

# Tips for Healthy Living and Successful Aging

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# Prevention is Important

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- In terms of healthcare policy and money, every \$1 spent on prevention saves \$50 in treating diseases.
- However, prevention is not reimbursed; therefore, it is not done.
- The following slides show the counseling we do in my cardiology prevention clinic at Beth Israel Deaconess Medical Center in Boston.
- Hopefully, they will help you live a healthier, longer life.

# Physical Activity

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- Exercise prolongs survival (1).
- 3 hours of exercise per week lowers the risk of death from all causes.
- Recommend 30 min of moderate-intensity exercise every day.
- People walking 5,000 steps daily (about 30 min of walking) have a 40% lower risk of developing type 2 diabetes or heart disease.

# Physical activity

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- Preserves cognition
- Boosts response to vaccinations
- Physical activity also lowers risk for
  - Osteoporosis, osteoarthritis, falls and hip fracture
  - cardiovascular disease and diabetes
  - cancer
  - obesity

# Risk Factors for Heart Disease: Know your numbers

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- Cardiovascular disease is the leading cause of death in industrialized countries; we can modify known risk factors to lower our risk for it.
- Blood pressure: ideal 120/80 or less
  - 120-140/80-90 is now considered pre-hypertension

# Risk Factors for Heart Disease: Know your numbers

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- Cholesterol: LDL-C is the bad form of cholesterol – a high level increases risk for heart disease
  - goal < 130 mg/dL if no heart disease
  - < 100 mg/dL with heart disease or diabetes
  - statin is best drug for those with coronary heart disease or diabetes

# Risk Factors for Heart Disease: Know your numbers

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- HDL-C is good cholesterol: higher levels associated with lower risk for heart disease; Goal > 40 mg/dL
  - recent evidence has not supported benefit of using drugs to raise HDL-C (niacin, Tricor, gemfibrozil, Torcetrapib)
  - exercise, weight loss, monounsaturated fats (olive and canola oil, peanut butter) and wine can raise HDL-C

# Heart Healthy Eating

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- Reduce intake of trans (hydrogenated) and saturated fats to lower LDL-C and inflammation and decrease risk of cardiovascular disease.
- Trans fats raise LDL-C and include:
  - fried fish or chicken, french fries, donuts
  - Stick margarine
  - Crackers, cookies and other baked products

# Avoid Saturated Fats

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- Saturated fats raise LDL-C and include:
  - Meat
  - Butter
  - High-fat cheese
  - Milk - whole and 2%
  - Ice cream
  - Coconut oil
  - Palm oil
  - Cream
  - Condensed or sweetened milk

# Heart Healthy Eating: Beneficial Fats

- Polyunsaturated and monounsaturated fats are beneficial.
- Polyunsaturated fatty acids include-
  - Omega 3 fatty acids, which are found in fatty fish and fish oil capsules, lower risk of coronary heart disease death and risk of sudden cardiac death (10-fold difference) (5).
  - Recommendation is two fatty fish meals per week or 1 fish oil capsule daily

# Fatty Fish Rich in Omega-3 Fatty Acids

- Fatty fish include
  - Salmon
  - Mackerel
  - Bluefish
  - Fresh herring
  - Albacore tuna (packed in water)
  - Sardines (packed in water or mustard)

Note about mercury—high levels found in swordfish, shark, tuna steaks, tilefish and king mackerel; biggest risk is for pregnant women

# Heart Healthy Eating: Polyunsaturated Fatty acids

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- Polyunsaturated fatty acids include-
  - Sunflower oil
  - Corn oil
  - Sesame oil
  - Safflower oil
  - Soybean oil
  - Tub or liquid margarine

# Heart Healthy Eating: Monounsaturated Fatty Acids

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- Monounsaturated fatty acids—can raise HDL-C
  - Olive oil
  - Peanut oil
  - Avocados
  - Canola oil - has more monounsaturated fat and less saturated fat than olive oil, therefore, a better choice
  - Peanut butter
  - Nuts

# Heart Healthy Eating: Fiber

- Higher fiber intake has been associated with decreased rates of all-cause mortality and cardiovascular, infectious and respiratory disease mortality (6).
- Eat a diet rich in “whole” foods -- whole grains, fruits, vegetables and low-fat dairy—avoid empty calories (soda, granola bars) processed, packaged foods. Shop the perimeter in a grocery store.

# Heart Healthy Eating: Sodium

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- Restrict sodium to  $< 1500$  mg daily. Lower sodium intakes should prevent or delay development of congestive heart failure, a major cause of morbidity and mortality.

# Supplements: Vitamins

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- Vitamins E and A and folic acid in the form of pills-
  - Randomized trials have shown no benefit in preventing cardiovascular disease and may be harmful at high levels.
  - Sources in food are fine

# Supplements: Vitamin D

- Vitamin D - In addition to preventing fractures, lowers risk for cardiovascular disease and stroke (7).
  - Ongoing randomized trials are examining optimal dosing, but here's what we know:
  - The threshold dose for reducing the risk of falling was 400 IU daily.
  - Maximal effect seen at 770 to 800 IU daily.
  - Optimal daily intake of vitamin D is likely 1,000 units with 200 from diet and 800 from supplements or--
  - 10-20 min sunshine daily without use of sunscreen

# Supplements: Calcium

- **Calcium**

- Calcium in the form of pills may increase the risk of cardiovascular events (8,9).
  - Does calcium deposit in arteries instead of bones?
- Therefore, ingest as much calcium through diet as possible rather than take pills.
- A diet rich in low-fat dairy products may not require calcium supplementation: yogurt, skim milk, low fat cheese, soy milk; sardines also good source.
- In those consuming a low-calcium diet, supplements of 500 to 1,000 mg/day are likely adequate.

