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**1. Diet Philosophy:** Our diet philosophy is simple – your diet should maximize your health, energy, functionality and longevity as well as help you maintain an ideal weight. It should also minimize the onset of degenerative disease, cancer and aging.

**2. Primary Diet Principles:** We only have 4

1. Consume food that maintains as low a blood sugar and insulin level as possible to minimize glycation.
2. Eat frequently but in small amounts
3. Drink water throughout the day and avoid other drinks
4. Consume organic if possible.

**3. What is Glycation and Why Should I Care?**

Glycation is the attachment of glucose (sugar) to our protein molecules.

Keeping blood glucose and insulin levels as low as possible helps to increase our productive life span because it decreases the rate of glycation.

99% of our cellular functions are carried out by proteins which are critical to the normal life processes within the cell

Proteins are very efficient molecules – slippery long chain polypeptide molecules which are constantly mingling within the “soup” of the cell – the cytoplasm. They move around one another, bump into one another and still get their jobs done primarily because they are slippery. When glucose attaches to protein they become sticky and therefore less efficient at carrying out their biological function which then predisposes us to degenerative disease.

All of us are glycation 24/7. It is a natural process but it is detrimental to life so we want to glycate as little as possible. The higher the blood sugar, the more we are going to glycate. The more sugar that proteins are exposed to, the more they attach to it. So as glycation occurs, the protein molecules become sticky and work much less efficiently which leads to cellular dysfunction, tissue inflammation and starts the process of degenerative disease i.e. atherosclerosis (hardening of the arteries), heart disease, strokes, diabetes, inflammatory diseases and poor health. Our longevity is dependant on prevention of degenerative disease. People don't die of old age, they die of degenerative disease. A 99 year old woman that dies in her sleep did not die of old age. She died of degenerative disease and probably ruptured an aneurysm during the night, or had a heart attack, cardiac arrhythmia, something related to years of accumulation of degeneration partly based on excess glycation and oxidative stress. Since glycation leads to oxidative stress we age faster when we have high blood sugar levels

Another issue is that high sugar levels leads to high insulin levels. As blood sugar levels rise we have to transport it into the cell which is done by a hormone called insulin. The higher the blood sugar level the more insulin we have to make. As insulin levels rise in the blood stream that also leads to degenerative disease because high insulin levels also causes oxidative stress. Adult onset diabetics are a model for rapid aging because they have both high blood sugar and high insulin levels. Long before non-diabetics get these diseases, they develop high cholesterol, hypertension, atherosclerosis, increased body fat, obesity, peripheral neuropathy, kidney and retinal disease which can lead to blindness.

Summary: Diabetics and non-diabetics alike can extend their productive life span by keeping insulin and sugar levels as low as possible which decreases the rate of glycation. The higher the rate of glycation the more you increase your risk of degenerative diseases, weight gain, hypertension, diabetes etc. Excess glycation is caused by consuming high glycemic carbohydrates, not just sweets. We're talking about all starches like bread, rice, pasta, potatoes, cereal, chips, crackers and similar snack foods as well as all sweets. Some fruit and vegetables are considered high glycemic like bananas, mango, papaya, corn, beets and carrots. There is a 10 – 15 year life span difference between people who exercise and consume a low glycemic diet than those that don't. But that's an average. It could mean a 30 – 50 year difference for someone who dies of a heart attack or stroke in their 30's, 40's or 50's. And we are not talking about increasing your life span to spend more time in a nursing home. We are talking about avoiding degenerative diseases and increasing your *productive years*. For specific diet recommendations, see below

#### **4. Dietary Recommendations:**

1. You must eat three meals (small) and 2 snacks a day.
2. No fruit or other carbohydrates after 6pm. If you must eat after dinner, have it be a lean source of protein (egg, chicken breast, tuna or nuts etc).
3. Do not eat carbohydrates on their own. Always include a protein or fat to slow down the rate of absorption to keep your blood sugar from spiking.
4. Do not eat rice, potatoes, bread, pasta or alcohol.
5. Sip water all day (80–100 oz/day). Drink additional 8–16 oz for every 20 min of exercise.

6. Make sure you have a lean protein and a low glycemic carbohydrate with each meal
7. Best veggies are broccoli, cauliflower, spinach, celery, carrots, lettuce, radish, asparagus, onions, garlic, green beans, zucchini, peppers, sweet potatoes, tomatoes, peppers & cukes
8. The best oils to use are olive oil and canola oil

### **5. Questions and Answers:**

**Question:** If I have to eat like this every day I don't think I want to live. Do I have to be this radical?

**Answer:** No. Try and be as strict as possible throughout the week and then let yourself "cheat" on weekends. It is much better to be "clean" for a number of days and then go off the "perfect" diet for one or two days and then get back on it. That is preferable to eating some sugar or refined carbohydrates every day. So stay "clean" for as long as you can and then allow yourself to relax.

