



Why lifting weights is essential for women:

Lifting weights is great for everyone's health (with the added benefit of looking great naked) but particularly important for us women as we age and our hormone levels start to shift:

- 1. Increase bone density: We lose bone mass at a rate of 1% per year after age 40. Regular strength training can slow down bone loss and maybe even build bone. Lower Oestrogen after menopause make women more susceptible to osteopenia and osteoporosis, and hence are at a higher risk for fractures.
- 2. Defy sarcopenia: As we age we lose muscle mass and strength (slowly from the age of 30 with a dramatic acceleration around 60). Simple tasks like opening a jar or carrying groceries get more difficult. Regularly lifting weights in conjunction with adequate protein intake can help retain and build muscle, warding off sarcopenia.
- 3. Live longer: A review of studies published by the British Journal of Sports Medicine found that strength training is associated with a 10% to 17% lower risk of premature death from all causes including heart disease, diabetes and cancer. (1) Strength training keeps your joints healthy and mobile and helps balance and coordination, reducing risks of falls (falls are the second leading cause of accidental or unintentional injury deaths worldwide). (2)
- 4. Improve sleep and mood: Peri-menopause and menopause can wreak havoc on your sleep and mood. Poor sleep disrupted by hot flushes plus low hormone levels can trigger mood fluctuations or even depression. Exercise has been shown to improve sleep and alleviate symptoms of depression (3) but also boosts your confidence and self-esteem.
- 5. Limit fat gain: The decrease in oestrogen around menopause coupled with factors such as poor diet and a sedentary lifestyle can cause fat accumulation around the midsection, making women at higher risk for metabolic and chronic diseases. Resistance training can contribute to lower fat mass and improved oxidation ("burning") of fat, minimising midlife weight gain.

Diet and building muscle:

Your body is like a car, it can't run on an empty tank. It needs nutrients for health, energy and to build muscle. Working out fasted will not cause your body to lose more fat.

Protein: is an essential macronutrient, they are the building blocks of your body, required by the human body for a variety of vital functions. Proteins are essential for the growth, repair, and maintenance of tissues and organs throughout the body.

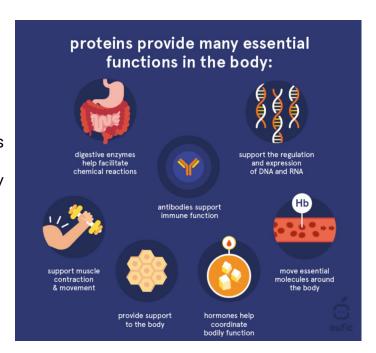






3 reasons why protein is so important:

- 1. Muscle Growth and Repair: one of the most well-known functions of protein is its role in muscle growth and repair. When you exercise, your muscles experience small amounts of damage that need to be repaired. Protein provides the necessary building blocks for muscle repair and growth, which is why it's such an important nutrient for athletes and anyone else who is physically active.
- 2. Enzymes and Hormones: proteins also play a crucial role in the production of enzymes and hormones. Enzymes are molecules that help catalyse chemical reactions in the body, while hormones act as chemical messengers that regulate a wide range of physiological functions.
- 3. Immune Function: proteins are also important for a healthy immune system. Antibodies, which are proteins produced by the immune system, help to identify and neutralise pathogens and other harmful substances in the body.



Without chugging back blenders of raw eggs à la Rocky-style, you ideally want to be eating at least 3 palm sized servings of protein throughout the day, and on top of that some dairy, lots of vegetables (they contribute to protein intake too though of lesser "quality").







If your goal is to lose body fat and reveal the muscle hiding on your legs, prioritise lean sources of protein, such as chicken breast, white fish, leaner cuts of beef, low fat dairy...

Vegan diets have higher protein requirements than omnivores as plant protein sources contain insufficient amounts of essential amino acids and the protein is much less digestible and bioavailable hence cannot be absorbed and used by the body.

Vegans should include a large variety of protein sources such as beans, pulses, legumes, soy, seitan, nutritional yeast, nuts and seeds. A pea/rice blend protein powder is an easy way to consume more bioavailable protein, and vegans should consider supplementing in leucine to maximise protein balance and growth.

Vegetarians can easily reach their protein and essential amino acid requirements by consuming eggs and sources of dairy daily (but be mindful that whole eggs and dairy can contain substantial amounts of fat in addition to the standard recommendations for vegans.)



Here's a visual to show you which protein sources are better absorbed in the body!

Try and cycle through a variety of nutrient choices weekly!









6 reasons dietary fat is essential for health:

- 1. It's a very dense energy source (a little goes a long way so we need to be mindful of quantities for fatloss)
- 2. Cell membrane formation
- 3. Brain and nervous system formation
- 4. Helps transport the fat-soluble vitamins A, D, E, and K
- 5. Provides two essential fatty acids that the body can't make: linoleic acid (an omega-6 fatty acid), and alpha-linolenic acid (an omega-3 fatty acid)

Ideally, we need to consume varied sources and types to thrive (monounsaturated, polyunsaturated). Many populations are deficient in Omega 3s, consider a fish oil or algae oil supplement if fatty fish (salmon, sardines, mackerel...) is rarely consumed.

