# 7 Habits of Happy, Healthy Vegans

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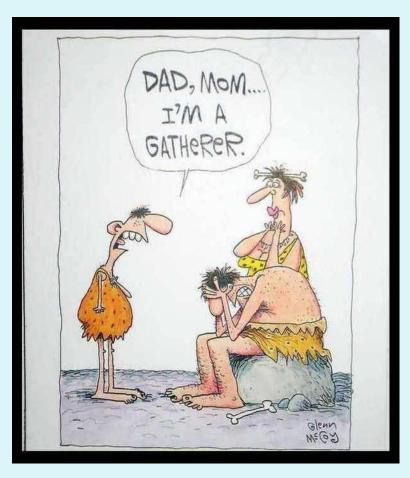








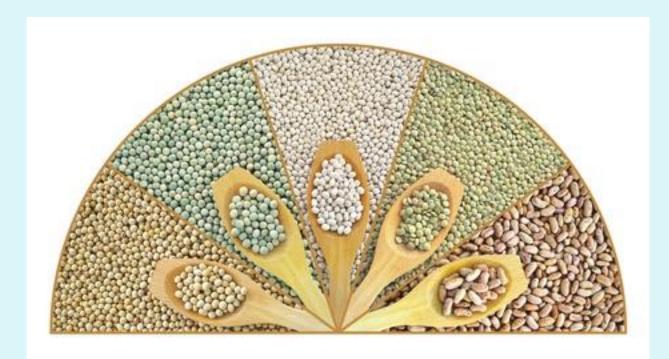
## Vegan Diets: No Cultural or Historical Habits



## 7 Habits of Happy, Healthy Vegans

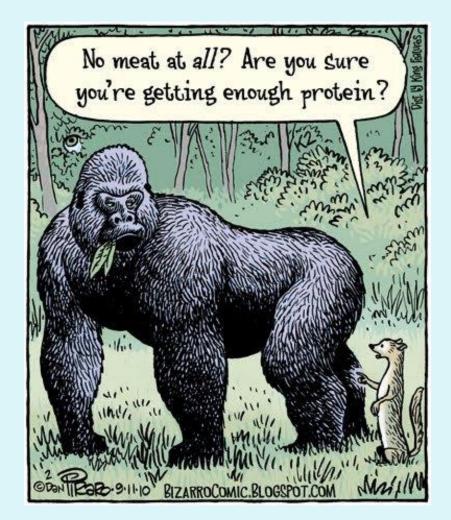
- 1. Eat legumes
- 2. Choose healthy fats
- 3. Identify important supplements
- 4. Eat a rainbow
- 5. Get adequate calcium
- 6. Enjoy vegan foods
- 7. Celebrate veganism

## **1. Eat Legumes**



## Where do you get your protein?

Grains Vegetables Nuts Seeds Legumes



## **Amino Acids**

- Building blocks of protein
- Used to build new proteins in the body
- 9 are "essential" & must come from food
- Grains, legumes, vegetables, nuts, and seeds provide all 9 essential amino acids, but are low in one or more

## Vegan Protein: Importance of Legumes

#### Legumes are the only good plant sources of the essential amino acid lysine





## **3 Daily Servings of Legumes**

- <sup>1</sup>/<sub>2</sub> cup cooked beans, tofu, tempeh
- ¼ cup soy nuts, peanuts
- 2 tbsp peanut butter
- 1 cup soymilk
- 1 oz veggie meat

# Pistachios and Quinoa (honorary legumes)





# **Legume Serving Sizes**

- <sup>1</sup>/<sub>2</sub> cup cooked beans, tofu, tempeh
- ¼ cup soy nuts, peanuts
- 2 tbsp peanut butter
- 1 cup soymilk
- 1 oz veggie meat
- ¼ cup pistachios
- 1 cup quinoa



# **A Serving of Legumes**

- PB& J sandwich
- Scrambled tofu
- > Veggie burger
- > Barbecued tempeh
- > Hummus wrap
- Lentil soup
- > Quinoa pilaf

- Trail mix with pistachios
- Vegetables with peanut sauce
- Salad with soynuts
- > Bean burrito
- Taco with veggie "ground beef"

