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THOUGHTS ON PREVENTIVE CARDIOLOGY

"The Great Eight": The Major Risk Factors for Cardiovascular Disease (CVD)

A
Hypertension
Hyperlipidemia
Diabetes
Cigarette Smoking

B
Diet
Weight
Activity Level
Mental Well Being

We are all familiar with the adverse cardiovascular consequences that ensue when the risk factors in column **A** go unchecked. We need to understand that the same consequences are likely to occur when the risk factors noted in column **B** go unchecked as well.

The health of your arteries determines the potential for future adverse cardiovascular events. As Sir William Osler said "You're only as old as your arteries". We have come to understand that the risk factors in column A are a large determinant to the health of one's arteries. What we may not realize is that the health of one's arteries is also very much determined by the risk factors noted in column **B**.

We tend to consider the benefit of "diet and exercise" largely as a "means" to lower cholesterol, blood pressure and blood sugar levels. That should not be the case. "Diet and exercise" should be looked upon as an "end" in and of itself for improving cardiovascular health beyond the effect it has on one's "numbers". That is because prudent lifestyle modifications have a direct beneficial effect on the health of one's arteries and serve to reduce the tendencies for plaque growth (atherosclerosis) and consequent rupture (causing heart attacks). While there is an inherent limit as to how much "diet and exercise" can alter one's blood pressure, lipid and glucose levels, there is no such limit to the improvement in one's cardiovascular health by achieving the proper balance of diet and exercise.

The message I would like to impart so far is that one's lifestyle is probably the most important determinant to your cardiovascular health. Moreover, it is entirely under your control. We all have a "busy lifestyle". No time to exercise. No time to eat healthy. The truth is there is no time not to do so! We can't (at least not as of yet) change our genetics. We can, however, change our lifestyle. Genetic tendencies, to a large degree can be offset by environmental modification. CVD is the #1 killer in the world today for male and female alike. If you want to minimize your chances of becoming part of that statistic you need to find ways to maximize the benefits you derive from your lifestyle.

Not smoking is a given. We need not say more about that. Reducing stress and enhancing one's mental well being is extremely important. Chronic stress can contribute to arterial plaque growth/rupture as importantly as any other member of the above noted "great eight". Pay attention to your mental health. Incorporate mental relaxation techniques and/or biofeedback/yoga into your lifestyle to aid in this regard. Seek proper medical attention as necessary to control depression/anxiety.

With regards to exercise:

The Surgeon General says that we should exercise daily. Realistically this may not be feasible but certainly on days where this cannot be achieved there must be some stairs that could be climbed, some blocks that could be walked by getting off the train, bus or taxi a little further than your destination (or parking your car a little further away) or possibly some activity that could be undertaken to achieve a modicum of exercise. Consider getting a pedometer (step counter) and slowly build up to achieving 10,000 steps per day.

I believe that each workout should consist of three varieties of exercise:

- 1) Cardio (aerobic)
- 2) Resistance (weights)
- 3) Stretching

Cardio:

Exercise for 30-40 minutes of an aerobic activity (i.e. bicycle, elliptical, treadmill) to achieve 75% - 85% of your age predicted maximal heart rate (calculated by 220 minus your age). I do not, in most cases, recommend trying to maintain a higher level of exercise. My goal is to encourage one to look forward to their exercise routine by not making it too intense.

- Vary your activity either in the same session or at different sessions
- There is no "best" type of cardio exercise. Whatever exercise you feel comfortable in performing is the "best" because you will be more likely to continue to partake in it
- Be careful with too much treadmill or jogging. Years of "pounding" will invariably take its toll. Mixing in lower impact aerobic activities will spare you some musculoskeletal related discomforts as you get older

Resistance:

Don't overlook the benefits of resistance training. Muscle burns more calories than fat. Adding resistance training to your workout will help reduce your body fat and maintain a proper body weight level. Rotate exercising different muscle groups during different workout sessions (i.e. upper extremities, core, abs and lower extremities).

Stretching:

- Usually the forgotten component of a workout session
- Proper stretching will help minimize musculoskeletal mishaps
- Avoid stretching without warming up. Suggestion: stretch after cardio and before as well as after resistance training.

Suggestion: (If time is limited, take a few minutes off each exercise component)

Cardio:	30-40 minutes
Resistance:	10-20 minutes
Stretching:	5-10 minutes
Total:	45-70 minutes

In general:

1. I do not believe in the concept of "no pain, no gain". I believe in "no pain is good". Remember, the goal is to adopt routine exercise long term into your lifestyle. Therefore, your workout regimens should not be at a level or intensity that leads to pain either during or subsequent to your workouts.
2. In terms of how important routine exercise is for your health, the well-known cartoon of a doctor's comment to his patient says it best: "What fits your busy schedule better, exercising one hour a day or being dead 24 hours a day!"

With regards to diet:

The focus of your diet should be a variety of fruits, vegetables, whole grains and good sources of proteins and fats.

I do not recommend a "low fat" diet.

I do not recommend a "low carb" diet

I recommend a healthy mix of carbs, fats and protein

"The Mediterranean Diet" best exemplifies a "heart healthy" diet.

Healthy fats:

Monounsaturated/Polyunsaturated fats: For example: Coldwater fish (such as salmon and tuna), soy products (such as tofu, tempeh, soy milk and soybeans), nut (especially walnuts and almonds), seeds (flax and sunflower), olive/canola oils and avocado. Be careful about portion size. These fats may be healthy but like all fats they are calorically "expensive".

Unhealthy fats:

1. **Trans fats:** Found in many processed foods. Check labels closely. Avoid coconut, palm and palm kernel oils (partially hydrogenated vegetable oils).
2. **Saturated fats/Cholesterol:** Meat, skin on turkey/chicken, egg yolks, butter and whole milk dairy products. Be careful with dressings and sauces.

Healthy carbs:

1. Fruits and vegetables
2. Whole grain soluble fiber: Oats, barley, rye and psyllium
3. Whole grain insoluble fiber: Wheat, corn, brown rice, couscous and quinoa

Unhealthy carbs:

All non-whole grain (processed) carbs

Suggestion for a healthy and "hearty" start to your day:

Add 1 cup of unsweetened almond milk to 1/3 cup of a whole multigrain hot cereal. Mix in 1 teaspoon of flaxseed. Add a few strawberries and/or raspberries, stir and cook in microwave. This will start your day with a nutrient rich combination of soluble/insoluble fiber and mono/polyunsaturated fats naturally sweetened by antioxidant-rich berries.

With regards to weight loss:

Two words come to mind: Eat less!

There are no easy permanent fixes. Unless you embrace the concept of "portion control" and cutting your daily intake of calories, achieving one's proper weight will be difficult to obtain/maintain.

Helpful Hints:

1. Minimize intake of high calorie dense foods (such as many desserts, dressings, sauces and processed grains).
2. Include healthy portions of vegetables/salads with lunch and dinner. These foods contain a large amount of water and will, therefore, provide a sense of satiety.
3. Many soups are "calorically inexpensive". Consider them as a choice of an appetizer.
4. While nuts and olive/canola oils are healthy, they are, as was already mentioned, high in calories. To achieve weight loss, eat these healthy fats sparingly.
5. If you leave the table feeling full, you probably ate too much!