Examples of fat sources:

- Meat
- Oils (olive, coconut, flaxseed, avocado, sesame, grapeseed, sunflower...)
- Dairy (butter, cheese, milk)
- · Fish and shellfish
- Nuts and seeds (almonds, walnuts, brazil nuts, pumpkin seeds, sunflower seeds, chia seeds...)
- Peanuts (not actually a nut but a legume like soybeans and lentils)

Carbohydrates:

Poor carbs have gotten a bad rap in recent years, between paleo, low carb and keto crazes. They are converted into glucose which is essential to life. The brain and central nervous system prefer glucose for fuel and benefit from a continuously available supply.

Theoretically carbohydrates are the least essential macronutrient because if you don't consume enough, your body can use protein and fat to make glucose. However they are very important because carb sources provide your body with fibre and so many vitamins and minerals vital to prevent disease and promote gut health.

There is no need to eliminate them from your diet, and they do not cause fat gain (an excess of any food will cause fat gain). Just be mindful of portion sizes, a restaurant-sized bowl of rice or pasta can easily be at least 3 times a standard serving size. Try to prioritise minimally processed carbs (veggies, veggies and more veggies, fruit (prefer whole fruit to juices which can be like having 3-5 servings), sweet and regular potatoes, oats, quinoa, beans...) and maybe smaller portions (think closed fist-size) of white rice, pasta, bread, prefer whole grain versions when possible (or palatable), avoid soda (sugar-free versions are fine) and by no means eliminate treats but keep in mind that you'll probably have to limit their consumption if you want to reduce body fat.





"But I don't want to get bulky!"

No you will not look like a She-Hulk: the much lower levels of testosterone in women make it difficult to build muscle. You might see an obvious increase in muscle size in the beginning (colloquially referred to as "newbie gains") but the more you advance the harder it is without making muscle building practically your main occupation. Regular strength training with a well structured program, will however ensure you continue to get strong but definitely not look manly, and especially if you are relatively lean, have a feminine, balanced physique.



It's never too late to start!

In a recent study, researchers compared how 5 groups of individuals from age 20 to 76 years responded to a maximal strength training program and found no difference in improvements between the five age groups or between male and female participants.

References

- (1) Momma, H., Kawakami, R., Honda, T., & Sawada, S. S. (2022). Muscle-strengthening activities are associated with lower risk and mortality in major non-communicable diseases: a systematic review and meta-analysis of cohort studies. British Journal of Sports Medicine, 56(13), 755-763.
- (2) Claudino, J. G., Afonso, J., Sarvestan, J., Lanza, M. B., & Pennone, J. (2021). Filho, CAC; Serrão, JC; Espregueira-Mendes, J.; Vasconcelos, ALV; de Andrade, MP Strength training to prevent falls in older adults: A systematic review with meta-analysis of randomised controlled trials. J. Clin. Med, 10, 3184.
- (3) Cunha, P. M., Werneck, A. O., Nunes, J. P., Stubbs, B., Schuch, F. B., Kunevaliki, G., ... & Cyrino, E. S. (2022). Resistance training reduces depressive and anxiety symptoms in older women: a pilot study. Aging & Mental Health, 26(6), 1136-1142.
- (4) Kittilsen, H. T., Goleva-Fjellet, S., Freberg, B. I., Nicolaisen, I., Støa, E. M., Bratland-Sanda, S., ... & Støren, Ø. (2021). Responses to maximal strength training in different age and gender groups. Frontiers in Physiology, 47.

Image source

https://www.eufic.org/en/whats-in-food/article/what-are-proteins-and-what-is-their-function-in-the-body

https://www.foodunfolded.com/media/images/Bioavailability_of_Proteins_copy.webp

https://www.netcost-security.fr/jeux-video/124159/lacteur-et-bodybuilder-qui-a-donne-vie-a-la-she-hulk-retrodans-she-hulk-se-devoile-des-photos-de-tournage-surprenantes/







Now, let's Lift!

Exercises such as B1, B2 are supersets, perform B1, rest as indicated, perform B2, rest and go back to B1. If the gym is too busy to superset, perform straight sets on all exercises- rest a bit longer than recommended if necessary.

Track your workout and the weights you used on a notepad, an app or your phone. Aim to increase weights or reps (it doesn't have to be by much!) each session if you are able to maintain good form and technique to avoid injury and maximise the benefits of the workout.

EXERCISE	SETS	REPS	REST	NOTES
A) Barbell Hip Thrusts	3	8-12	90-120 seconds	Keep your chin tucked and shoulder blades on the bench.
B1) Goblet Squat	3	12-15	60-90 seconds	Hold a dumbbell or kettlebell towards your chest, keep your torso upright.
B2) Prone Leg Curl	3	8-12	90-120 seconds	Adjust the machine to your desired weight and complete the reps with a slow and controlled tempo on the descent and more explosively going back up.
C1) Bulgarian Split Squat	3	8-12	60-90 seconds	Use 1 or 2 dumbbells and focus on keeping the weight evenly distributed and your torso slightly forward, hinging at the hips.
D1) Leg Extensions	3	15-20	60-90 seconds	Set the knee pad to align with your ankles. Complete the reps with a more explosive force going up and and a slower controlled descent
D2) Seated Hip Abduction	3	15-20	60-90 seconds	Push your legs as far as you can against the pads and control as you bring them back together.