## **2. Choose Healthy Fats**



Essential Omega-3 Fatty Acid Alpha-linolenic acid (ALA)

- Ground flaxseed (1 tbsp)
- Flaxseed oil (1 tsp)
- Walnuts (4 halves)
- Walnut, hempseed, soy or canola oil (1 tbsp)
- Chia seeds (2 tsp)

## **DHA & EPA: Omega-3 Fats**



## **DHA and EPA**

- Found in fatty fish
- May reduce risk for heart disease, dementia, depression

## DHA & EPA can be synthesized from ALA

### **Conversion is poor**

Vegans typically have low blood and tissue levels



# Fish Get DHA and EPA from Algae...We Can, Too



## Vegan Omega-3 Fats from Algae

## 200-300 mg DHA + EPA 2-3 times per week



## **Healthy Sources of Fats**

- Nuts
- Seeds
- Avocado
- Olives
- Vegetable oils



## **Benefits of High-Fat Plant Foods**

- Nuts and seeds provide zinc
- Nuts reduce risk for heart disease
- Nuts/monounsaturated fats helpful in controlling diabetes
- Replacing carbs with plant fats improves cholesterol profiles

## Vegan Diet with Healthy Fats

#### **Breakfast**

- Miso soup w/ ½ C tofu, 1 C vegetables ½ C brown rice
- 1 C honey dew melon

#### <u>Lunch</u>

Raw vegetable salad Vinaigrette (1 tsp oil) 1 ½ C lentil soup + tomatoes 2 slices whole grain bread Banana

#### <u>Dinner</u>

- 1 C quinoa
- 1 C black beans
- 1 ½ C greens in 2 tsp oil

#### **Snacks:**

- 1 C fruit topped w/ ¼ C walnuts
- Air popped popcorn

Total calories: 1800Saturated fat: <3%</td>0 grams cholesterol

## 3. Take the right supplements

## • Vitamin D

• Vitamin B12

#### Sub-optimal vitamins D and B12



#### Poor concentration

Vague aches

Fatigue

Food sources of vitamin D

✤ Fish

# Fortified foods



# Factors that reduce vitamin D synthesis

- Smog, clouds
- Sunscreen
- Darker skin
- Age
- Weak sunlight (northern latitudes in winter)

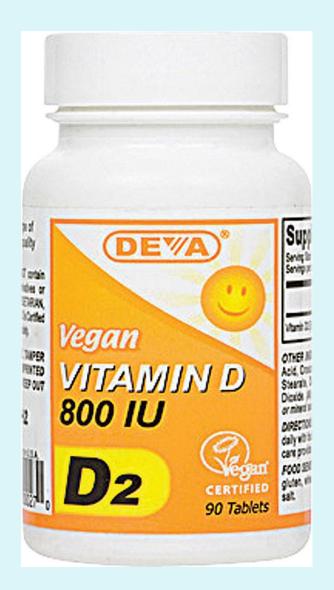


## **Two Forms of Vitamin D**

 D3: Cholecalciferol is animalderived (fish, sheep's wool)

 D2: Ergocalciferol is plantderived (yeast)

## 600 IU per day



# Vitamin B12

#### Made by bacteria

### Does not occur naturally in plants



## Vitamin B12 Analogues

Fermented soyfoods

Similar structure to B12, but no vitamin activity

- Sourdough bread
- Sea vegetables
- Chlorella, spirulina
- Shiitake mushrooms

## Can we get adequate B12 from unwashed organic produce?



## **Endogenous B12 Production**



## Vitamin B12 Storage

In liver and muscle

 Size of B12 stores determined by your pre-vegan diet Recommendations for B12 Supplements (cyanocobalamin)

2 fortified foods per day; at least
1.5 micrograms each or

• 25-100 micrograms daily or

• 1,000 micrograms 2-3x per week

## 4. Eat a Rainbow



#### **Iron Content of Selected Foods**

Food	mg
Milk, 1 C	0.07
Salmon, 3 oz	0.6
Chicken, ½ breast	0.6
Beef, 3 oz	1.3
Soymilk, 1 C	1.6
Black-eyed peas, 1/2 C	2.2
Tofu, 3 oz	3.0
Lentils, ½ C cooked	3.3
Dark chocolate, 1 oz	3.9

