




Antioxidant Power

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Happy Diabetes Awareness Month

- Every 23 seconds, another person is diagnosed with diabetes in the United States
- Every two minutes, another person in America dies from diabetes complications.

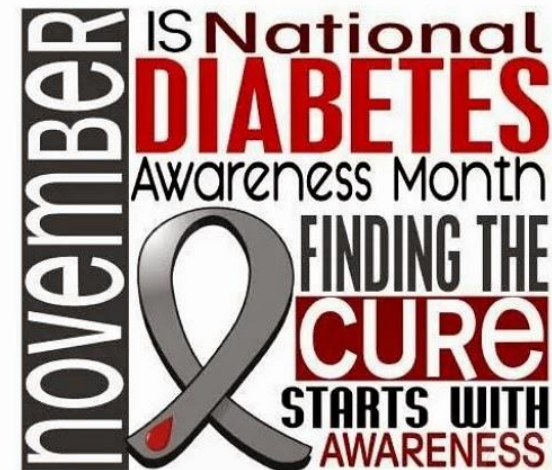


world diabetes day

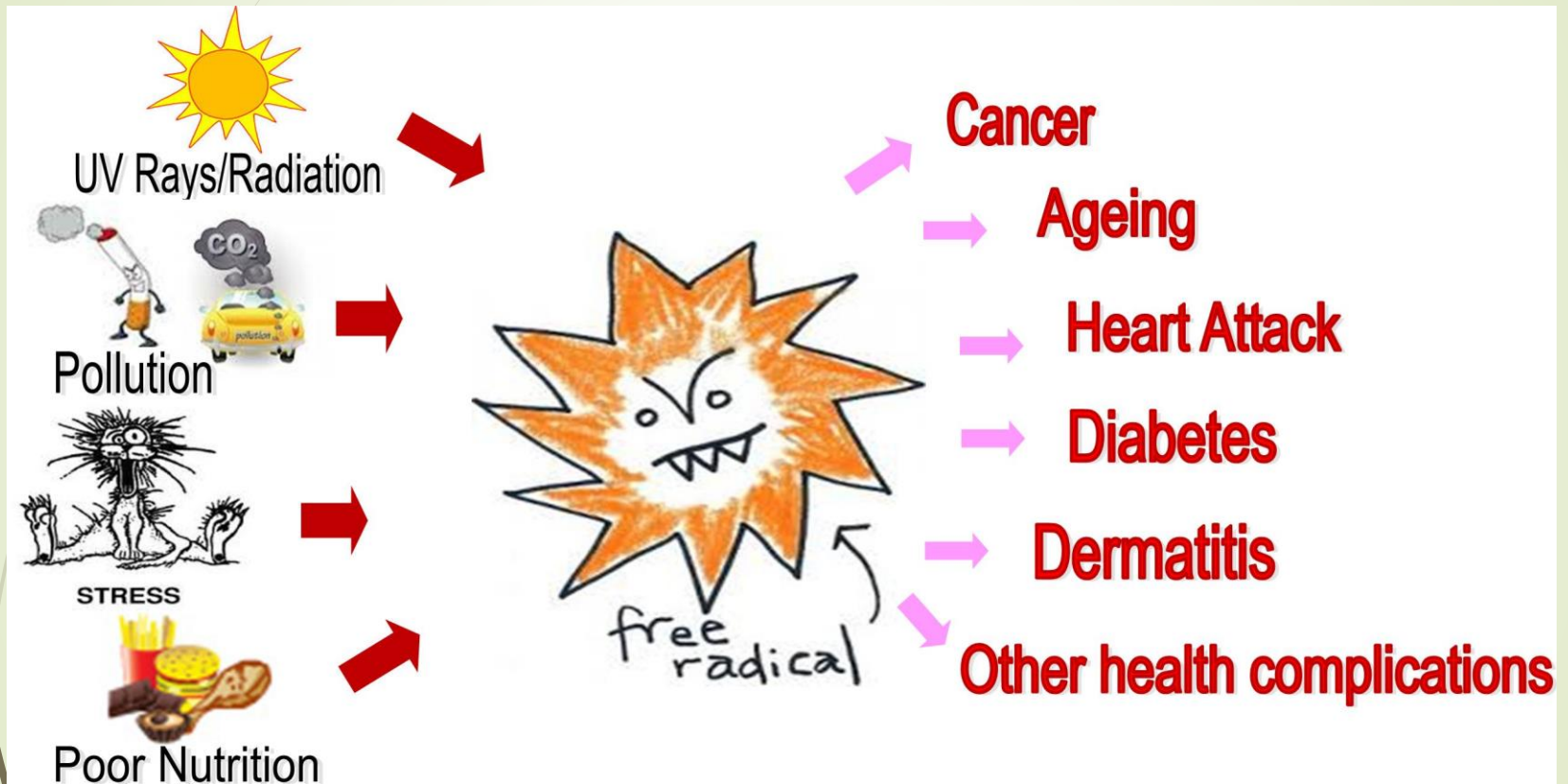
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Diabetes tips

