A BRIEF DESCRIPTION OF LEUCINE

- **Educating and implementing health & fitness**
- **Fitness and nutrition advise for you and your loved ones.**
- **Our mission is to make a positive impact on people's health and wellbeing.**

LEUCINE

FITNESS CONSULTING

WHO WE ARE

JEREMY CHOI

DIRECTOR

Jeremy has previously worked in the property sector for four years, but always been obsessed with the health and fitness industry.

Subsequently, he began the role of Director at Fit Lab Hong Kong Limited in 2016. Currently with three fitness clubs, a 16,000 sf space located at Kwun Tong, a 6,000 sf space located at Lai Chi Kok, and a new Yoga Studio in Causeway Bay.

He is also a holder of NASM-CPT Certificate. By turning his attention into his passion, he became the health and fitness entrepreneur he is today.

HEYWOOD CHEUNG

DIRECTOR

With his interest lying in economics and statistics, Heywood worked as research professional for 8 years at property developers, supermarket, and a global research agency. He is now turning his passion in nutrition and fitness into his profession.

He is passionate in nutritional science. He is a holder of Precision Nutrition Level 1 Certificate in Exercise Nutrition.

LEUCINE

FITNESS CONSULTING

THE GOLDEN AGE: AGE STRONG AND HEALTHY

AGING IS A FACT OF LIFE.
GROWING OLD IS A MATTER OF CHOICE.

THE THREE FACTORS

THE THREE MOST COMMON CULPRITS THAT WE HAVE CONTROL OVER

STRESS

INFLAMMATION

BLOOD SUGAR IMBALANCES

Factor #1

STRESS

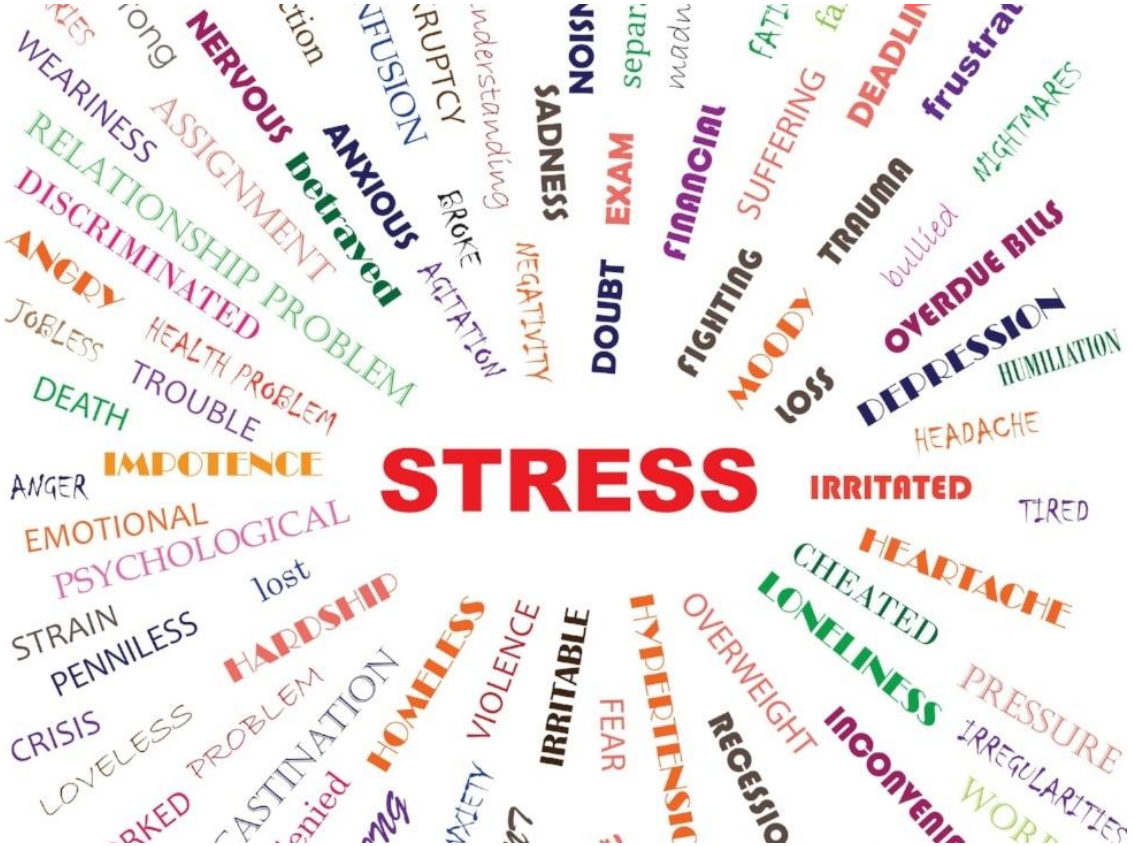
ANCIENT STRESS

FLIGHT OR FIGHT SITUATIONS

Low danger = low stress.