### Phytates, Iron and Vitamin C

**Phytates** bind iron in whole grains and legumes

Vitamin C breaks bond between phytate and iron if it's present at the same time as the iron

## Iron and Vitamin C

#### **Iron sources**

- Legumes
- Whole and enriched grains

#### Vitamin C sources

- Citrus fruits
- Strawberries
- Green leafy vegetables
- Peppers
- Cauliflower
- Cabbage
- Tomatoes

# Iron + Vitamin C

- Oatmeal with orange juice
- Brown rice topped with steamed broccoli
- Lentil soup with tomatoes

#### **Fruits and Vegetables for Vitamin A**



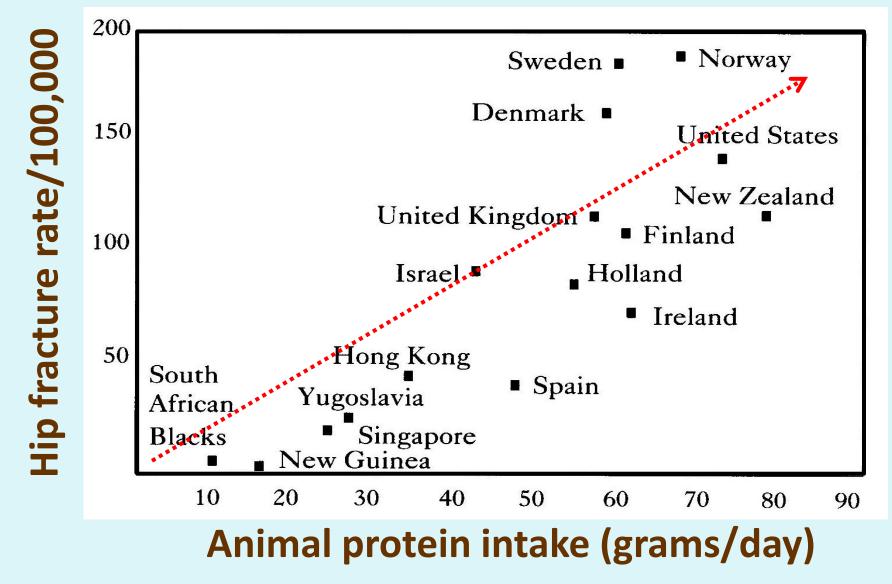
# Fruits and Vegetables for Calcium



## 5. Get Adequate Calcium



#### Hip Fracture Rates & Animal Protein Intake



#### Prevent Osteoporosis: Eliminate Meat and Dairy Foods?

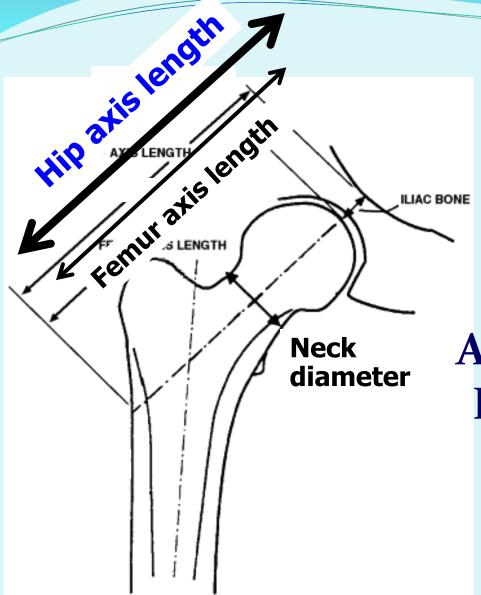






#### **Hip Fracture Data = Ecological Study**

- Studies that pool data from different groups and compare the averages rather than comparing information from individuals
- Don't control for other variables
- Miss important factors that might affect the comparisons



