

What's up with metabolism?

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Happy Summer!



Summer Bucket List



- Create your own summer bucket list
- Excavate frozen fruit**
- Do some learning outside
- Make suncatchers**
- Make sidewalk chalk paint
- Explode sandwich bags
- Catch fireflies
- Make a balance beam
- Go see fireworks
- Throw whirlybirds off the deck
- Make a leaf scrapbook
- Go on a hike
- Water blob
- Play miniature golf
- Make root beer floats
- Wash the car by hand
- Library's summer reading program
- Library's summer letterbox program
- Outdoor scavenger hunt
- Photo scavenger hunt
- Make a map of the backyard
- Have a carnival at home
- Go for a boat ride
- Go bowling
- Pick raspberries



- Make dirt pudding
- Grow a garden
- Bake something with fresh cherries
- Play in the creek
- Go to a park
- Build a campfire
- Cook dinner over the campfire
- Make s'mores
- Go to a baseball game
- Make fireworks art
- Make patriotic fruit kabobs
- Make astronaut pudding
- Swim in a pool
- Make a butterfly craft
- Make homemade popsicles
- Make a father's day gift
- Go out for ice cream
- Go for a bike ride
- Make a jellyfish suncatcher
- Make a mini ocean aquarium
- Make beachy pudding cups
- Make under the sea graham
- Cracker snacks
- Play with water beads
- Have a water gun battle
- Visit a splash pad

- Start a lemonade stand
- Play in the sprinkler
- Play in a public fountain
- Fly a kite
- Blow bubbles
- Hunt for cloud animals
- Fly paper airplanes
- Play in the mud
- Go to a museum
- Go to a yard sale
- Play frisbee
- Play hide and seek outside
- Visit the library
- Take photos of flowers
- Slip n slide
- Workshops at Lowes & Home Depot
- Visit a pet store
- Jump rope
- Play hopscotch
- Visit a fair or carnival
- Build an obstacle course
- Create a music video
- Start a youtube channel
- Play with shaving cream
- Make a fairy garden
- Take a nap in a hammock



What's in Season? What is your go-to potluck dish?

- Apples
- Apricots
- Bananas
- Beets
- Bell Peppers
- Blackberries, blueberries, raspberries
- Cantaloupe, honeydew melon
- Carrots, Celery
- Cherries
- Corn
- Cucumbers

- Eggplant
- Green Beans
- Lemons, Limes
- Lima Beans
- Mangos
- Okra
- Peaches
- Plums
- Strawberries
- Summer Squash, Zucchini
- Tomatillos
- Tomatoes
- Watermelon



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- One glass of water between meals (you will naturally feel thirsty and feel like drinking water).

So... are you ready for it?

Contact: Your Name
your email address
Tel: 0000 your number
personal message personal message
personal message personal message



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Body Fat = Food + Beverages – Metabolism – Exercise – Other movement



Definitions

➤ **Metabolism:**

- **The chemical reactions in the body's cells that change food into energy.**
- Our bodies need this energy to do everything from moving to thinking to growing.