**Question:** What is the most important part of the diet?

**Answer:** As we stated above – avoiding the glycation process. The less glycation the slower the degenerative process and the better we age. So only eat low glycemic carbohydrates and always eat them with protein or fat. That's the most important aspect of a healthy diet.

**Question:** Does exercise play a role in diet?

**Answer:** Exercise makes your diet more effective. Without regular exercise your body can not function at its peak because your cells are less efficient. You must exercise and you must do the right type of exercise.

**Question:** So what is the right type of exercise?

**Answer:** It's not what most people think. You don't have to exercise for hours on end but you have to exercise with a mission. That mission is to challenge your lung capacity multiple times for short bursts. This should take no longer than 20 minutes with no more than 12 minutes of intense exertion per session. Refer to #14 **The Exercise Connection**

### **6. Meal and Snack Options:**

#### **Breakfast:**

- \*2 egg omelet with vegetables cooked with olive oil
- \*Scrambled eggs with onions and sliced tomatoes
- \*Smoked Salmon, sliced tomato, sliced cucumbers
- \*Low-fat PLAIN yogurt: add berries, nuts/flaxseed or chopped apple, nuts/flaxseed, cinnamon
- \*Oatmeal: after cooking add skim milk or unsweetened almond milk, tablespoon (tbsp) ground flaxseeds, tbsp chopped nuts, fruit (either chopped apples, blueberries, blackberries, raspberries, strawberries, peaches, orange, grapefruit or tangerines) & cinnamon

#### **Snack: can not be carbohydrate alone – carbs must be eaten with protein, fat or both**

- \*1-2 tablespoon of nuts (all nuts except peanuts)
- \*fruit with nuts
- \*hummus on celery or other vegetables
- \*almond butter on apple or celery
- \*Hard boiled egg
- \* Protein drink (recipe below)

## **Lunch:**

Lean source of protein (size should be no more than the palm of your hand) (turkey, chicken, fish, eggs, veggie burger, tofu) with vegetables and salad with oil & vinegar

**Snack: can not be carbohydrate alone – carbs must be eaten with protein, fat or both**

\*1-2 tablespoon of nuts (all nuts except peanuts)

\*fruit with nuts

\*hummus on celery or other vegetables

\*almond butter on apple or celery

\*Hard boiled egg

\*Protein drink (recipe below)

## **Dinner:**

Lean source of protein (size should be no more than the palm of your hand) (turkey, chicken, fish, eggs, veggie burger, tofu) with vegetables and salad with oil & vinegar

***\*\*\*Cook twice as many vegetables for dinner so you can have them at lunch the next day\*\*\****

## **7. Food Group Choices:**

### **Fruit**

blackberries, raspberries, cherries, blueberries, strawberries, peaches, plums, apples, pears, orange, grapefruit or tangerines

### **Vegetable**

Broccoli, cauliflower, spinach, celery, lettuce, radish, onions, garlic, asparagus, green beans, zucchini, peppers, sweet potatoes, tomatoes, cucumbers, sprouted beans, kale, collard greens

### **Nuts**

all except for peanuts

### **Other:**

\*Dried Apricots – unsulfured

\*Dried Goji Berries (to mix with the nuts and seeds as a trail mix)

## **8. Sample Recipes:**

### **SNACKS - CREAMY**

1. Plain yogurt 2% plain & organic: add chopped apples, lots of cinnamon, 1 tbsp slivered almonds, 1 tbsp ground flaxseed
2. Low fat whipped cottage cheese: add cinnamon and stevia as a sweetener
3. Plain yogurt 2% plain & organic: add tsp of unsweetened Hershey's Cocoa powder and add stevia as a sweetener. Put it in the freezer for 15 – 20 minutes.
4. Protein Drink: in a blender combine either skim milk, unsweetened soy or unsweetened almond milk or water. Add a scoop of vanilla protein powder (we suggest Jay Robb Whey Protein), 1/2 tsp of ground flaxseeds and 8 – 10 ice cubes. Blend until thick and creamy