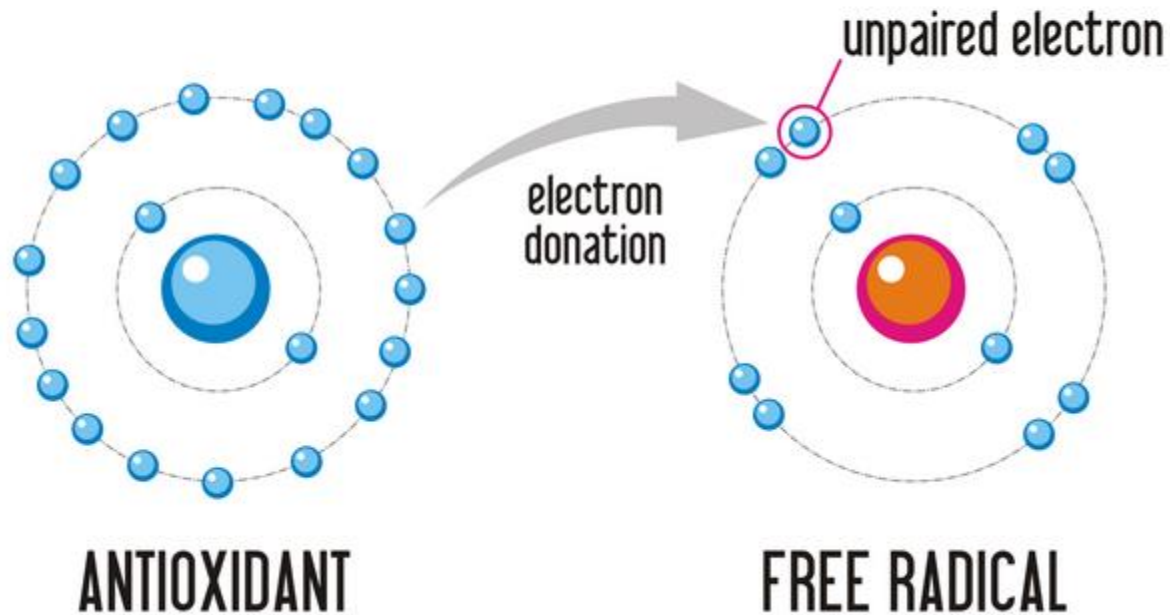
- ABCs: Manage your A1C, blood pressure & cholesterol levels & don't smoke
- Seek additional support for your specific needs.
- Make physical activity part of your routine.
- Follow a diabetes mean plan.
- Stay on top of your vaccines.