➤ **Basal Metabolic Rate**

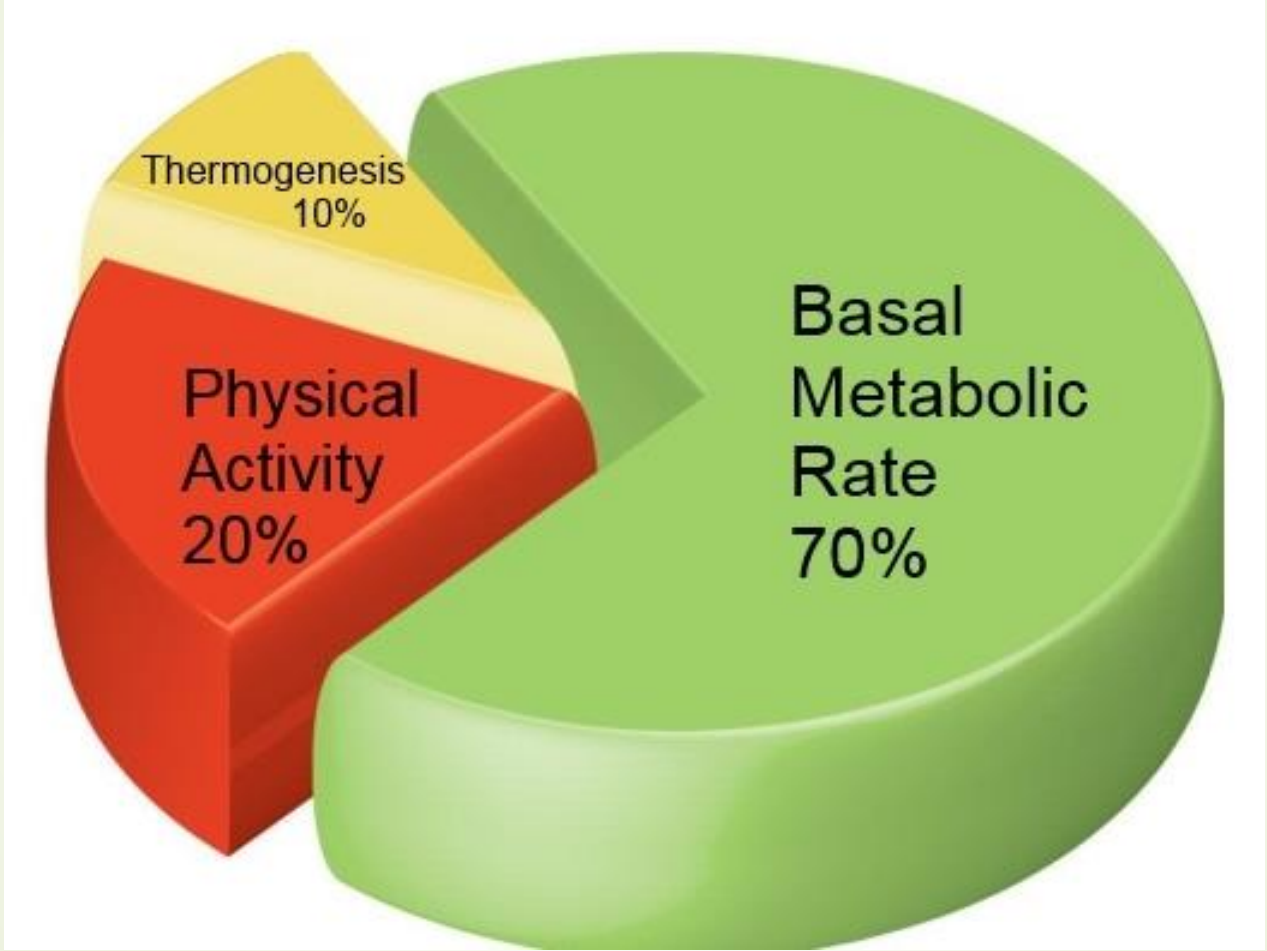
- The calories needed to support daily activities needed for life