## **SNACKS - FRUIT**

1. Apple slices (or any other low glycemic fruit) coated with almond butter
2. Sliced pear and low fat cottage cheese with slivered almonds
3. Dried unsulfured apricots with almonds or almond butter
4. Fruit salad: oranges, apples and strawberries tossed with a little lemon juice and stevia and a tbsp of shredded coconut
5. Dried goji berries with mixed nuts
6. Sliced pear topped with goat cheese

## **SNACKS – Salty & Crunchy**

1. Spiced popped pumpkin seeds: put pumpkin seeds onto a cookie sheet coated with olive oil. Sprinkle with cayenne pepper, cumin, paprika or any spice to your liking. Toss the seeds until lightly coated. Bake at 375 for 8 minutes.
2. Zucchini Chips: On a baking sheet coated with 2 tbsp of olive oil put thinly sliced zucchini. Bake at 400 degrees until crispy and brown. Add sea salt to taste.
3. Dry roasted Edamame with or without wasabi
4. Toasted Almonds: toss unskinned almonds in tamari sauce. Then bake in a toaster oven at 350 degrees until brown

## **SNACKS – Veggie**

1. Celery with almond butter
2. Dip raw or blanched veggies (see below for blanching instructions) in a mix of toasted sesame seeds and ground sea salt
3. Dip raw or blanched veggies in hummus, guacamole or dips made with low fat sour cream
4. Whole radish topped with goat cheese

## **9. BLANCHING INSTRUCTIONS:**

To blanch a vegetable like broccoli, cauliflower or green beans .... drop into boiling water for 1 minute & remove & drain immediately. If you rinse with cold water it will remain crispy.

## **10. OTHER VEGGIE IDEAS:**

### **Roasted Cauliflower:**

**Break a head into florets and toss in a mixing bowl with a tbsp of olive oil and a little sea salt. Place on a baking sheet at 400 degrees for 30 – 40 minutes until crispy brown. Serve immediately.**

### **Roasted Asparagus:**

**Sprinkle with lots of Italian herbs, a little olive oil and a little parmesan cheese and wrap up in a foil packet. Put in a toaster oven for 10 – 12 minutes at 350 degrees.**

### **Grilled Vegetables:**

**Zucchini (sliced length-wise), eggplant (peel & slice ½ inch thick, red/green and yellow peppers (in wide slices), onions (thick slices) and asparagus - brush with olive oil and sprinkle with salt & pepper and Italian herbs. Grill on hot grill long enough to make nice brown stripes on them. You can drizzle some balsamic vinegar on them after cooking.**

**Spinach with Garlic: Sautee sliced garlic in olive oil and add spinach stirring until cooked**

### **Italian Zucchini:**

Sautee sliced garlic in olive oil and add sliced onions and cook until limp. Add one can of diced tomatoes with Italian herbs and slice zucchini. Sautee for a few minutes until zucchini begins to get soft...but not too long so it gets mushy.

**Steam Fresh Green Beans:** until they are bright green (just a couple minutes) and toss with grated orange rind. Sprinkle toasted slivered almonds on top.

### **Chinese Stir Fried Vegetables:**

Slice an assortment of vegetables on an angle. Use twice the quantity as you think because they will reduce in size by 50%. Some cook faster than others. Slice them up in different piles and put them aside while you saute' a couple cloves of chopped garlic in olive oil on your wok (you might like to grate a tablespoon of fresh ginger in the oil). Don't let the garlic get too brown before adding onions, carrots, celery, peppers, zucchini, broccoli and scallions. Stir constantly for a couple minutes. After a minute or two add green beans or asparagus tips. Pour in some organic chicken broth and continue to stirring. Add fresh spinach and keep stirring. When the spinach is reduced I size it should be cooked. Sprinkle some toasted sesame seeds and maybe a little sea salt.

**Quinoa:** this product can be used in place of rice in recipes

In a saucepan saute' diced onion in olive oil for a few minutes. After it is soft and clear, stir in one cup of dry Quinoa – stir for a couple minutes until it is slightly brown. Add 2 cups of low sodium chicken broth. Put a lid on the pot and cook for 15 minutes until all liquid is absorbed (in the last 5 minutes you can choose to add fresh or frozen chopped vegetables).