Why we need antioxidants



How antioxidants reduce the free radicals



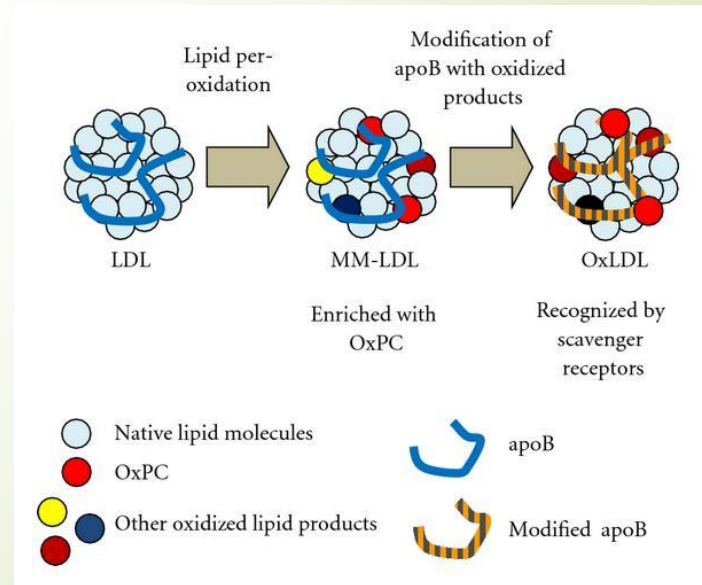


What are Antioxidants?

- Reduce oxidative damage to our cells from Free Radicals = instable molecule
- Oxidation is like rust on a car
- Protect against: cancer, arthritis, cataracts, diabetes, stroke, hypertension, heart disease and ageing
- Vitamins C & E
- Selenium, manganese, copper and zinc
- Flavonoids & Carotenoids
 - Found in fruits, veggies, whole grains, teas, spices

Antioxidants and Heart Disease


- Reduce oxidized fats in the blood stream
- Oxidized fats can damage blood vessels in the brain (ie. increase risk of stroke)
- Decrease artery stiffness
- Prevent blood clots
- Lower blood pressure
- Reduce inflammation



What are phytochemicals?

- Found in plant foods
- They protect the plant from harm
- Also help us – protect cells, DNA, reduce cancer risk
- Colorful plants have lots of phytochemicals
- Some phytochemicals act as **ANTIOXIDANTS**





Check out if your foods have antioxidants

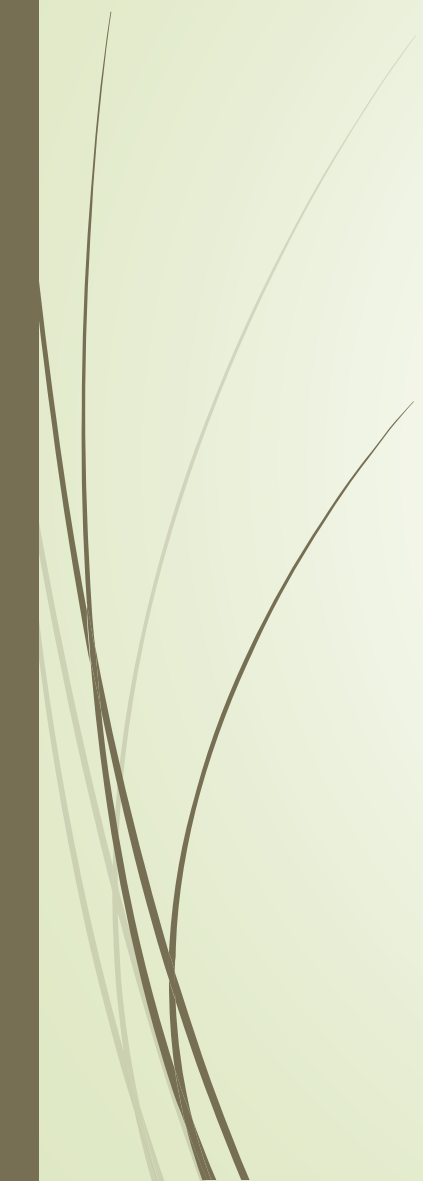
- Apple – turns brown if exposed to air – low in antioxidants
- Mango – cut it open and nothing happens – lots of antioxidants
- Put lemon onto your fruit salad to keep it from turning brown – Vit C is antioxidant
- Oil turns rancid from oxygen exposure – low in antioxidants

