

## Your Metabolism

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**NUTRITION:** Each type of unsaturated fat independently raises RMR e.g. by reducing insulin resistance (IR) and activating fat burning (Krebs Cycle/mitochondria). Sufficient quality protein raises RMR by stimulating growth and maintaining lean tissue (the engine). Veggies provide both nutrients so the engine functions, and slower digestion (to reduce fuel going to storage) if they are crunchy when you eat them. Carb calories drive movement, the neuroendocrine system, protein production, and fat burning if properly timed and with a slow digestion (with crunchy veggies except right after waking and exercise). In other words, raising RMR nutritionally entails making sure that all of these key elements are present. Missing one part, just like when one thing in your car is dysfunctional, slows the entire machinery.

Once RMR is nutritionally optimized, see if there is too much of a good thing i.e. excess. Saying that you need each part does not mean more is better. I recommend against going less than 1/2 of the amounts in any of the below columns (fats per day, protein/carb at breakfast, starch right after exercise, protein/carb/vegetables at lunch & dinner), or going above 2-3 times these amounts depending on your metabolic rate, your lean tissue mass, and your activity level. The listed amounts are to create 400 Cal meals i.e. 1200 Cal per day, but many active people need 2-3 times this. Estimating calories is the most complex for protein foods because they can contain just as many fat and/or carb calories as protein. Soy, beef, fatty fish, eggs and regular cottage cheese have as much fat calories as protein calories. Regular milk and yogurt also have just as much carb calories as either fat or protein. Starchy legumes (lentils, beans) are ~200 Cal per cup where 1/4 of these are fiber (carbs that don't count), 1/2 (100 Cal) is carb that does count, and 1/4 (50 Cal) is protein, although the efficiency of protein use is only 2/3. Knowing your ballpark Calories per day helps to estimate fluid needs to achieve ~1 L (32 oz) per ~1000 Cal that you consume, spread out evenly for digestion between meals (not just fluids at meals) starting upon wake up.

Minimum 1/2 of the below portions & up to 2-3 times higher portions based on preference & needs

Unsaturated Fat ~100 Cal	Protein ~50 Cal	Veggies ~100 Cal, Vol	Carb ~100 Cal
1-4 Tbsp / <b>thumb</b> volumes	1/4-1 cup / <b>palm</b> volume	3-10 cup / 1-5 pint <b>fists</b>	1/4-1 cup / <b>palm</b> volume
<b>Each type each DAY</b> <b>MonoUnsat / Ω-9</b> 1 Tbsp olive oil 3 Tbsp olives, 4 T avocado / hummus <b>Ω-6:</b> 1 Tbsp any nut butter 2-3 Tbsp nut/seed <b>Ω-3:</b> 1 teaspoon oil 40 Cal 1 Tbsp flax/chia 40 Cal 3 oz salmon sardine →	Up to <b>TWICE</b> the Cal due to fat or carb these foods: • 2 eggs • 3 oz muscle tissue (meat, poultry, fish) • 4 oz cottage cheese, Greek yogurt, tofu • 6 oz regular yogurt • 8 oz soy/milk, legumes →	<b>Every lunch &amp; dinner</b> Not including fiber: • 10 cups leafy greens • 5-10 cups vegetables; more watery = less Cals • 3 cups tomato carrot beet  For portion control: salad If starch: volume ratio 2-4+	<b>Each MEAL w/ Protein</b> Sucrose 1 cup • <b>Fruit</b> (or 1/2 cup banana) • <b>Legumes:</b> Beans, lentils (fiber & prot 50 Cal ea) <b>Starch</b> 1/2 cup glucose: • Tuber: yam, potato • Cereal: rice, corn, other grains e.g. oat, quinoa, wheat e.g. 1 slice bread
NOT oxidized oils • Ω-3 in freezer no air • Ω-6 & 9 in fridge no air • Cold pressed quality oil	NOT oxidized or fast digest • Powders used for meals • Low qual animal product • Bars/suppl w/other ingr	NOT oxidized or fast digest • Soft / cooked past crunch • Eaten after carb calories • Juice/ powder/ supplemnt	NOT oxidized or fast digest • Juice/ powder/ supplemnt • Eaten w/o crunchy veg at lunch or dinner
Your main options for <b>BREAKFAST:</b>			
Your main options for <b>LUNCH / DINNER:</b>	Do not put foods not on list		
Main <b>SNACKS:</b>			Exercise <b>STARCH:</b>

**EXERCISE Strategy for Raising Metabolic Rate (MR)**

Half of our MR (whether considering BMR or RMR) is due to our muscle. We lose more muscle than any other tissue as we age. Recovering some of our lost muscle quality therefore has a large impact on raising MR. Muscle quality means the density of actual contractile tissue within muscle (correlated to muscular strength), the ability to burn sugars for extended periods (muscular endurance), and burn fats for extended periods (correlated to cardiovascular endurance). Muscular strength only increases efficiently with sets of <10 repetitions when those muscles (or you) are not fatigued. Muscular endurance (often thought of as “fitness”) is your strength for >10 repetitions. Fat-burning capacity is increased with either intervals (1-3 minute higher intensity bouts with lower intensity between these bouts), or with steady-pace exercise for extended periods of time (> 1 hour). However, low-intensity for long duration might not reduce body fat, even though it is most correlated to longevity. Since the amount of quality muscle correlates to fat burning, increasing both strength as well as cardiovascular endurance work together to provide a greater than linear sum of benefits. Since mortality risk can increase with > 5 hours of hard exercise per week, efficiency in achieving a higher MR is critical.

Specific exercise you could use	Details of movement to achieve	Details of movement to achieve
<b>Pushing</b> straight in front of you:	Sets < 10	Sets > 10
<b>Pulling</b> straight back to you:	Sets < 10	Sets > 10
<b>Leg</b> exercise:	Sets < 10	Sets > 10
<b>Interval</b> exercise for fat burning:	Bouts of 1 min to near fatigue	Bouts of 2-3 min to near fatigue
<b>Steady</b> pace movement for longevity:	Medium intensity > 1 hour	Low intensity > 2 hours

**Your minimalist 1-week program** including each type of strength & endurance activity

- Fill in the exercise sessions that are the most important to you personally **FIRST**
- Specify endurance **movement** (walk swim cycle) & **target** (sprint = metabolism, steady pace = health)
- Specify strength body **part** (push, pull, leg, or whole body “WB”) & repetition range (<10 H or >10 L)

Day	1	2	3	4	5	6	7
Endurance <b>movement &amp; target</b>							
Strength body <b>part &amp; &lt;10 “H” or &gt;10 “L”</b>							

**STRESS** response can be improved for several hours in the evening by systematically integrating things into your evening that you know from past experience improve your evening & **SLEEP** experience. This includes exercise **timing**, whether you eat with others or standing up & when, TV vs reading, music, etc. **Create a stress reducing evening program (what & when) based on your insights into your life.** What you do throughout your day starting the moment when you wake ultimately determines whether or not there is time to make room for reducing stress response in the evening. This includes how quickly you initiate your nutrition (including hydration) to coincide with your required circadian rhythm/schedule. What is your ideal/required **TIME** of waking, water, food & what do you need to take with you to work? Instead of trying to remember to do each thing right each day, set up your environment to succeed.