## **11. Dressing Recommendations:**

### **Mustard Vinaigrette Salad Dressing:**

3 tablespoons water	2 tablespoons Balsamic vinegar
½ packet stevia	5 teaspoons Olive Oil
1 ½ teaspoon ground pepper	

Shake up in a small jar

**Tofu-Carrot Ginger Dressing with Miso:** Similar to the dressing served on iceberg lettuce in Japanese restaurants, this is equally good on salads and as a marinade. Any silken tofu will work in this recipe and provide a smooth consistency. Yields 1 ¼ cups (serving size: 2 tablespoons)

½ cup grated carrot	2 tablespoons yellow miso (soybean paste)
½ cup silken tofu	2 teaspoons chopped peeled fresh ginger
2 tablespoons fresh lemon juice	1 packet stevia
1 tablespoon rice vinegar	¼ teaspoon sea salt
1 tablespoon olive oil	1 garlic clove, crushed

Preparation - Place all ingredients in a blender or food processor; process until smooth.

**Carrot Ginger Dressing:** Ingredients - Servings: Makes about 2 cups.

½ lb carrots (3 medium), coarsely chopped	¼ cup chopped peeled fresh ginger	
¼ cup chopped shallots	¼ cup seasoned rice vinegar	
1 tablespoon soy sauce	1 tablespoon Asian sesame oil	
1/8 teaspoon salt	½ cup vegetable oil	¼ cup water

Preparation - Pulse carrots in a food processor until finely ground (almost puréed). Add chopped ginger, chopped shallots, rice vinegar, soy sauce, sesame oil, and salt and pulse until ginger and shallots are minced. With motor running, add vegetable oil in a slow stream. Transfer mixture to blender. Add ¼ cup water & blend until smooth, 2 to 3 minutes. Thin with water if desired.

## **12. SHOPPING LIST:**

## Produce

**Fruit:** \*apples \*blueberries \*blackberries \*raspberries \*cherries \*grapefruit \*oranges \*pears \*strawberries \*tangerines \*peaches \*plums \*dried apricots \*dried goji berries to mix in with seeds and nuts for a trail mix

**Vegetables:** \*broccoli \*cauliflower \*spinach \*asparagus \*kale \*collard greens \*celery \*carrots \*lettuce \*radish \*onions \*garlic \*green beans \*zucchini \*peppers \*sweet potatoes \*tomatoes \*cucumbers \*sprouts

## Protein

\*Jay Robb Whey Protein – vanilla \*Skim or 1% milk \*Almond Breeze Unsweetened Almond Milk \*Eggs \*Hummus \*Plain 2% yogurt \*Low Fat cottage cheese \*tofu \*fish \*turkey \*chicken \*grass fed beef

## Fats

\*olive oil (try Lucini) \*canola oil (expeller cold pressed) \*unsalted nuts (except peanuts) \*flaxseeds (ground or grind your own in a coffee grinder – keep refrigerated) \*fresh ground almond / cashew butter \*unsweetened wheat germ

## Grains & Legumes

\*Ezekial Sprouted Grain Bread (frozen food section) \*Quinoa (grain that cooks like rice but has more protein) \*beans (edamame, garbanzos, black beans, pinto beans) \*Rolled oats or steel cut oats \*tabouleh

## Miscellaneous:

\*stevia – Use instead of sugar or other sweetener. It comes from a plant, contains no calories and doesn't raise blood sugar. *Truvia* is the best tasting stevia product and you can get it at Pueblo in the sugar section or you can order it online at [www.drugstore.com](http://www.drugstore.com) The site will ask you what country you are from and what currency you use. Put in USD for currency and click "continue as US". Type Truvia in the search box.

\*Egyptian Licorice Tea (yogi teas)

\*unsweetened cocoa powder

## 13. Vitamins / Supplements We Recommend:

\* Vitamin A: Helps prevent night blindness, lowers the risk of macular degeneration, decreases the risk of lung and breast cancer, and maximizes skin health. Take 20,000 i.u. daily.

\* Vitamin E: Fights free radicals, lowers risk of heart disease, and lowers the risk of prostate and colon cancer. Take 200 i.u. daily.

\* Vitamin C: Fights free radicals, maintains body structure, helps your immune system, aids the nervous system, and helps break down histamines. Take 500 mg. daily.

\* Alpha Lipoic Acid (ALA): Lowers the risk of lung disease and neurological disorders. Take 50 mg. daily.

\* CoQ10: Destroys free radicals, and successfully treats heart disease, high blood pressure, and high cholesterol. Helps prevent

arteriosclerosis. I recommend 50 mg. of the more potent form, ubiquinol, daily.

\* Lutein: Protects your vision, and lowers the risk of cancer and heart disease. Take 12,000 mcg. daily.

\* Lycopene: Prevents coronary artery disease, and reduces the risk of prostate and pancreatic cancers. Take 10-20 mg. daily.