SOURCES OF PHYTOCHEMICALS

COLOR OF FRUIT AND VEGETABLE GROUPS	SOURCES OF ONE OR MORE OF THE FOLLOWING	FOUND IN ONE OR MORE OF THE FOLLOWING FOODS
GREEN		
	Lutein, Zeaxanthin, Indoles, Vitamin K &/Or Potassium	Turnip, Collard, Kale, Spinach, Lettuce, Broccoli, Green peas, Kiwi, Honeydew, Cabbage, Brussels Sprouts, Bok Choy, Arugala, Swiss Chard, Cauliflower, Leafy greens, Watercress, Endive
YELLOW/ORANGE		
	Beta-Carotene, Vitamin A, Bioflavonoids, Vitamin C, &/Or Potassium	Carrots, Sweet potatoes, Pumpkin, Butternut Squash, Cantaloupe, Mangoes, Apricots, Peaches, Oranges, Grapefruit, Lemons, Tangerines, Clementines, Peaches, Papaya, Nectarines, Pears, Pineapple, Yellow Raisins, Yellow Pepper, Bananas
RED		
	Vitamin C &/Or Anthocyanins	Cranberries, Pink grapefruit, Raspberries, Strawberries, Watermelon, Red Cabbage, Red Pepper, Radishes, Tomatoes, Cherries, Beets, Apples, Red Onion, Kidney Beans, Red Beans
BLUE/PURPLE		
	Anthocyanins, Vitamin C, &/Or Phenolics	Blueberries, Blackberries, Purple Grapes, Black Currants, Elderberries, Plums, Prunes, Raisins, Eggplant
WHITE		
	Allium & Allicin	Garlic, Onions, Leeks, Scallions, Chives



Should I supplement?

- NO!
 - Best source of antioxidants are the actual plants
 - Studies with supplements have never had the good results that foods have, in fact, may cause harm
- 



How to load up on antioxidants?

- Plant foods have 64x more antioxidants than animal foods
- Aim for fruits, veggies, herbs and spices at each meal
- Fill half your plate with veggies
- Have salad and cooked veggie at meals
- Have fruit or veggie as snack
- Eat unprocessed whole grains
- Drink tea & coffee
- Utilize spices (not salt)

Antioxidants per Calorie

AKA, ORAC per Calorie

Table of Foods

Note: The following table provides antioxidants (ORAC) per calorie for 287 foods. Antioxidant testing results are from USDA Oxygen Radical Absorbance Capacity (ORAC) of Selected Foods, Release 2 (2010) (see <http://www.ars.usda.gov/Services/docs.htm?docid=15866>).

Antioxidants per calorie is an important measurement, as incorporating antioxidants into the diet is limited by total calories consumed. Some foods that are extremely high in antioxidants by weight, such as dark chocolate, are much less attractive when considering antioxidants per calorie due to their calorie density. The antioxidant per calorie measurement is somewhat less practical in measuring essentially calorie free foods such as unsweetened green tea and in measuring foods, such as spices that cannot be eaten in substantial quantities. In the following table, spice-type items that cannot be eaten in significant quantities are shaded in green. Berries, which as a group make up the highest antioxidants foods that can be eaten in significant quantities, are shaded in red.

Level	Food	ORAC per 100g	Calories per 100g	ORAC per calorie
400 + ORAC per Calorie	Tea, green, brewed	1253	1	1253
	Tea, brewed, prepared with tap water	1128	1	1128
	Spices, cloves, ground	290283	323	899
	Spices, oregano, dried	175295	265	661
	Rosehip	96150	162	594
	Spices, thyme, dried	157380	276	570
	Spices, cinnamon, ground	131420	247	532
	Spices, rosemary, dried	165280	331	499
200-400 ORAC per Calorie	Chocolate, dutched powder	40200	100	402
	Spices, sage, ground	119929	315	381
	Spices, turmeric, ground	127068	354	359
	Chokeberry, raw	16062	47	342
	Thyme, fresh	27426	101	272
	Sage, fresh	32004	119	269
	Raspberries, black	19220	73	265
	Spices, basil, dried	61063	233	262
	Basil, fresh	4805	19	255
	Spices, parsley, dried	73670	292	252
	Cocoa, dry powder, unsweetened	55653	229	243
	Blackberries, raw	5905	25	236
	Blueberries, wild, raw	9621	43	224
	Raspberries, raw	5065	25	203
Elderberries, raw	14697	73	201	
Peppermint, fresh	13978	70	200	
100-200	Cranberries, raw	9090	46	196
	Juice, black raspberry	10460	54	193