### Genetic Differences

Asians have a shorter HAL which protects against fractures

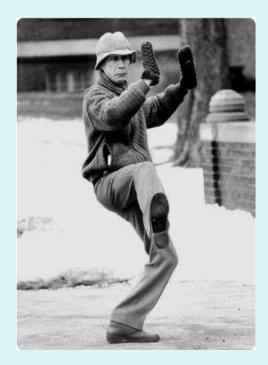
# Cultural Differences

#### Strength



# Cultural Differences

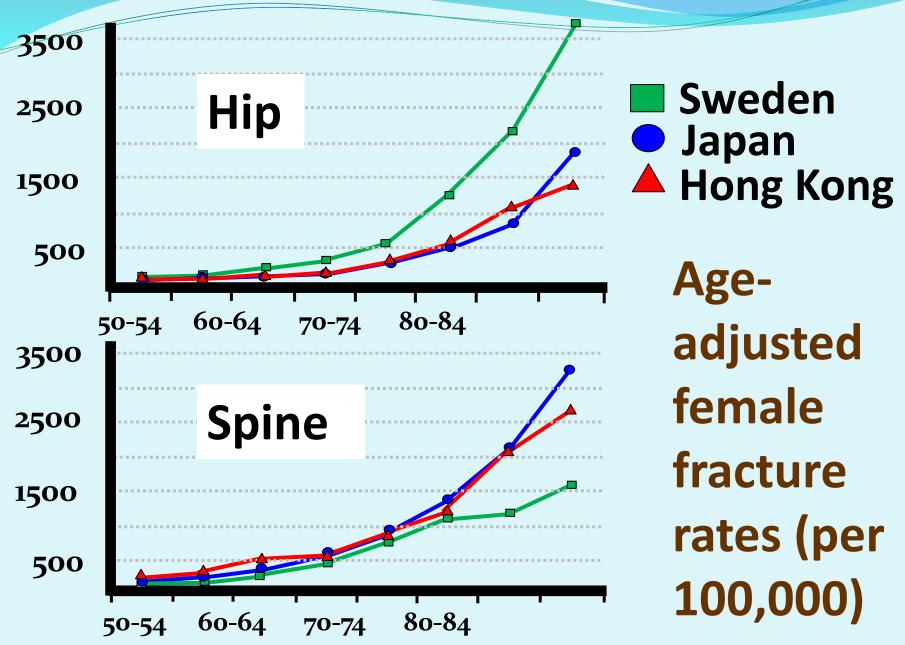
#### Better balance





# Even where hip fracture rates are low, osteoporosis is common





**Osteoporosis Int 23: 879, 2012** 

# **EPIC-Oxford 2007 Findings**

Vegans were 37% more likely to fracture a bone than meat-eaters or lactoovo vegetarians



# Calcium Intake in the EPIC-Oxford

<b>Dietary pattern</b>	Intake (mg/d)	
Omnivores	1,057	
Pesco-vegetarian	1,081	
Lacto-ovo	1,087	
Vegan	610	

## Protein protects bone health

Improves calcium absorption

Contributes to bone structure

• Promotes muscle strength

# **Adventist Health Study**



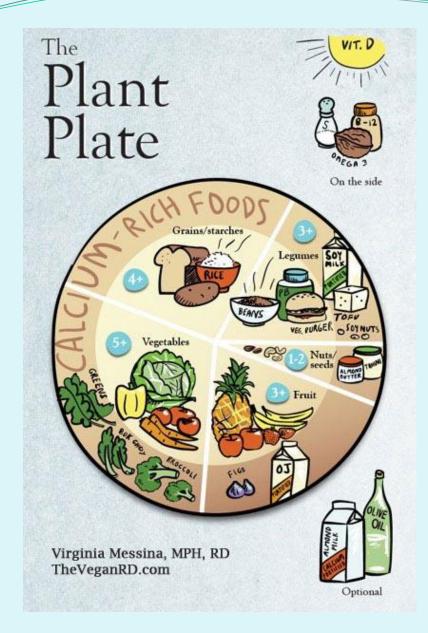




Calcium without cows



Wild greens supplied abundant calcium to early humans



## All vegan food groups provide calcium

#### Calcium-rich foods for vegans (RDA = 1,000 mg)

Food	mg calcium
<sup>1</sup> / <sub>2</sub> C calcium-set tofu or soybeans	90 - 200
1 C fortified plant milk	300 +
2 T almond butter or tahini	90
1 C fortified orange juice	300 +
½ C figs	120
2 navel oranges	120
1 C leafy green vegetables	160 - 250