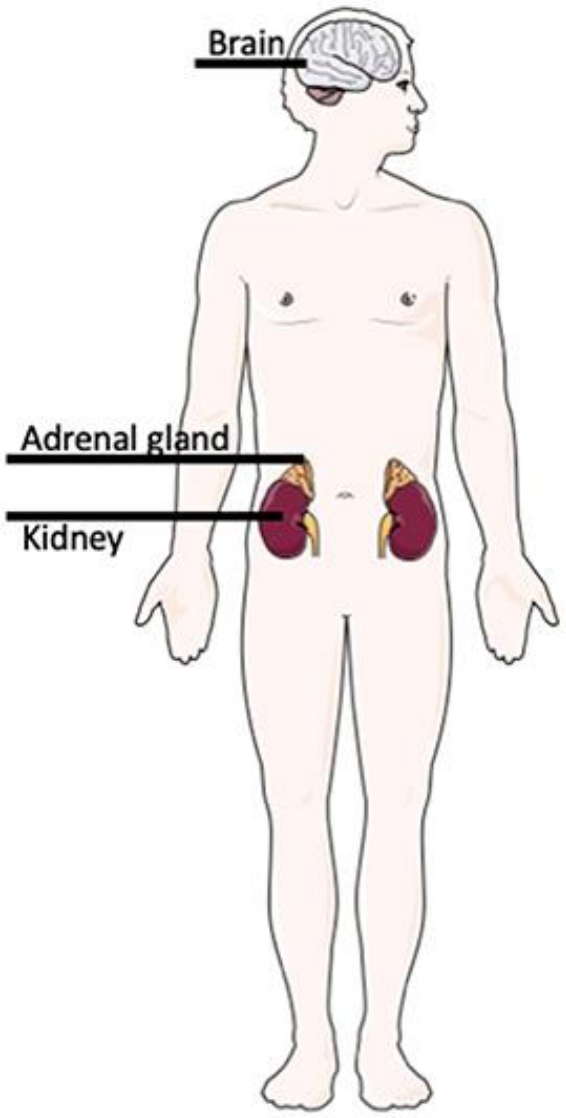
MODERN STRESS

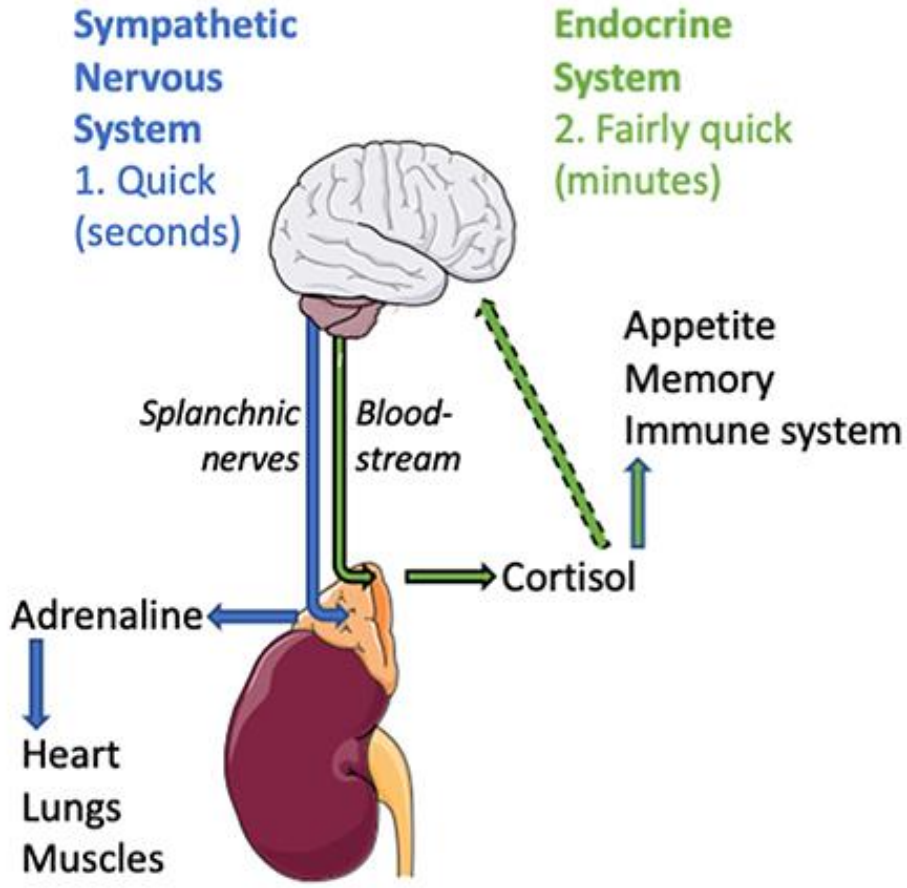
NON-LIFE-THREATENING / TRIVIAL SITUATIONS



Ever-present nowadays.
Modern life clenches stress overtime.