# Flavanols

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- Active ingredient in chocolate (dark), wine and tea
  - Lower blood pressure
  - Decrease inflammation -- the mechanism thought responsible for plaque build-up in our arteries

# Gum Disease and Systemic Disease Link

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- Recent studies show an association between gum disease and heart disease (and other chronic diseases), possibly because unhealthy gums cause systemic inflammation.
- Brush at least 2 minutes after each meal and floss daily.
- Dental cleaning at least twice per year

# Menopause: Estrogen Deficiency

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- Our native estrogen is an endogenous vasodilator so loss of estrogen results in higher blood pressure and increased risk of heart disease in women
- Also leads to fractures—high mortality within 1 yr after hip fracture
- Accelerated aging

# Treatment of Menopause: Estrogen Replacement

- Randomized trials have shown that hormone replacement therapy (estrogen plus progestin) increases the risk of heart disease, stroke, dementia and breast cancer
- Current recommendation is to use hormone replacement for refractory symptoms (such as hot flashes) for as short a period of time as possible.
- Soy milk and soy nuts – lower blood pressure; may also help maintain bone density and reduce hot flashes; ? more effective with high fiber intake (research ongoing)

# Treatment of Menopause: Bisphosphonates

- Oral bisphosphonates (Fosamax, Actonel) have been associated with esophageal cancer and pre-cancerous lesions in the distal esophagus.
- Long-term follow-up has shown that bisphosphonates may increase the risk of fracture by causing “brittle bones”.
- IV bisphosphonate - zoledronic acid (once a year) should not increase risk of esophageal cancer but brittle bones may still be a problem

# Treatment of Menopause: What can we do to safely prevent osteoporosis?

In all women (pre- and postmenopausal) – these modalities should be started early in life and maintained throughout life -

- Exercise to maintain bone density
- Dietary calcium with vitamin D (D can be in form of pill)
- Whole soy foods may help maintain bone density

Postmenopausal women

In addition to above,

- Consider nasal calcitonin spray
- If estrogen replacement is recommended for bones, use a 17-beta estradiol product

# Weight

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- Maintain Ideal Body Weight: Body mass index of 25 or less. Being overweight increases blood pressure and risk for diabetes and heart disease.
- All reduced calorie diets result in clinically meaningful weight loss regardless of their carbohydrate, protein or fat content (10).
- Therefore, the best diet is that with which an individual patient can be compliant and includes the opportunity to eat whatever food groups that are preferred while reducing total caloric intake and saturated and trans fats.

# Weight

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- In my prevention clinic, patients following the tips on the next few slides lost an average of 10.8 lb (5%) at a mean follow-up of 1.75 years (11).
- This amount of weight loss has been shown to lower risk for diabetes and lower blood pressure.
- Those who exercised 4 days per week maintained their weight loss better than those who exercised less.

# Tips to decrease portion sizes to lose weight

- Drink one to two full glasses of cold water prior to all meals. Your body burns calories trying to warm up the water.
  - The water has no calories and stretches your stomach and makes you feel full, thus, decreasing the amount of food you eat during your meal.
- When we are full, it takes 15-20 minutes for the fullness signal to go from our stomach to our brain so if we eat too quickly, we could be full but not know it. This is how we gain weight. To prevent this, slow down your eating as follows.

# Tips to slow down eating and decrease portion sizes to lose weight

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- Put fork down between bites and take sips of water to help make yourself feel full.
- Stop meal after consuming half and do something else for 15-20 minutes. You'll probably find that you are full at the end of this time and do not need to finish the meal. Put the bad foods in the second half of the meal.

# Tips to decrease portion sizes to lose weight

- It's important to eat high fiber foods.
- Fruits and vegetables are high in fiber with peas and beans being the highest. Other examples:
  - Oatmeal; oat bran
  - Barley
  - Metamucil
  - High fiber cereals
- When you eat fiber, make sure you drink plenty of water
- Water makes the fiber swell in your stomach and helps make you feel full.

# Tips to decrease portion sizes to lose weight

- If you eliminate 100 calories from your diet each day for 1 year, you'll lose 10 lbs in 1 year.
- A slice of bread is about 100 calories so if you are a sandwich eater, consider an open-faced sandwich with 1 slice of bread instead of 2.
- Alternatively, if you walk 1 mile daily, you'll burn 100 calories and lose 10 lbs in 1 year.

# Tips to decrease portion sizes to lose weight

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- Eat a high fiber, high protein breakfast cereal or oatmeal (oatmeal is very filling).
- If you don't eat breakfast, you'll binge later in the day and overeat.

# Tips to decrease portion sizes to lose weight: psyllium seed

- Fiber powders as psyllium seed (metamucil)
  - 1 tlbsp daily has been shown to lower LDL-C 9%.
  - If you use 1 tsp in water before a meal, the water makes the fiber swell in your stomach and helps make you feel full, decreasing the amount of food you eat during your meal.
  - Generic type of psyllium seed or other fiber is okay—doesn't need to be brand name Metamucil.
  - CVS generic original texture flavor is a good choice

# Potential new advances on the horizon

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- Curcumin: Active ingredient in turmeric (found in curry)
  - may prevent cardiovascular disease and cancer  
Trials ongoing.
- Sirtuins: anti-aging gene in yeast—
  - calorie restriction prolongs survival in mice and rats—  
thought related to Sirtuins
  - decreases diabetes
  - improves memory