

Steps to Creating a Nutrition Program

1. Set a goal (4 types)

- **Goal Type 1: Weight (fat) Loss** - Lose 5-10% of body weight in first 6 months of program
 - Calorie Deficit Equation
 - $\text{Calorie Deficit Needed} = (\text{goal \# of lbs. lost}) \times (3,500) / (\text{weight loss time frame})$
 - 3,500 Calories = 1 Pound of Weight
 - An upper threshold of 1% weight loss per week should be set for almost all anyone
 - A Minimum threshold of 250 calorie deficit per day should be set
 - calorie reductions smaller than about 250 kcals per day are not very effective
 - At a 250 deficit, it takes a long time (about 2 weeks) to see 1 pound (0.45 kg) of weight loss, which, when coupled with natural daily fluctuations in weight, can take 4 to 6 weeks to observe 1 true pound of weight loss.
 - Furthermore, at deficits this small, minor deviations from a nutrition plan can result in a loss of the deficit, making it more difficult to achieve meaningful results
 - Weight-loss goals should fall in the range of 1 to 2 pounds (0.4 to 0.9 kilogram) per week or 0.5% to 1.0% of body weight per week
 - According to most research on people who are overweight or obese, **weight loss of 10%** can substantially improve an individual's health and reduce their risk of many chronic diseases (e.g., diabetes and cardiovascular disease).
 - Even a 1-kilogram (2.2-pound) reduction in weight can reduce the relative risk of developing diabetes by 16%
- **Goal Type 2: Weight (muscle) Gain** - 0.5-1% Weight Gain per Month (in beginners), 0.25-0.5% Weight Gain per Month (in more advanced resistance trainees)
- **Goal Type 3: Body Recomposition** - Simultaneous Fat Loss and Muscle Gain
 - This goal requires adequate protein intake, resistance training, and a moderate calorie deficit.
 - It may be best to focus on one goal at a time
 - The rate of muscle gain while in a negative energy balance will be slower than if you were in a calorie surplus
 - While this goal is possible, it works best with people who have minimal training history and who are obese or overweight. This is also possible in deconditioned individuals who were formally fit.
- **Goal Type 4: Improved Exercise (sport) Performance**

- Nutrition varies substantially between strength/power training and endurance training
- These 2 different types of training often have interfering effects on one another. This is why **periodization** is important in a wellness program (they are usually set as independent goals for specific blocks of time)

2. Determine the total daily energy requirements adjusted for the goal.

- Use this calculator to estimate how many calories you should eat to reach your goal: <https://www.niddk.nih.gov/bwp>
 - Less accurate but neater looking website: <https://www.nasmbwpcalculator.com/>
- Total Daily Energy Expenditure (TDEE) = Basal Metabolic Rate × Activity Factor
- **Having an accurate daily physical activity factor is much more important** than what equation you use. It greatly affects the outcomes.
- **It is more beneficial to slightly overestimate the activity factor than it is to underestimate the activity factor.** There are two main reasons for this:
 - When overestimating you have room to lower your calories and macronutrients if weight loss is stagnant; if underestimating, you do not have room to lower it.
 - It may serve as a mental anchor for you and encourage you to reach for a slightly higher level of regular activity

3. Set target percentage of calories from protein (4 Calories/gram)

- **Recommendations for the General Population = 1.2 to 1.6 grams/kilogram (0.54 to 0.7 grams/pound)**
- **Recommendations for Athletes or Muscle Gain = 1.6 to 2.2 grams/kilograms (0.7 to 1.0 gram/pound)**
 - consuming roughly 0.4 to 0.55 grams per kilogram (.18 to .25 gram/pound) every 4 hours at least 4 times a day is optimal for maximizing muscle growth
- **Recommendations for Body Recomposition = 2.2-3.1 grams/kilograms (to preserve muscle during periods of caloric restriction. Anything over 2.2 grams/kilograms doesn't actually increase muscle growth)**

4. Set target percentage of calories from fat (9 calories/gram)

- **Recommendations for the General population = 20-50% of calories from fat**
- **Recommendations for Athletes = 20-35% of calories from fat, because need lots of carb calories to fuel exercise**

5. Set target percentage of calories from carbohydrates (4 Calories/gram)

- **Carbohydrate targets** can be set **based on the remaining calories left** after protein and fat targets are established.
 - Carbohydrate target calories = total daily calories – protein calories – fat calories
- **Recommendations for the General Population and Low-Volume Training Athletes = 3 to 5 g/kg/day (1.3 to 2.2 g/lbs/day)**
- **Recommendations for Moderate-Volume, High-Intensity Training Athletes = 5 to 8 g/kg/day (2.2 to 3.6 g/lbs/day)**
 - This can be defined as athletes engaging in 2 to 3 hours of training per day for 5 to 7 days per week.
- **Recommendations for High-Volume, Endurance-based Training = 8 to 10 g/kg/day (3.6 to 4.5 g/lbs/day)**
 - This can be defined as athletes engaging in 3 to 6 hours of training per day for 5 to 7 days per week.
- **Recommendations for Very-High-Volume, Endurance-Based Training = about 12 g/kg/day (5.4 g/lbs/day)**
 - This can be defined as athletes engaging in > 6 hours of training per day for 5 to 7 days per week.