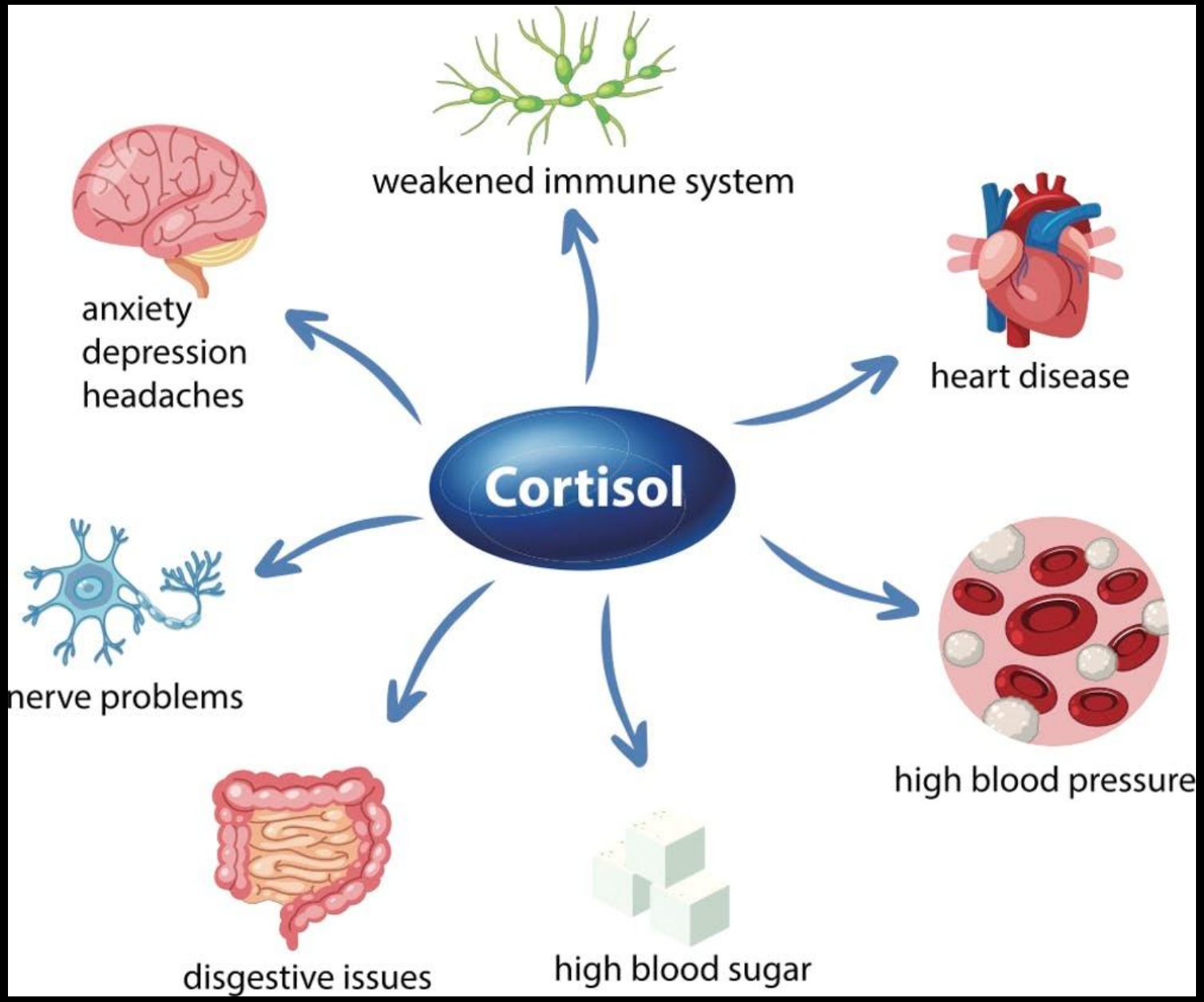
Stress signals + stressful situations ➔ increased cortisol levels.





Cortisol

- Key Impact - insulin regulation, sex hormones production and thyroid health.
- Key Functions - microbiome regulation, cognition, memory, digestion and absorption and immune function.
- If constantly elevated can affect the above.
- Master hormone – affect every system in the body.
- A factor in every health issues.