# **Calcium from Leafy Greens**

Good sources: Bok choy, collards, kale, turnip greens

Poor sources: Spinach, Swiss chard, beet greens

# 6. Enjoy vegan foods



#### What vegans really eat

#### What people think vegans eat

#### Granola

Grass

Tofu



asparagua avocados bacon' bagels bañanas beans beef beets. biscuits' broad broccoli brownies" Brussels sprouts buffalo wings' burgers' burritos' cake' carrots celery cheese steak sandwicho peppers cheese' cheesecake' cherries chili cheese fries\* chili Chinese food'

artichokes

cookies\* khwi. lasagne' lettuce wraps mac 'n' cheese' mandarin oranges mangos marshmallows' mashed potatoes melons Mexican food\* nachos" noodles onion rings orariges paelfa' pasta peaches peanut butter peas pies' pineapple pizza' potato skins' potatoes pumpkin guinaa

Kale raspberries rice salsa samosas sandwiches seitan soul food\* soup soy milk spring rolls\* stir-fry strawperries sushi\* sweet potato fries taboul tacos' tempeh Thai food\* Tofurky tofu scramble Iomatoes tortilla chips veggie tempura veggie wraps everything eise\* "vegan version

coconut coconut curry coconut milk cookies' kiwi lasagne' lettuce wraps. mac 'n' cheese' mandarin oranges mangos marshmallows\* mashed potatoes melons Mexican food\* nachos" noodles onion rings oranges paella' pasta peaches peanut butter peas. **ipeppers** pius" pineapple pizza potato skins\* potatoes pumpkin























# **Demonizing foods**

• Demonizing foods is fear-based nutrition: never, ever eat this food

 Science-based nutrition: emphasize certain foods, eat others less frequently, use some foods as occasional treats.

## 7. Celebrate Veganism



# **Findings from EPIC/Oxford**

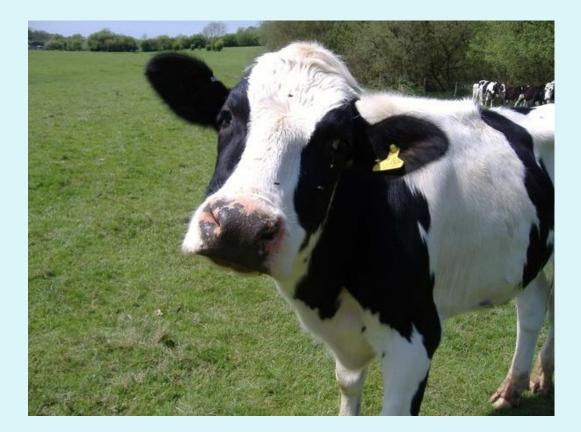
	Meat eaters	Vegan
Total fat intake	34%	30%
Saturated fat intake	12%	5%
<b>Blood Cholesterol</b>	191	158







#### Vegan = Compassion; Guaranteed



#### **1. Eat legumes**

3 or more servings per day of beans, peanuts/peanut butter, soyfoods, quinoa, pistachios

## **2. Choose Healthy Fats**

- Omega-3 fats from flaxseeds, walnuts, flax, walnut or canola oil, chia seeds.
- DHA/EPA? 200-300 milligrams
- Moderate use of higher fat foods like nuts, seeds, avocado and vegetable oils

#### 3. Take Appropriate Supplements

- 600 to 1,000 IUs of vitamin D (if sun exposure isn't adequate)
- •25-100 micrograms of vitamin B12

## 4. Eat a Rainbow

- Vitamin C
- Vitamin A
- Calcium

#### 5. Choose Calcium-Rich Foods

Kale, collards, fortified plant milks and juices, tofu, figs, almond butter, tahini.

# 6. Enjoy Vegan Foods

• Emphasize whole plant foods but no foods are off limits

# 7. Celebrate Veganism

- Vegan diets always deliver on their promise of compassion
- Health benefits vary among individuals and are a wonderful bonus

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