Sprouting

- Increases antioxidant power
- https://www.youtube.com/watch?v=QOn1hVZUDvo&feature=emb_rel_end



Carotenoids

- Beta Carotene
- Lycopene
- Lutein
- Zeaxanthin
- Lower risk of cancers and CVD
- Source:
 - Orange and yellow fruits and veggies
 - Dark green leafy greens
 - Eat a huge salad as a main dish at least once a day



Flavonoids

- Anthocyanins
- Flavonols
- Isoflavones
- Catechins
- Anti-inflammatory antioxidants = anti-cancer
- Lowers risk of cardiovascular disease
- Sources:
 - Berries, black & green tea, soy, veggies
whole wheat, wine, purple grape juice
 - Oregano, olives, onions, garlic, leeks,
chives



Isothiocyanates

- Cruciferous veggies
 - Bok choy
 - Broccoli
 - Brussels sprouts
 - Cabbage
 - Cauliflower
 - Collard and mustard greens
 - Kale and swiss chard and watercress
- Immune-strengthening
- Cancer fighting



Sulforaphane

- Green and purple cruciferous veggies
 - Broccoli/Sprouts
 - Cauliflower
 - Cabbage, Brussels
 - Kale
- Antioxidant
- Anti-inflammatory
- Cancer fighter



Selenium



- Nuts & seeds
- Powerful antioxidant
- Sources:
 - Brazil nuts, sunflower seeds, walnuts
 - Brewer's yeast, wheat germ
 - Garlic
 - Truly whole grains
 - Raisins
 - Shellfish and both fresh and saltwater fish

Anthocyanins

- Blue/Purple foods – part of flavonoid family
- Powerful antioxidant
- Anti-inflammatory
- Associated with:
 - Improving cancer risk
 - Helping blood pressure
 - Improving brain health
- Purple potatoes, blueberries, plums, red grapes, red cabbage, etc.



Spices

- Flavor compounds in spices are the antioxidants
- Turmeric
 - Curcumin – gives it yellow color
 - Anti-inflammatory
- Oregano/Marjoram
- Peppermint
- Cinnamon, Cloves
- ½ tsp cinnamon on your oatmeal increases the antioxidant power from 20 units to 120 units





Build a better salad (or soup)

- **Greens** = Kale/Chard/Spinach: Isothiocyanates
 - **Red Beans** - anthocyanins
 - **Onions** - flavonoids
 - **Mushrooms**
 - **Blueberries** - flavonoids
 - **Pumpkin Seeds** - Selenium
 - **Tomatoes & carrots**: Beta carotene
 - **Cucumbers**
 - **Broccoli slaw** - cruciferous
 - **Basil**
 - **Lemon juice** – Vit C
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What can you do to have more antioxidants this holiday season?

- Salad every day?
- Make some soup/stew?
- Fruit &/or Veg at each meal?
- 2+ cups veg at lunch AND dinner?
- Sprout?
- ??????



My Antioxidant Dish: Purple Party

➤ Purple potato salad (4x antioxidant power)

- 1 pound small purple potatoes
- 1 ripe avocado
- 2 tablespoons Dijon mustard
- 2 tablespoons diced red onion
- 2 tablespoons fresh dill chopped
- 1 teaspoon fresh lemon juice
- 1/2 cup cucumber diced



➤ Purple Cabbage Salad

- 4 oranges, cut into supreme (2 packed cups)
- 4 cups shredded red cabbage
- 1/2 cup dried cranberries
- 2 shallots, finely chopped (1/4 cup)
- 1/4 cup chopped walnuts, divided
- 2 tablespoons finely chopped fresh parsley, divided
- 3 tablespoons balsamic vinegar
- 1 tablespoon pure maple syrup