Symptoms of
HIGH CORTISOL LEVELS

INCREASED ANXIETY

HIGHER RISK FOR BONE FRACTURES & OSTEOPOROSIS

WEIGHT GAIN (ESPECIALLY AROUND THE ABDOMEN/STOMACH)

HIGHER SUSCEPTIBILITY TO INFECTIONS

FATIGUE/POOR SLEEP (INCLUDING FEELING "TIRED BUT WIRED")

MUSCLE ACHES AND PAINS

A PUFFY, FLUSHED FACE

HIGH BLOOD PRESSURE

INCREASED URINATION

CHANGES IN LIBIDO

MOOD SWINGS

ACNE OR OTHER CHANGES IN THE SKIN

IRREGULAR PERIODS & FERTILITY PROBLEMS

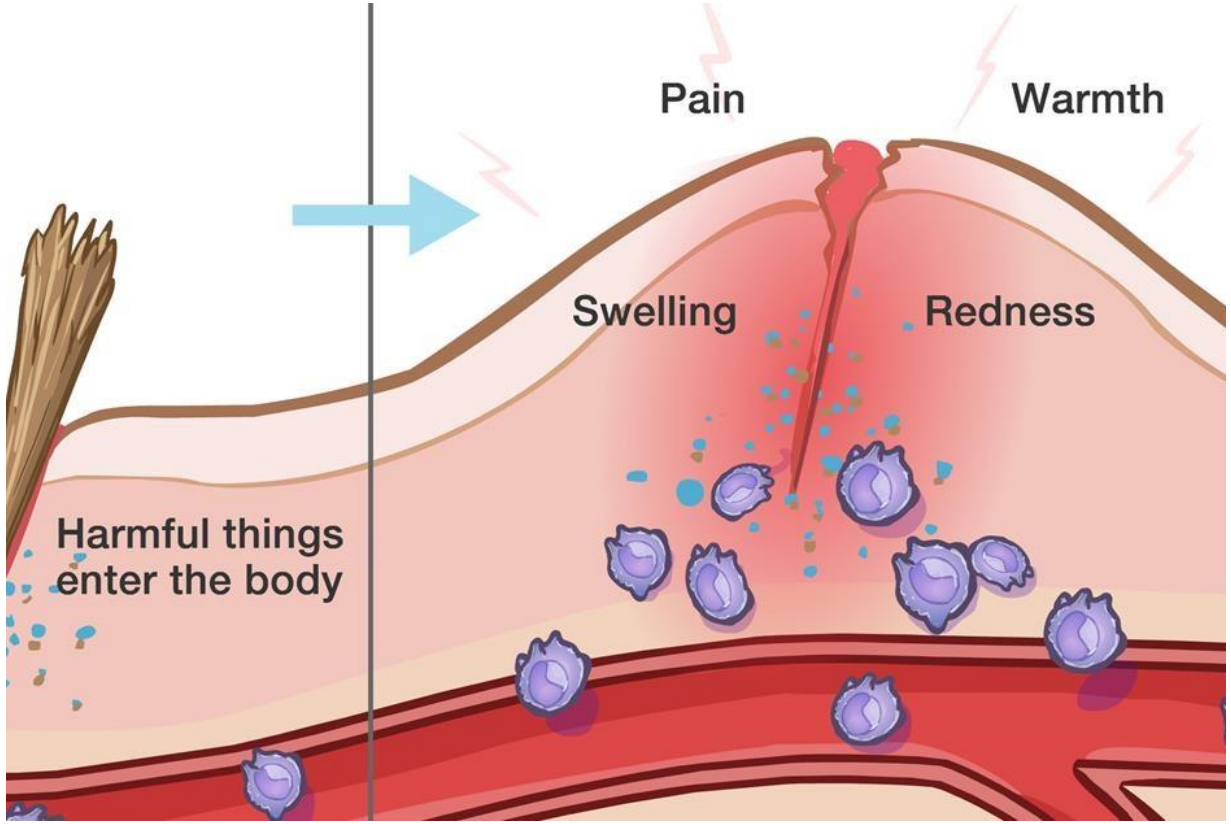
EXCESSIVE THIRST

Factor #2

INFLAMMATION