6. Individualize and convert numbers to food and habits.

- Use an initial assessment to help determine your behavioral style, food preferences, current habits, barriers, and goals and determine your current level of nutrition/food competency
- There are a myriad of ways to monitor, track, and evaluate your food habits. One way to think about the varied approaches is to visualize them on a continuum of **highly quantitative methods** (e.g., measure and weigh everything you eat and keep meticulous notes) to **highly qualitative methods** (e.g., consume mostly whole foods or “eat the rainbow”).
 - Both approaches have been shown to be successful and the different approaches should fit your individual needs and preferences to maximize adherence to the recommended plan
- Regardless of the exact approach used (highly quantitative versus highly qualitative) and the level of measuring precision (macromanagement versus micromanagement), guide yourself toward a sustainable approach. This begins at the initial assessment **through an evaluation of your current approaches to tracking, monitoring, and evaluating food intake and reflection on what has worked in the past and what has not worked.**

- Many times, people will take an all-or-nothing approach to monitoring their intake. However, **approaches that do not fall at the extreme edges of the spectrum** and provide a flexible and somewhat intuitive approach to eating appear to **provide the best long-term results**
 - **You can start at either extreme, but with time, you should work your way more towards the middle**
- **Carefully develop a list of foods you would like to include in your nutrition plan from each of the food categories: fruits, vegetables, grains, dairy, and protein**
- **Use a nutrition database (e.g., the USDA Nutrition Database) to create a list of food options that meet your daily nutrition needs**
 - Go to this website for ideas: <https://fdc.nal.usda.gov/fdc-app.html#/>

7. Monitor, Evaluate, and Adjust.

- **Step 1) Conduct a baseline readiness assessment.**
 - **Complete food frequency questionnaires and food diaries**
- **Step 2) Develop a set of data to monitor and outcomes to evaluate.**
 - **Create a simple list of goals and behaviors to track. The scope should be appropriate for your starting point.**
 - For example, if you have never tracked food before, the first round of monitoring should not involve an overly meticulous calorie-counting and macronutrient tracking plan. Instead, it should begin with basic recording of eating habits.
 - Rate your confidence you can accomplish your chosen monitoring tasks on a scale of 1-10. Anything below 7 needs to be reevaluated for how realistic it is and adapted.
 - **Monitor and Evaluate progress on both hard (calorie counting) and soft skill improvements**
 - **Implement a new soft-skill habit every week (or at a regular pace). Examples include:**
 - Eat more slowly – put the fork down in between bites. Focus on the food: its taste, texture, and smells.
 - Eat until you're approximately 80% full. Once you are about 80% full, stop your meal and allow your body time to adjust to feeling satiated.
 - Drink at least 8 cups of water per day and aim to stay hydrated throughout the whole day.
 - Set a new sleeping schedule. Aim for 8 hours each night.
 - Substitute saturated or trans fats (whole cream, butter, or lard) for unsaturated fats (avocado or olive oil).

- Eat at least one serving of lean protein with each meal (e.g., seafood, white-meat poultry, eggs, lean beef, or soy).
- Fill half your plate with colorful fruits and vegetables each meal.
- Drink primarily calorie-free drinks (e.g., water, black coffee, unflavored iced tea, etc.). Minimize calorie-dense drinks (e.g., soda, juice, or energy drinks).
- Take a 5-minute break; avoid sitting for more than 3 hours at a time.
- Aim for 150 minutes of moderate aerobic activity per week such as walking or brisk jogging.
- Practice destressing techniques (e.g., meditate, unplug from technology for an hour, go for a walk, listen to music, or focus on a fun hobby).
- Celebrate your wins and revisit any of these habits you are still having trouble maintaining.
- Anticipate high-risk situations, identify triggers, and develop coping/problem-solving strategies for lapses.
- Develop a social support network.
- Replace negative self-talk (especially during weight-loss plateaus) with constructive and positive outlets (e.g., write down and acknowledge your own accomplishments).
- **Step 3) Set guidelines for collecting data and monitoring.**
 - **Set guidelines for:**
 - what data is to be recorded
 - how often it is to be recorded
 - which party is responsible for collecting what
 - how it is to be recorded (notebook, e-mail, spreadsheets, mobile apps, etc.)
 - **Sign Behavioral Contract together** (Found in appendix.)
- **Step 4) Set intervals for check-ins and evaluations.**
 - **Decide how often regular check-ins will occur**
 - There is no guideline for how often check-ins should occur. Some circumstances require daily check-ins while other circumstances require weekly, biweekly, monthly, or even longer periods between check-ins
- **Step 5) Gather data and analyze results.**
 - **At each interval, gather all the available data that is being monitored, organize that data, and analyze it.**

- Package and examine analysis summary and data in a way that's very easy to understand.
- **Step 6) Evaluate the results**
 - Identify areas of success and areas for improvement
 - Assess progress toward goals
 - Repeat your results and action steps back to yourself in your own words
- **Step 7) Form a plan for the next iteration.**
 - Add in habits (optional)
 - Alter tracking methods (optional)