➤ **Resting Metabolic Rate**

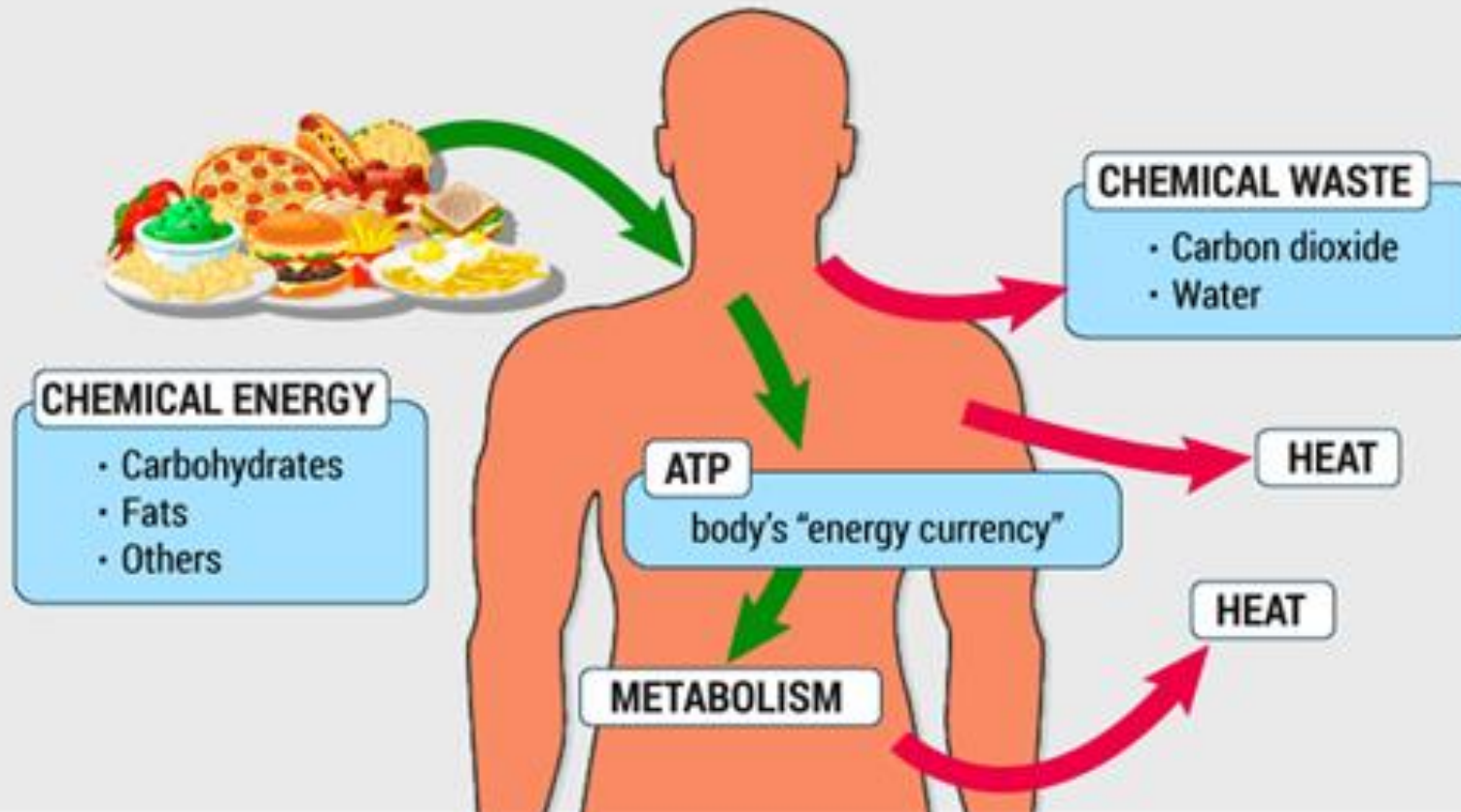
- Calories burned at rest

➤ **Thermogenesis**

- The calorie burn as result of creating heat to digest foods



ENERGY AND HUMAN LIFE



With help from Oxygen, **energy** found in CHO, Fat and Pro (in C-C and C-H bonds) is...

