

Analyzing Popular High Protein Foods and Diets

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Questions

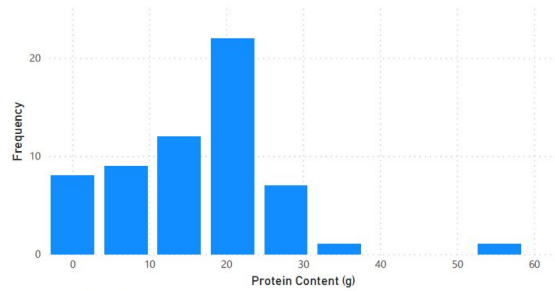
1. General trends macros of high protein foods?
2. Which foods have the highest protein to calorie ratio?
3. Are there any significant difference between Macros and Calories between Diet Types?
4. Which food Groups have the lowest calorie content?

Approach

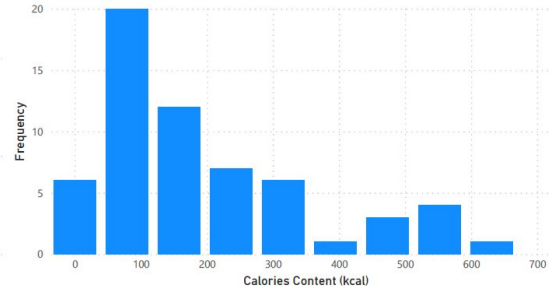
1. Dataset obtained from [Kaggle](#)
2. Cleaned dataset and reformatted in order to answer questions.
3. Uploaded to PostgreSQL database to transform data.
4. Uploaded transformed data to PowerBi to visualize

General Macros and Calories

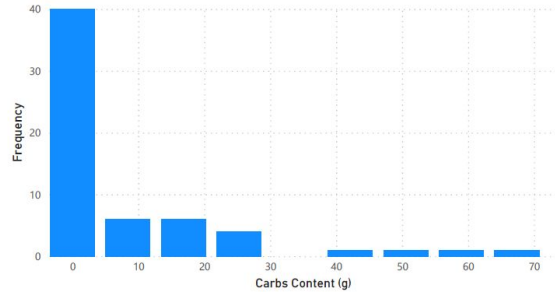
Protein per 100g Distribution



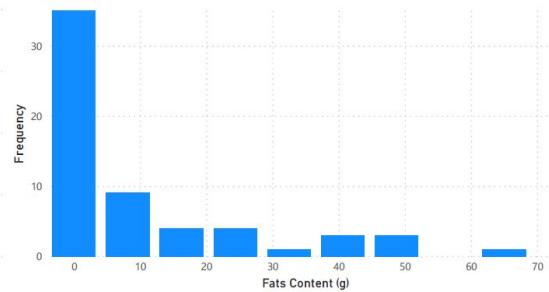
Calories per 100g Distribution



Carbs per 100g Distribution



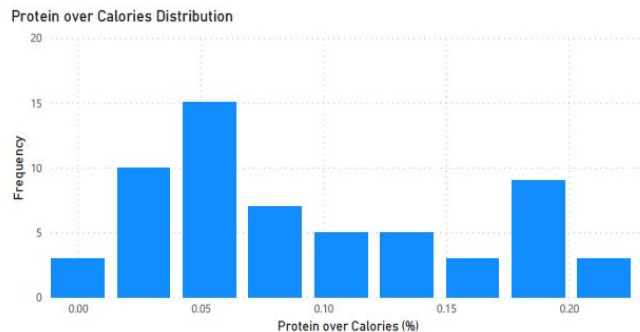
Fats per 100g Distribution



Here protein distribution averages around 20g. Calories averages around 90 calories. Fats and Carbs average around 0g. We can see here that most foods that are considered high in protein have about 20g protein with less than 100 calories with close to 0g of carbs and fats.

Proteins over Calories

food_name	percent_energy
Tuna (Yellowfin)	0.23
Cod	0.22
Turkey breast	0.21
Lobster	0.21
Cuttlefish	0.21
Tilapia	0.20
Seitan	0.20
Spirulina (dried)	0.20
Crab	0.20
Shrimp	0.19
Halibut	0.19
Chicken Breast	0.19
Squid	0.18
Octopus	0.18
Clam	0.17
Alaskan salmon	0.15
Mussel	0.14

