<https://www.nal.usda.gov/human-nutrition-and-food-safety/dri-calculator>

<https://www.nutritionvalue.org/Natto_nutritional_value.html>

https://www.fda.gov/food/food-labeling-nutrition/nutrition-information-cooked-seafood-purchased-raw

Harris-Benedict Caloric Calculator

Caloric need calculation

* Inputs:
  + Gender
  + Age
  + Height
  + Weight
  + Activity level
* Output
  + BMR:
    - Men: BMR = 66.5 + (13.75 × weight [kg]) + (5.003 × height [cm]) – (6.775 × age [years])
    - Women: BMR = 655.1 + (9.563 × weight [kg]) + (1.850 × height [cm]) – (4.676 × age [years])
  + Activity level:
    - Sedentary (little or no exercise): AMR = BMR x 1.2
    - Lightly active (exercise 1–3 days/week): AMR = BMR x 1.375
    - Moderately active (exercise 3–5 days/week): AMR = BMR x 1.55
    - Active (exercise 6–7 days/week): AMR = BMR x 1.725
    - Very active (hard exercise 6–7 days/week): AMR = BMR x 1.9

Conclusion: the number of calories your body needs for a day.

Menu

* Input:
  + Food avoidance (allergies/religious/obligations/out-of-access): find and select.
  + Preference: Vegan/Asian and Pacific/European and North America/Mediterranean & Hispanic
  + Desired progress: gain weight/lose weight/weight maintenance.
    - Weight gain/lost: x (kg).
  + Duration: months/weeks
* Output:
  + Calculation:
    - Real caloric need:
      * Weight maintenance: total = AMR
      * Weight gain/lost:
        + Calories gain/lost: x\*7716 (Kcal)
        + Calories gain/lost per day: x\*7716/(month \* 30 or week \* 7)
    - => Total = AMR +- x\*7716/(month \* 30 or week \* 7)
  + Plate proportion based on preference:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Preference | No Preference (0) | Asian and Pacific (1) | European and North America (2) | Mediterranean & Hispanic  (3) | Vegan  (4) |
| Carbohydrate | 50% | 60% | 45% | 50% | 60% |
| Fiber | Carbohydrate/11 | Carbohydrate/11.2 | Carbohydrate/13 | Carbohydrate/12 | Carbohydrate/9 |
| Protein | 0.8\*weight | 0.8\*weight | 0.9\*weight | 0.85\*weight | 0.9\*weight |
| Fat | 25% | 20% | 30% | 32% | 18% |
| Water | 2.25 | 2.25 | 2.5 | 2.5 | 2.25 |

Database of Food Bank:

* Name
* Category
* Type
* Portion size
* Calories per portion
* Carbohydrate
* Fiber
* Protein
* Total Fat
* Water

FOOD BANK

Name, type, portion size (1 cup = x g), Calories per portion, Carbohydrate, Fiber, Protein, Total Fat, Water

Objects:

**User**

* **userID**
* username
* dob
* phone
* address
* email
* password
* weight
* height
* gender
* activity
* preference: No preference/ Asian and Pacific /European and North America / Mediterranean & Hispanic/ Vegan
* goal: gain/lose/stay
* duration
* rank
* createdate

Food avoidance

* **userID (FK)**
* **foodID (FK)**

Day of program

* **dayID**
* **userID (FK)**
* index

**Exercise**

* **exerciseID**
* exname
* lowerweight
* upperweight
* calorexp

ExSession

* **sessionID**
* **excerciseID**
* **userID**
* **dayID**
* *completed: Boolean*

**Food**

* **foodID**
* foodname
* category
* size
* caloricintake
* carbohydrate
* fiber
* protein
* fat
* water

Type

* **foodID**
* type

Meal

* **mealID**
* **userID**
* **dayID**
* time: breakfast, lunch, dinner, supper, brunch, snack
* *completed: Boolean*

FoodDetail

* **foodID**
* **mealID**
* amount
* quantity

**Product**

* **productID**
* name
* type: fat, fiber, vitamin, protein, carbohydrate
* price
* quantity
* brand
* origin
* volume
* effect
* rate (best-seller item)
* purchase

ProductDetail

* **detailID**
* **productID**
* **userID**
* **billID** (if billID = 0 -> in the cart but not purchased yet)
* quantity

Bill

* **billID**
* **userID**
* date
* delivery
* payment

**SaleOff**

* **saleoffID**
* description
* startDate
* endDate
* target (depending on rank/status)

Sale-off detail

* **detailID**
* **saleoffID**
* **productID**
* percentoff
* priceoff
* gift

**PopUp**

* **popupID**
* theme image
* description
* status: boolean

Pop-up detail

* **popupID**
* **productID**
* description