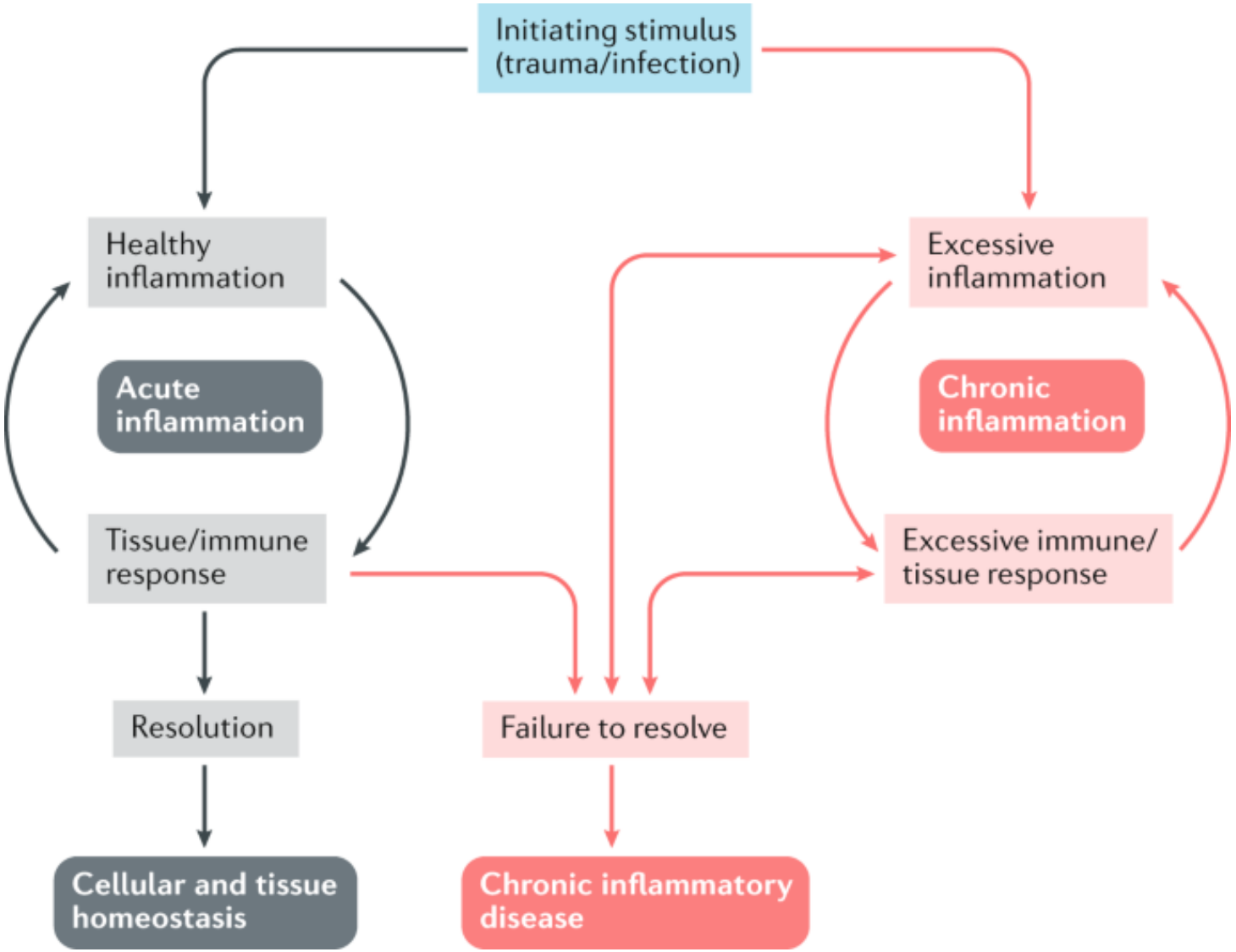
ACUTE INFLAMMATION

Acute (bruise-short run): Wound healing + diseases



CHRONIC INFLAMMATION

Chronic (body-long run): Poor sleep / smoking / food intolerances / toxicity.



Sensitivity

Inflammation happens when the body senses something that should not be there. Hypersensitivity to an external trigger can result in an allergy.

Exposure

Sometimes, long-term, low-level exposure to an irritant, such as an industrial chemical, can result in chronic inflammation.

Autoimmune disorders (自體免疫性疾病)

