STEAM PROJECT-ROSIE BRENNAN

A day of a nutrition intervention for iron deficiency



The following is a mini cookbook that focuses on food to help increase iron levels. Iron is best absorbed as heme iron from animals but can also be found in plant sources. Red meat is a great source and the one most commonly thought of, but to show other foods that can help with iron, examples in this menu do not include red meat. It's best to avoid coffee and tea with high iron foods and to pair iron rich foods with vitamin C to increase absorption. Copper, zinc, folate, and B12 are also important components for red blood cell and hemoglobin function and should therefore also be consumed at an adequate level. The recommended daily value for iron for an adult female is 18mg, however, this number has much debate in the athletic population and is likely greater. Additionally, because iron isn't very bioavailable aiming for a larger amount, especially if coming from plant sources, can be beneficial. The upper limit set by the USDA is 45mg/day. The recommended daily value for is 400 mcg for folate, 2.4 mcg for B12, 11 mg for zinc, and .9mg for copper. Lastly, it's important to be sure you are meeting your daily energy demands with energy intake to maintain a healthy metabolism and body function.

BREAKFAST Potato Hash with Eggs



INGREDIENTS

Olive oil

2 medium sweet potatoes ½ onion, diced

1/2 bell pepper, diced

1 clove minced garlic

¹/₂ tsp. cumin

¹/₂ tsp. salt

Pepper to taste

2-3 eggs

Avodcado, sliced

| 2-3 | 5 MIN | 30 MIN |
|-------|-----------|------------|
| Yield | Prep time | Total time |

DIRECTIONS

Heat oil in a cast iron pan over medium heat. Add the onion and cook until soft, about 5 min. Add the potatoes, peppers, cumin, salt, and pepper to the pan. Let cook, stirring occasionally until potatoes are soft, about 10-15 min. Make 2-3 holes in the potatoes and crack the eggs into the holes. Reduce heat to medium-low and cover pan. Cook until eggs are set, 6-8. Add sliced avocado to the top.

NUTRITION TIP

Although potatoes are a starch, they have a number of nutrients in them, making them a high quality carbohydrate to start your day. Potatoes are good sources of vitamin C, potassium, vitamin B6, manganese, and do contain some iron. Be sure to leave the skin on when you dice them for added nutrients! Eggs also contain some iron, B6 and vitamin D.

LUNCH

White Bean Salmon Salad Sandwich



INGREDIENTS

5 oz cooked salmon fillet or canned salmon 1 cup white beans, drained and rinsed ¼ cup green onions, white and light green portion thinly sliced ¼ cup turnips, diced 1 Tbsp lemon juice 3 Tbsp mayonnaise Salt and pepper to taste

Whole wheat pita bread

25 MIN10 MINYieldPrep timeTotal time

DIRECTIONS

Mix all ingredients together, smooshing the white beans a little to help everything stick together. Spoon salad into a pita, adding some lettuce for additional crunch.

NUTRITION TIP

Salmon is an excellent source of vitamin B12 which is essential for the synthesis of DNA and red blood cells. In addition, it is also a good source of omega-3 fatty acids.



Cashew Molasses Granola



INGREDIENTS

3 cups rolled oats ¹/₂ cup chopped cashews ¹/₂ cup pumpkin seeds ¹/₂ cup olive oil ¹/₄ cup honey ¹/₄ cup blackstrap molasses 2 tsp cinnamon 2 tsp grated or ground ginger ¹/₂ cup raisins

| 15 | 10 MIN | 1 HOUR |
|-------|-----------|------------|
| Yield | Prep time | Total time |

DIRECTIONS

Preheat oven to 275 degrees Fahrenheit. Add oats, nuts, seeds, and spices to a large mixing bowl. In a small bowl whisk the oil, honey, and molasses. Pour the liquid over the dry ingredients and stir until well mixed. Spread the mixture on a baking sheet lined with parchment paper. Bake for 40-45 minutes, stirring every 15 minutes until golden brown. Let cool completely. Stir in the raisins and store in an airtight container.

NUTRTION TIP

Cashews are a good source of copper, zinc, and iron. Blackstrap molasses is also a good source of iron and is therefore a more nutrient dense sweetener. Have the granola with whole milk yogurt to add additional protein and vitamin B12. Top with some fresh fruit like kiwis to add vitamin C and increase the absorbability of the iron.



Lentil Chickpea Curry with Tofu



Olive Oil 1 onion 1 jalepeno or other spicy pepper, diced 4 cloves of garlic, minced 1 Tbsp ginger, grated 1 tsp turmeric 1 tsp cumin 2 Tbsp curry powder 1 can diced tomatoes 1 can chickpeas 1 cup lentils, rinsed and drained 1 can coconut milk

| 4 | 10 MIN | 30 MIN |
|-------|-----------|------------|
| Yield | Prep time | Total time |

DIRECTIONS

Drain the tofu by wrapping it in a towel and placing something heavy on top to squeeze the water out. Let it rest at least 30 minutes.

Heat a large pot over medium heat. Add the oil, the onion, and some salt. Cook until translucent, about 5 minutes. Add the pepper, cooking for another 2 minutes. Add the garlic and ginger, stirring for another minute before adding the rest 1 cup broth or water Cilantro Cottage Cheese of the spices. Raise the heat and add the lentils, coconut milk, broth, tomatoes, and chickpeas. Once at a simmer, drop the heat to low to maintain a low simmer until the lentils are soft, about 20 minutes. While the lentils are cooking, dice the tofu and heat a frying pan over medium heat. Add the tofu allowing each side to brown and become crispy for a few minutes before turning it. Add the tofu to the pot. Serve with cilantro and a dollop of cottage cheese on top.

NUTRTION TIP

Lentils are a nutrient packed food. They are an excellent source of folate, iron, and protein. Tofu is also a good source of protein and iron. Non-heme iron found in plants is more difficult to absorb, but the tomatoes add a good source of vitamin C which helps the absorption.

DESSERT

Total Bars



INGREDIENTS

2 cups Total cereal 1/2 cup hazelnuts, chopped 1 cup mixed nut and seed butter 3 Tbsp butter, melted 1/3 cup flax seed 3/4 cup dark chocolate chips

| 9 | 10 MIN | 10 MIN |
|-------|-----------|---------------|
| Yield | Prep time | Total time |

DIRECTIONS

Melt the butter in a small microwave safe bowl. Add the mixed nut and seed butter, stirring until combined. Mix the cereal, nuts, seeds and chocolate chips in a large bowl, Pour the butter mixture over top and stir until well combined. Press into a 9x9 in. pan and let cool.

NUTRTION TIP

Many cereals are fortified with important nutrients like folate, and B12. Hazelnuts are a good source of folate. Chocolate, when eaten in its dark form, greater than 60% cocoa, is a good source of iron and copper.