- captured in ATP
- “leftovers” (C & H) are converted to CO₂ and H₂O



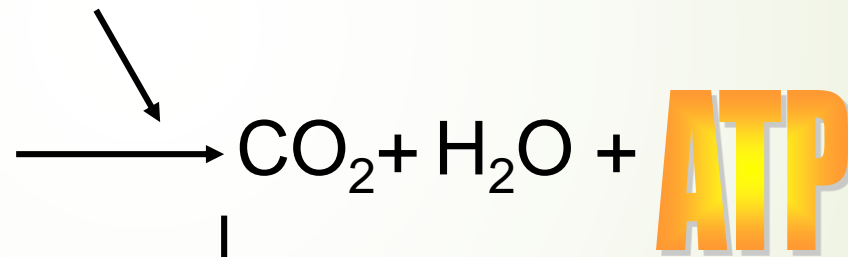
CHO

FAT {C,H,O & N}

PRO

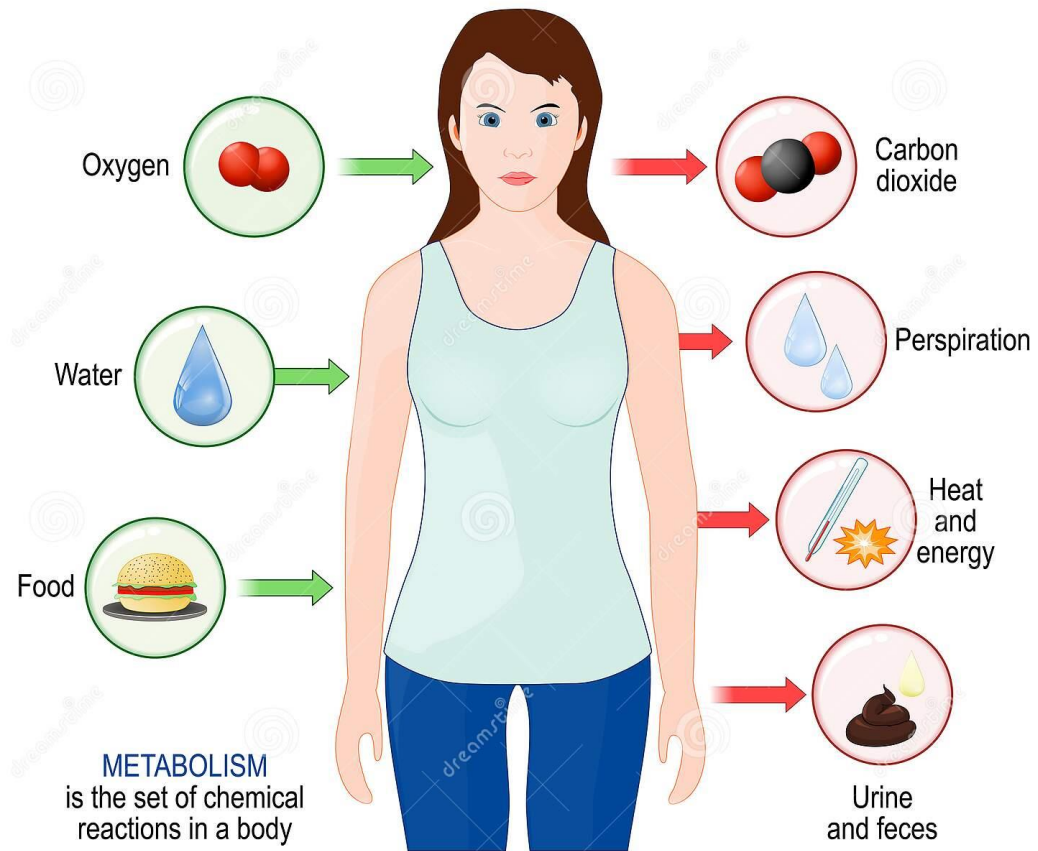


O₂ (from lungs)



HEAT &
Urea (N)
(waste)

Metabolism



METABOLISM
is the set of chemical
reactions in a body



Basal Metabolic Rate - BMR

- Age
- Height
- Growth
- Body Composition – more muscle = higher BMR
- Fever
- Stresses – diseases, medications
- Environmental temp (both hot and cold raise BMR)
- Malnutrition (lowers BMR)
- Hormones – ie. Thyroid can raise or lower
- Smoking – increases
- Caffeine – increases
- Sleep – lowest when sleeping

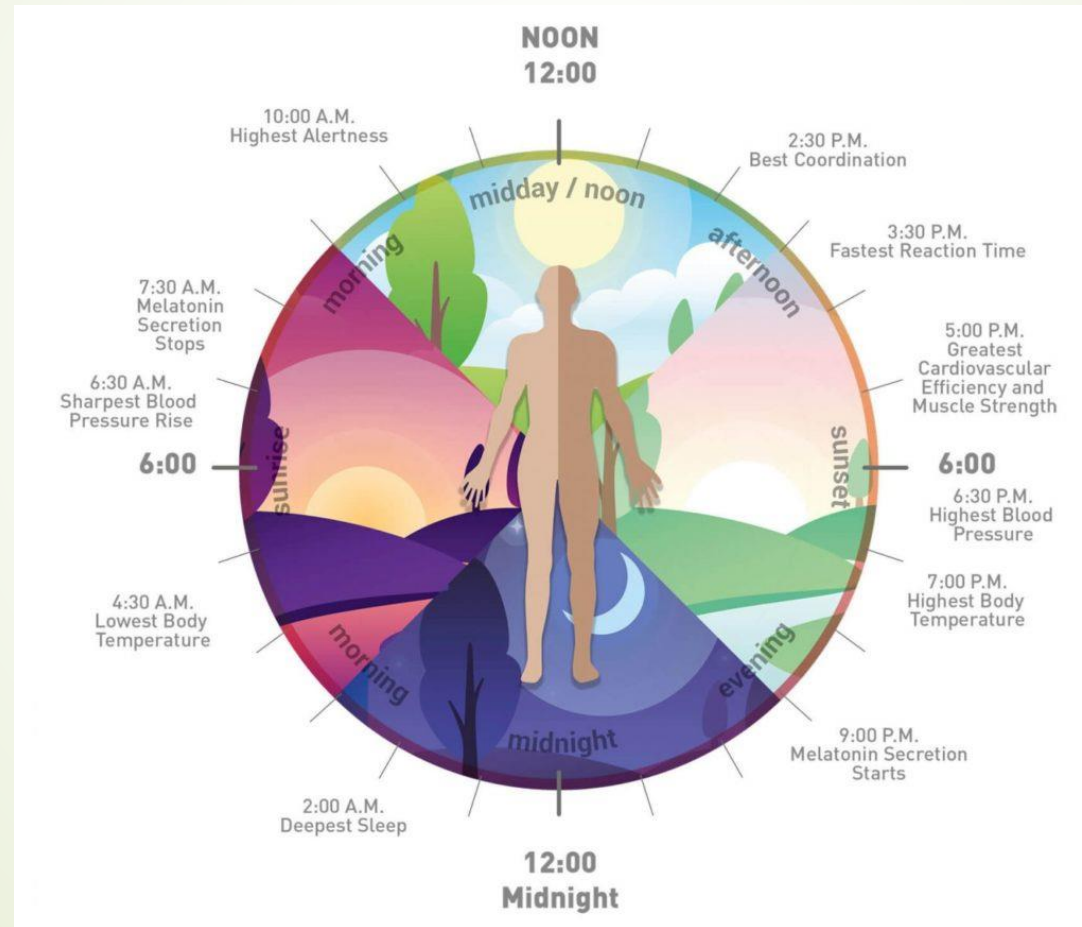
Factors affecting metabolism you can change