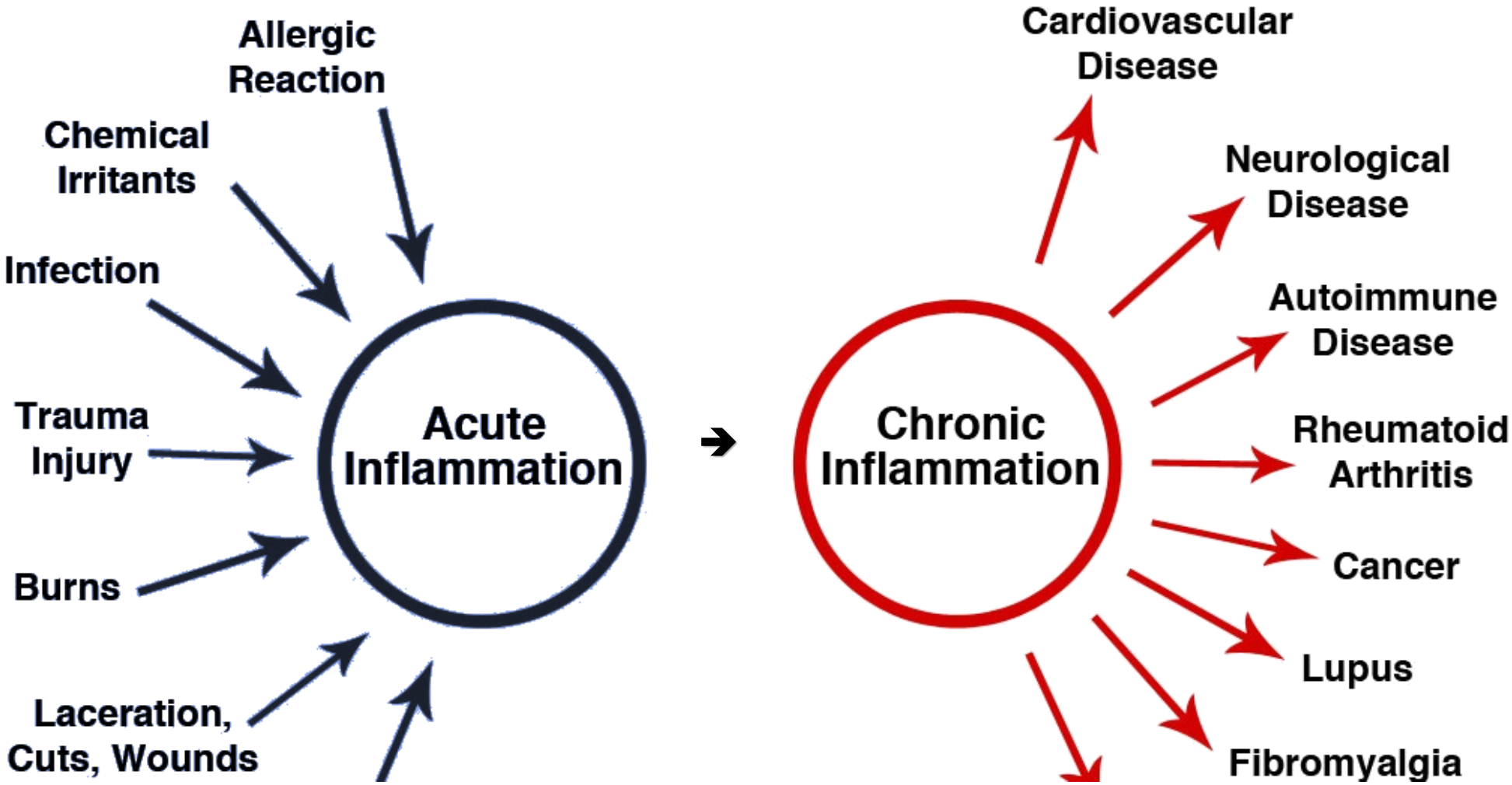
The immune system mistakenly attacks normal healthy tissue, as in psoriasis.

Persistent acute inflammation

In some cases, a person may not fully recover from acute inflammation. Sometimes, this can lead to chronic inflammation.

ACUTE VS CHRONIC INFLAMMATION

Sub-clinical inflammation - Associated with major degenerative diseases known today: Diabetes / obesity / cancers; Related to Alzheimer's / asthma / arthritis.



Factor #3

BLOOD SUGAR IMBALANCES

HOW INSULIN WORKS

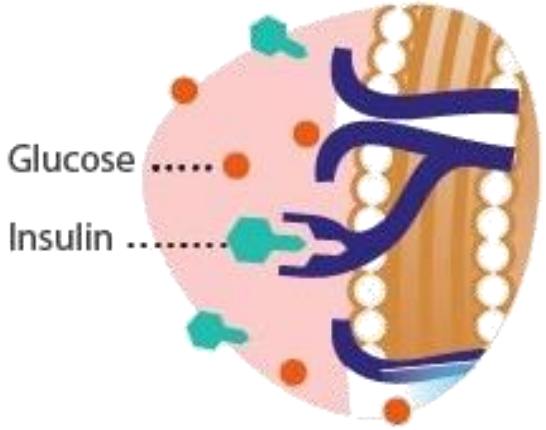
Insulin (胰島素) helps control blood glucose levels by signaling the **liver, muscle, and fat cells** to take in glucose from the blood.

1

Food we eat becomes glucose and enters our bloodstream. Blood glucose level goes up.

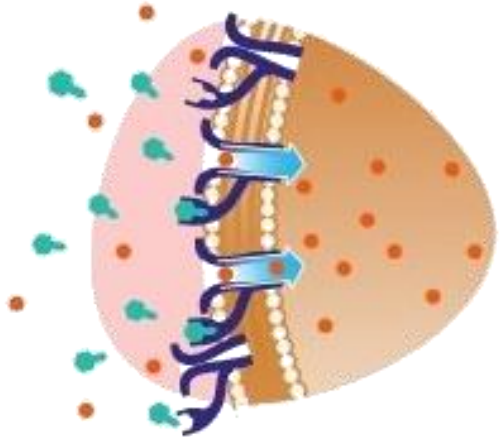
2

Insulin, a hormone made by the pancreas, acts as a key to unlock body cells and let in glucose.



3

Glucose leaves the bloodstream and enters cells. Blood glucose level returns to normal.



4

Cells turn glucose into energy.