## **14. The Exercise Connection:**

All your hard work controlling your diet will have significantly less impact on your health if you don't combine it with the proper exercise. We recommend you buy and read *P.A.C.E.* a book written by Dr. Al Sears. It will give you all the information you'll need to get yourself on an efficient exercise program. Here are the highlights:

1. You need short bursts of intense exercise
2. You need to progressively increase your intensity i.e. do not do the same routine over and over. Your body needs a new challenge in order to adapt and grow.
3. Each time you exercise try and do something new, or a little more or somehow different.
4. The principle of acceleration: as you train your body to respond faster each time you exercise, your physical condition improves faster as well. As you progress you'll reach your target heart rate faster and your breathing will get deeper and more efficient sooner when challenged. The same applies for your recovery from exercise. These two principles of acceleration actually cause you to require LESS exercise time as you get more fit because you become quicker at gearing up and recovering. You will be stimulating, encouraging and training the speed of the response time of your heart, lungs, blood vessels and metabolic machinery. So you train your physiology to have higher levels of fuel, oxygen and energy more immediately available on demand. This also has the priceless benefit of making you feel more energetic.

### **Basic Workout Principles**

The foundation of your program is this: You start off easy, you gradually increase intensity, you reach a level of maximum exertion and you slow down and rest. Those of you that are familiar with *Interval Training* will understand this. The only difference is that the intervals are more intense and shorter.

Choose whatever exercise you would like i.e. walk, run, swim, treadmill, rowing machine, bike, elliptical, it doesn't matter

If you are out of shape and not sure how you will react you might consider walking.

For example let's use a stationary bike: Use a light medium tension, note the time and start pedaling. Monitor your perceived exertion. After a few minutes, turn up the intensity. Pedal for another minute and turn up the resistance again. Keep pedaling. How quickly you turn up the resistance is up to you. But here is the idea: **progressively increase the intensity over time.** If you're out of shape, do it slowly. If you have more experience, you can jump into a more intense level earlier. As you keep pedaling, your level of perceived exertion will increase. You'll start to sweat. Your face will feel flush. Your breathing will get faster and deeper. Keep turning up the intensity until you've reached your limit. How do you know when you've reached your limit. Simply put, you'll run out of steam. You'll start to pant. Your breathing will be uncontrollably heavy. You won't be able to speak clearly. Your breathing will be too deep and demanding. At this point you've created an oxygen debt. Now slow

down and get your breath back. Make note of the time. This is your **exertion time**. It is your baseline or starting point. You also need to note your **heart rate** (pulse). Now note the time it takes you to recover. This is your **recovery time**. This is determined by your “perceived recovery”. It’s not a scientific measurement. It is when you feel rested. When you feel like you’ve “caught your breath”. Now take your pulse again and write it down. That’s your first exercise session.

We suggest you use one form of exercise for 4-6 weeks and then switch to another i.e. treadmill for 4 weeks then bike for 4 weeks then Stairmaster for 4 weeks etc. Ideally do this program 3 – 4 times a week.

There are 3 Basic Workouts below. **Basic Workout 1** features a descending pattern of exertion time as you progress through each set i.e. 4 min on your first exertion period, 3 min on your second etc. As you begin each set you will increase the intensity i.e. your first exertion period is 4 min but the intensity would be lower. Your 4<sup>th</sup> set is 1 minute but your intensity should be high. Give this last set everything you have. For **Basic Program 2**, start with a medium to high intensity from the start. It will be a challenge to make it through 6 sets. **Basic Workout 3** uses the opposite progression as **Workout 1** so start with a very high intensity and decrease through each set.

**Basic PACE Workout 1**

**Warm-up** 2 min  
**Exertion** 4 min  
**Recovery** X min  
**Exertion** 3 min  
**Recovery** X min  
**Exertion** 2 min  
**Recovery** X min  
**Exertion** 1 min  
**Done**  
**Total Exertion Time 10 min**

**Basic PACE Workout 2**

**Warm-up** 2 min  
**Exertion** 2 min  
**Recovery** X min  
**Exertion** 2 min  
**Recovery** X min  
**Exertion** 2 min  
**Recovery** X min  
**Exertion** 2 min  
**Recovery** X min  
**Exertion** 2 min  
**Recovery** X min  
**Exertion** 2 min  
**Done**  
**Total Exertion Time 12 min**

**Basic PACE Workout 3**

**Warm-up** 2 min  
**Exertion** 45 sec  
**Recovery** X min  
**Exertion** 90 sec  
**Recovery** X min  
**Exertion** 2 min  
**Recovery** X min  
**Exertion** 4 min  
**Done**  
**Total Exertion Time 8 min 15 sec**