- Exercise: Continues burning calories after activity, builds muscle which tells body how many calories to burn – exercising fasted may burn more calories
- NEAT: non-exercise activity thermogenesis
- Standing burns 3x more calories per minute than sitting
- Body mass
- Muscle mass
- Health/illness



Circadian Rhythm

The 24-hour internal clock in our brain that regulates cycles of alertness and sleepiness by responding to light changes in our environment.





Maximize calorie burn using circadian system

- Sleep at night, be active during the day
- Sleep 7-8 hours nightly
- Early to bed, early to rise
- Avoid bright light exposure at night
- Sleep in total darkness if possible
- Eat dinner at least 2-1/2 hours before going to bed
- Avoid eating at night

Metabolic Syndrome

- Cluster of symptoms that contribute to heart health risk, diabetes or stroke.
- 3 or more of these:
 - Abdominal obesity
 - High blood sugar
 - Low HDL
 - High blood pressure
 - High triglycerides



The magic of thermogenesis

- 2020 study by PCRM – investigating weight loss with WFPB diet.
- 14% higher thermogenesis with WFPB diet contributing to weight loss.
- ‘After-meal burn’
- Sleep plays role, too





Weight loss tweaks by Dr. Greger

- ▶ Vinegar (can increase fat burn) – 2 tsp each meal
- ▶ Black cumin (not related to cumin) – ¼ tsp daily
- ▶ Eat breakfast (more calories burned in the morning, more thermogenesis – 50% more than night, 25% more in afternoon than night) - Eat breakfast like a king, lunch like a prince, dinner like a pauper
- ▶ Make meals last 20 minutes – can lower calorie intake:
 - ▶ eat foods that take longer to eat – chewier, bulkier, harder
 - ▶ small, well-chewed bites – takes that long to turn on hormones that tell us we are satiated
- ▶ Preload with water – 2 cups cool water (boost metab)
- ▶ Preload with negative calorie foods (volumetrics)
- ▶ Undistracted meals (focus on satiety)

More tweaks....



- ¼ tsp Garlic powder daily – may reduce body fat
- 1 tsp ginger OR ½ tsp cayenne pepper (assoc with weight loss, pepper increases brown fat activation)
- 2 tsp nutritional yeast – aid weight loss
- ½ tsp cumin lunch and dinner – aid weight loss
- 3 cups green tea daily – between meals
- Stay hydrated
- Intact whole grains vs flour – more fiber, feel more full
- Time-restrict eating: <12 hour eating period – no food after 7 pm – utilizing circadian rhythms

What can you do to increase your metabolism?

- Choose whole, real foods
- Avoid the CRAP diet: Calorie-rich and processed
- Adjust sleep habits if needed
- Be active
- Develop more muscles
- Increase fidgeting
- Try some 'tweaks'
- Adjust calorie timing: more in morning, less at lunch, least at dinner





My Recipe today: Tandoori Tofu Sheet Pan meal

- 7 ounces extra-firm tofu, drained and pressed
- 2 small (~1/2 lb each) sweet potatoes, cut into 1-inch wedges
- 2 cups small cauliflower florets
- 1/2 medium red onion, halved and thinly sliced (1 medium onion yields 1 cup sliced)
- 2 Tbsp olive or avocado oil – used about 2 tsp
- 2 Tbsp [Tandoori Spice Mix](#) (or store-bought)
- 1/2 tsp sea salt – left out



Have an
awesome
Summer!