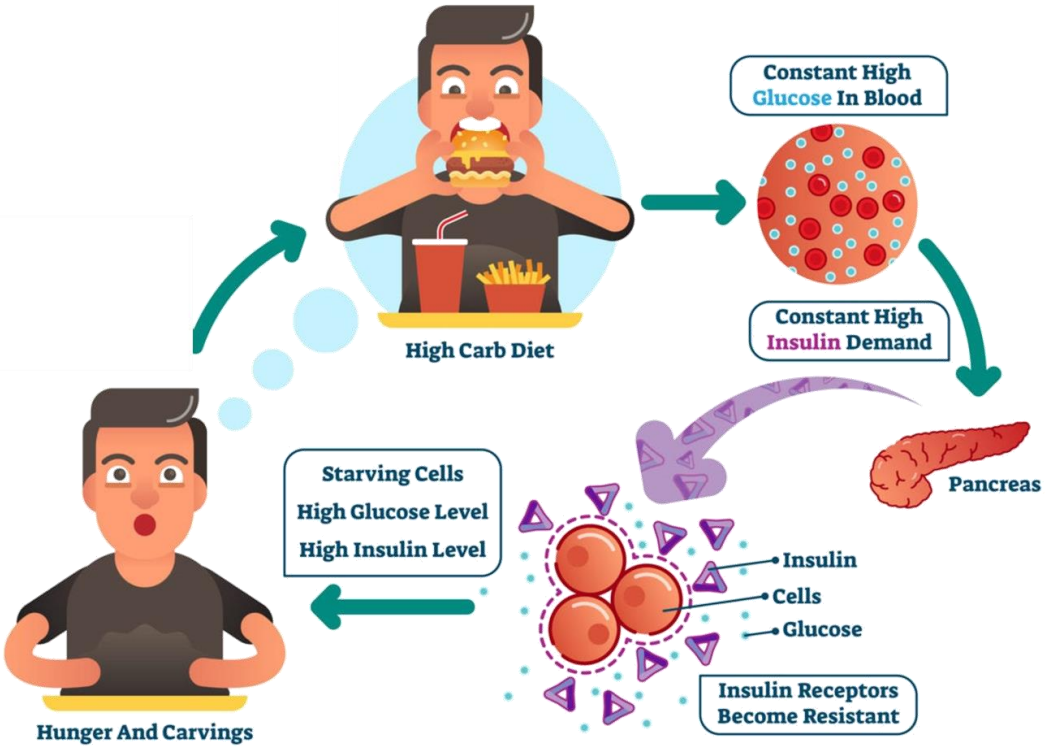
INSULIN RESISTANCE ➔ BLOOD SUGAR IMBALANCES

High Carbohydrates intake

- Blood sugar spike ➔ insulin levels up
- Energy crash ➔ Crave sugary foods.

- Too much carbs ➔ negative impact on sleep
- Cortisol rise to counter high insulin.
- Poor sleep = negative impact on insulin sensitivity.
- Viscous cycle

= main causes of the issues associated with aging

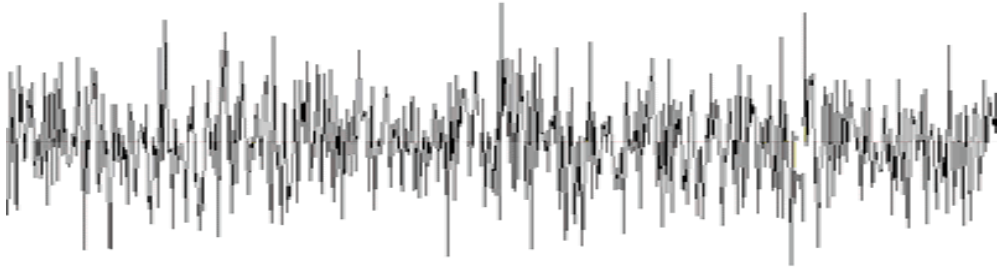


Our Goal is to Preserve insulin sensitivity.

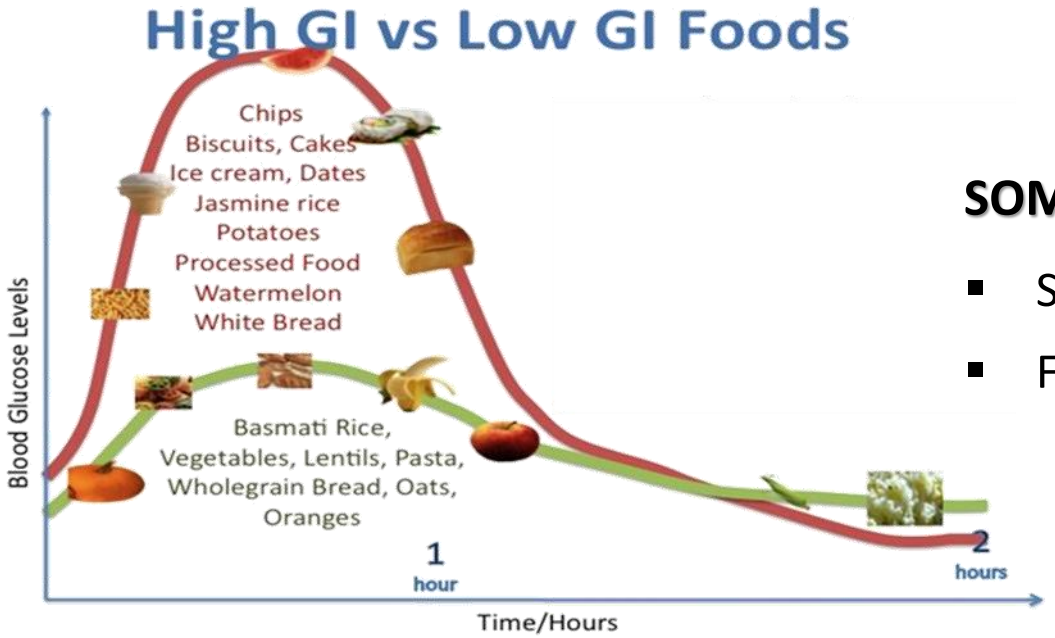
Dysregulations➔ metabolic mayhem.