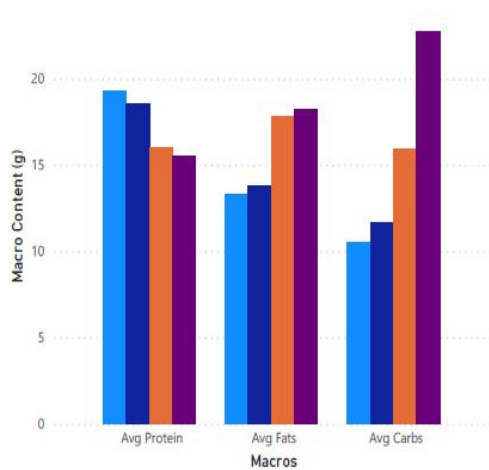


Here we check to see which foods have the best ratio of protein over calories. Most of the foods have 10 percent protein to calorie ratio. The top 5 best food with the most protein for calories are Tuna, Cod, Turkey Breast, Lobster, and Cuttlefish. The first Vegetarian and Vegan option were Seitan and Spirulina (dried) being 7th and 8th respectively.

Diet Differences

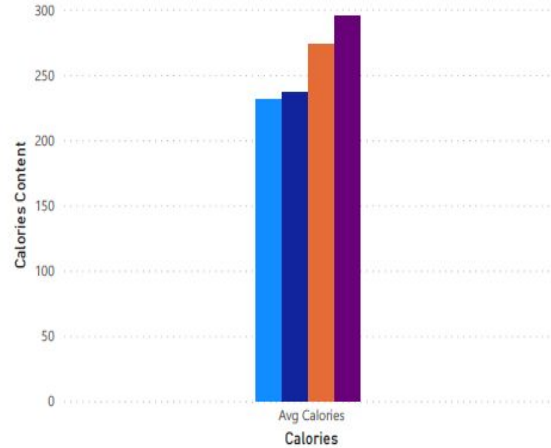
Omnivorous, Pescatarian, Vegetarian and Vegan by Macro

● Omnivorous ● Pescatarian ● Vegetarian ● Vegan



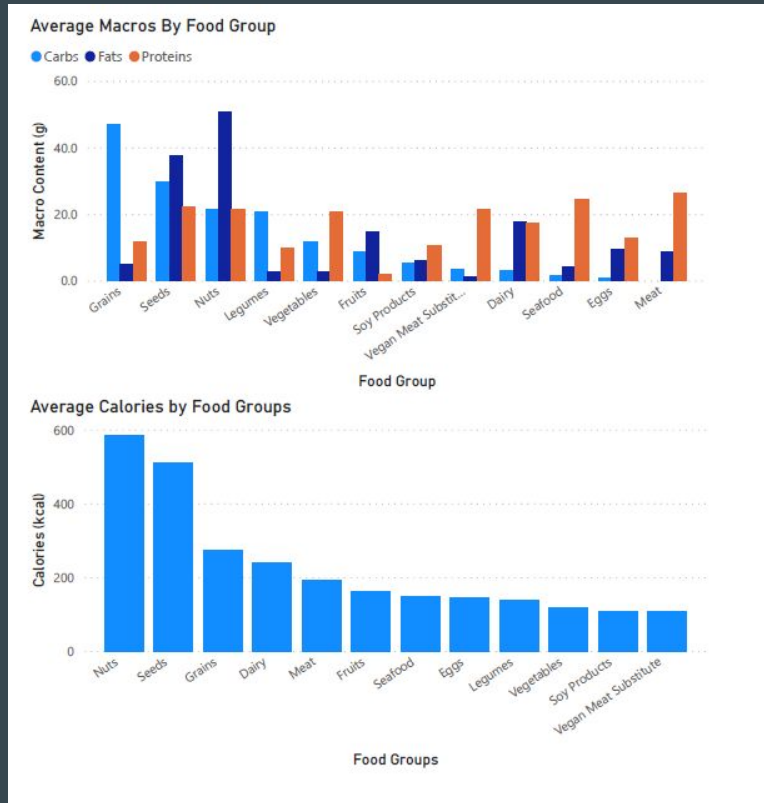
Omnivorous, Pescatarian, Vegetarian and Vegan by Macro

● Omnivorous ● Pescatarian ● Vegetarian ● Vegan



Protein did not differ much between diets but the omnivorous diet had the highest protein content. Fats and carbs, and calories was surprising because the non-meat diets, Vegan and Vegetarian, had the most fats, carbs and calories.

Food Groups



In the Calories graph all of the food groups have about equal calories except for Nuts and Seeds both being over 500 calories.

Applications of Data

- If we want to focus primarily on losing weight we should look at food that is low in calories. Food groups such as Vegetables, Soy Products, and Vegan Products.
- In working out we usually want to hit a protein target in order to reduce the risk of losing muscle while on a diet. Individuals with these goals should focus on foods that have the best protein to calorie ratio.
- Those with Vegan and Vegetarian Diets may have a harder time hitting protein target due to the fact that a lot of their high protein foods have a lot of calories in them.