchased in farmer’s markets, supermarkets or restaurants, are safe, despite the claims on the internet to the contrary. Remember that the internet, particularly social media, lives on controversy. If non-evidenced based claims did not exist, internet writers would need to invent them.

If a crucial part of your identity is to ‘eat cleanly’ (also known as orthorexia), then purchase your ‘non-GMO, gluten-free, organic foods’. It is your money and your body. Science tells us that these frankly are wastes of money.

2) We need to feed both our bodies and our gut microbiome. Complex, ‘non-digestible’ carbohydrates – fiber and ‘resistant starch’ are crucial. We need to consume fiber and resistant starch EVERY DAY (unless we are fasting – more on this later).

3) All types macronutrients – carbohydrates, fats and proteins, are needed. We need to consume a serving (= 3 ounces) of fatty fish (salmon, herring, sardines, etc.) at least once per week for the omega-3 fatty acid DHA. We can obtain the omega-3 fatty acid ALA from nuts and flax seed meal, but our bodies do not convert ALA to EPA very efficiently (< 2% of ALA gets converted to EPA and then the EPA must be converted to DHA). We need to either consume the fatty fish or obtain the ALA from supplements (fish oil, krill oil; algae oil apparently is no longer available).

4) Eating appears to cause inflammation – an adverse immune response. We’ve seen which foods are strongly associated with inflammation – processed meats, fats (other than the omega-3’s), starchy foods such as white breads, white potatoes and added sugars. We’ve seen that fruits, vegetables and pulses (beans and lentils) are negatively associated (‘anti-inflammatory’) with inflammation. Non-processed red meat is slightly inflammatory, poultry (chicken) is non-inflammatory.

We are finding that many chronic diseases (heart, stroke, possibly some cancers, possibly dementias) may be caused or aggravated by inflammation.

5) Diets – as defined as ‘temporary eating patterns’ – as in ‘I will eat this way until I lose 10 pounds’ or ‘I will eat only meat and dairy during January’ – are ineffective. This DOES NOT mean that permanent weight loss is impossible. It does mean that ‘dieting’ and then returning to an unhealthy diet will not be effective.

While this is a sample size of 1 (= anecdotal evidence), permanent weight loss is possible, HOWEVER, doing so requires that you permanently change how you eat, along with other lifetime habits. Your instructor was able to lose 45 pounds (225 to 180 pounds, 20% of body weight) by permanently changing his diet and other lifestyle factors.

**How to permanently lose weight (if overweight or obese):**

1)Minimize consuming added sugar – ‘sugar’, ‘sucrose’, ‘corn syrup’, ‘high fructose corn syrup’, ‘maple syrup’, ‘cane extract’, etc. – these are effectively the same things. All are various combinations of glucose and fructose; both are inflammatory. Note that, despite the claims of people who fall victim to the Naturalistic fallacy, artificial/noncaloric/non-nutritional sweeteners are NOT inflammatory (or have any other documented adverse health effects). If you need a sweetener, use a noncaloric one. If the ‘manmade’ stuff makes you uncomfortable, then use stevia leave extracts.

ADDED sugar is bad.

This is not to imply that fruits (fresh, dried, frozen or canned) are bad. Fruit juices are not as healthy as are whole fruits, as the whole fruits come with the fiber and other nutrients that are no longer present in the juices.

American diets are high in added sugar as sugars/sweeteners make foods taste better. McDonald’s hamburger buns are notoriously sweet – which makes improves the hamburgers’ taste.

The ’10 day no added sweeteners challenge’: Try to go 10 days without consuming any foods or drinks that have added sweeteners, both caloric and noncaloric. The objective of this exercise is to learn how this 10 day ‘wash out’ period changes how your sense of sweetness responds when you consume foods with natural sugars (fruits, starchy vegetables) or added sweeteners. You may be surprised at what you find.

So, if you want to lose weight or reduce inflammation, the first step is to cut out the added sugars. Yes, this is difficult to do.

