

## Iron – Are you getting enough?

### Why does your your body need iron?

Your energy levels depends on it! Iron is a mineral that carries oxygen to the muscles and brain. It is crucial for health as well as mental and physical performance.

### Symptoms of Low Iron Levels:

- Low energy level
- Poor focus and concentration
- Weakened immune system
- Slow recovery from exercise

### How Much Iron Do We Need?

	Male	Female	If Deficient*	Pregnancy
<b>Recommended Daily Intake</b>	<b>8 mg</b>	<b>18mg</b>	<b>30 mg</b>	<b>27 mg</b>
<b>Maximum Daily Intake</b>	<b>45 mg</b>	<b>45 mg</b>	<b>45 mg</b>	<b>45 mg</b>

*\*Deficiency is diagnosed by your doctor*

### Types of Iron

- *Heme* Iron
  - Found only in animal foods: meat, chicken, fish, dairy, and eggs
  - Is easily absorbed
- *Nonheme* Iron
  - Found in plant based foods: beans, vegetables, and soy
  - Harder to absorb than heme iron, but certain dietary factors can increase absorption.

### Factors that Enhance Non-Heme (“Plant”) Iron Absorption:

Factor	Source
Vitamin C	Bell Peppers      Melon Berries              Papaya Broccoli             Pineapple Oranges             Potatoes Grapefruits        Tomatoes
Citric Acid, Malic Acid, Tartaric Acid	Fruits                      Vinegar Vegetables             Citrus Zest
Lactic Acid	Sauerkraut
Retinol and carotenoids	Dark green, red, and orange fruits and veggies
Note: Eating animal protein with non-heme iron promotes absorption of non-heme iron.	

### **Beware...Some Factors in Certain Foods INHIBIT Iron Absorption**

<b>Factor</b>	<b>Source</b>
Polyphenols, tannins	Tea, coffee
Calcium, phosphorus, dairy protein	Milk, yogurt, cheese
Egg protein	Whole eggs, egg whites
Phytates	Legumes, whole grains
Oxalates	Spinach

### **What to Do**

#### **Include These Iron Rich Foods in Your Diet Regularly:**

- Fish and shellfish – tuna, salmon, oysters, clams, shrimp, etc.
- Lean meats – beef, pork, lamb
- Poultry – chicken and turkey
- Organ meat – beef liver
- Beans and legumes – kidney, black, soy, pinto, navy, garbanzo, lentils
- Tofu and soy-based meat alternatives like veggie burgers
- Greens – spinach, kale; mustard, collard and turnip greens
- Vegetables – broccoli, asparagus, parsley, Brussels sprouts, potatoes, peas
- Dried fruits – raisins, dates, prunes, apricots
- Iron-fortified whole grains – cereals, breads, tortillas, rice, pasta
- Blackstrap molasses, egg yolks, nuts

#### **Eat a fruit or vegetable (especially one that's vitamin C rich) when you eat an iron containing food.**

For example:

- Add strawberries (or drink a small glass of OJ) when you eat iron fortified breakfast cereal.
- Add segments of orange/grapefruit (or bell pepper strips) to a salad that contains chicken or turkey.
  - Eat chicken fajitas with bell peppers.
  - Add tomato slices to a turkey sandwich.
  - Make a burrito with beans and salsa.
- Pair Canadian bacon and pineapple toppings on pizza

#### **Avoid consuming tea, coffee, or milk with meals containing iron rich foods.**

## Sample Menu Suggestions Containing Foods with Iron

### Breakfast

- Iron fortified cereal + raisins or strawberries + skim milk.
- Scrambled eggs + whole wheat toast. Eat with OJ.
- Yogurt Parfait: layer nonfat greek yogurt + sliced strawberries + wheat germ + crushed walnuts

### Lunch/Dinner

- Split Pea Soup
- Lentil Soup
- Turkey sandwich with hummus and roasted red bell peppers and spinach
- Spinach salad with grilled chicken and sliced strawberries
- Spinach salad with choice of the following proteins: lentils, chickpeas, kidney beans, sardines, tofu, or turkey. Add sliced strawberries or orange slices. Drizzle with olive oil.
- Yogurt Parfait: yogurt + sliced strawberries /oranges + wheat germ + slivered almonds
- Sardines on whole wheat crackers.
- Grilled chicken or meat + baked potato + broccoli or steamed artichoke

### Snacks

- Hard boiled egg
- "Trail Mix" :
  - Almonds + raisins
  - Walnuts + dried apricots
  - Pumpkin seeds + sunflower seeds + raisins
  - Any combination of walnuts, almonds, pumpkin seeds and/or sunflower seeds + raisins and/or dried apricots!
- Bell peppers dipped in hummus.
- Dried chick peas

### References:

Conrad, ME. Iron deficiency anemia. eMedicine from *WebMD*. Updated Oct 4, 2006. Accessed 12/15/2006: <http://www.emedicine.com/med/topic1188.htm>

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