2) Avoid starchy foods – white potatoes (sweet potatoes are healthier), white flour (cakes, cookies, white bread, pizza crust) and white rice. Whole grain products are better than are white flour products because fiber replaces some of the digestible carbs.

3) Fried foods are inflammatory and the oil in the food fattening. These also need to be minimized.

Thus, the standard American lunch – a hamburger with French fries and a sugary soft drink. – The healthiest part of this meal is the hamburger meat and any vegetables (pickles, onions, tomatoes, lettuce) that may be on the hamburger. The rest of the meal is ‘empty calories’ that come from inflammatory substances.

**How to live healthy (according to the best scientific evidence)**

1)If possible, restrict the times that you eat. Interment fasting – eating only during a 12 hour or less window every day – the longer the ‘non-eating’ (fasting) period, the better. If you can avoid eating during a 12 (or 16 or 18) hour period each day, your body will spend more time in ‘glucagon’ – also known as ‘burn fat’ mode. Another interment fasting strategy is the ‘3-1-2-1’ method – eat 3 days, fast one day, eat 2 days, fast one day. Fasting, whether for one or two days per week, or during a 12 to 18 hour period each day helps burn fat and reduce inflammation.

2) What to eat when you eat: mostly plant-based foods. Oats and fresh (or dried or frozen) fruits. Coffee and tea (possibly with added milk but no added sugar). Salads (green leaf or red leaf lettuce, carrots + what ever else that you want to add). Ideally, the oil in the salad dressing will be olive oil. Take it easy on the salad dressing. Add some fresh or dried fruit. A large salad for the first dinner course will reduce the amounts of the other foods consumed.

Minimize ‘highly processed’ foods. While we love foods such as Pop Tarts, potato chips, cookies, these are ‘nutrient dense’ foods – each bite contains more calories than do less processed foods. Unless you are hiking 100’s of miles, these nutrient dense foods are not your friend.

Red meat can be part of a healthy diet, but there is no reason to eat red meat more than a few times per week. Substitute chicken or turkey or better, non-meat proteins, such as mushrooms or beans.

**Healthy fast food:** Most of us don’t have the luxury of being able to prepare and eat all of our meals at home. Fast food is a reality for people who work outside of their residence. Healthy (and cheap) fast food: bean burritos, tacos, refried beans. Lunch from Taco Bell can be more healthy than McDonalds if you pay attention to calorie counts. Grilled chicken with green beans is a healthier KFC meal.

**Sleep and exercise** are crucial. Make a conscious effort to obtain 8 (at leat 7) hours of sleep per night. Routinely sleeping for less than 7.5 hours of sleep is strongly associated with inflammation. Sleep quality is also important – we are finding that the brain clears out ‘waste products’ during deep sleep. Chronic lack of deep sleep may be a cause for developing dementia.

Exercise is important. The objective is 30 continuous minutes of exercise – vigorous enough to significantly raise pulse – every day. A one mile walk, particularly in a nature setting such as a park, 3 or 4 days per week is important for health.

So, eat a healthy diet, get an adequate amount of sleep and walk a mile each day (or some other exercise) whenever possible.

**Assignment:** The online magazine *US News and World Report* publishes a yearly ranking of the healthiest diets. The latest rankings (and these have been ranked #’s 1, 2 and 3 for several multiple years) are the Mediterranean, the DASH and the MIND diets. Research each of these and summarize then. Is there any significant differences between these diets?

Note that while there are foods that we should eat routinely, the concept of ‘superfoods’ is more marketing than science. There is no need to be eating blueberries or kale just because people hype these.

Note that these are intended to be permanent, not temporary. Note that transitioning to a healthy eating pattern does not mean that foods that are not part of the diet will never be eaten. While there are no ‘bad foods’, there are foods that we should eat rarely. It is eating these too often that produces problems.

While we should be strategic about what we do- and don’t- routinely eat, we should not obsess over what we eat. Learn how to eat healthily as described by the diets in our assignment, let this become your routine and save your brain processing for more important issues.