INSULIN RESISTANCE

High levels of insulin over extended amount of time ➔ Resistance. Similar to background noise:



- **INSULIN IS A SIGNAL = NOISE.**
- **RAISED OVER A LONG TIME ➔ DESENSITIZED**



SOME CARBS BETTER THAN OTHERS

- Same mount of carbs – produce more insulin to have effect.
- Fat gain / diabetes / obesity / cardiovascular diseases.

- Food with a high glycemic index GI (red) cause a dramatic rise in blood glucose.
- Lower glycemic foods (green) are absorbed more slowly.

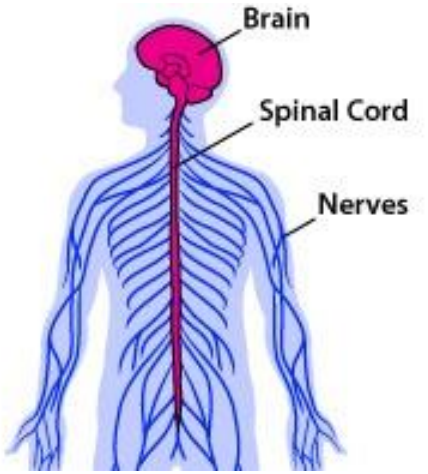
Solution #1

EXERCISE REGULARLY

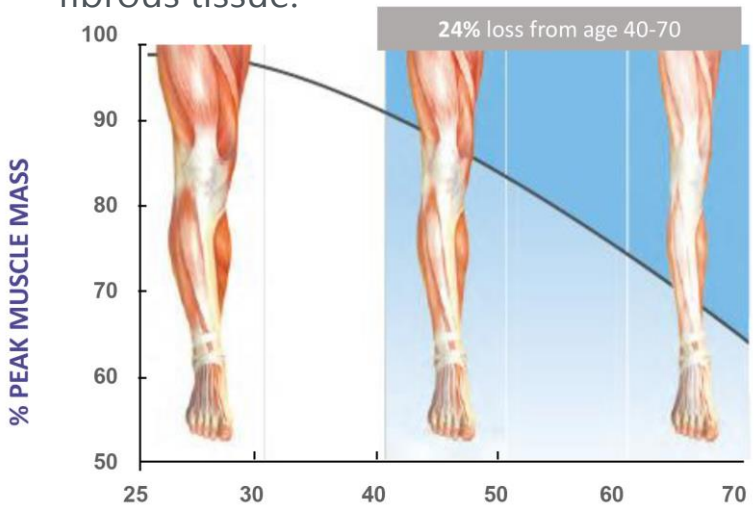
WHY EXERCISE?

AS WE AGE:

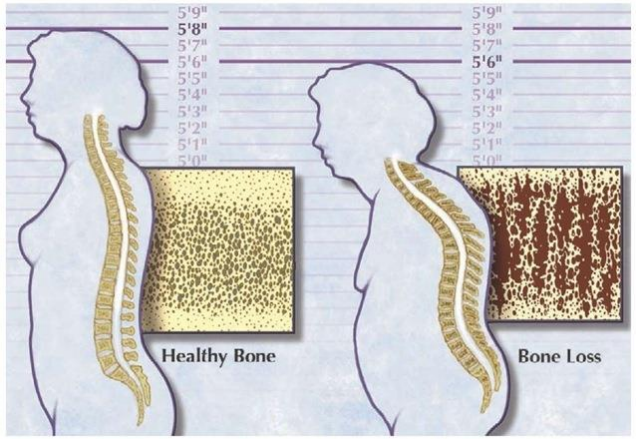
NERVOUS SYSTEM ATROPHY
Causing muscles to have reduced ability to contract.



MUSCLE LOSS
Reduce in muscle fibers and shrink in size; and are replaced more slowly and lost muscle tissue is replaced with a tough, fibrous tissue.



LOWER BONE MASS
Bones are weaker and places people at risk of breaks from a sudden bump or fall.



"Exercise is the stimulus that returns our bodies to the conditions for which they were designed… Exercise is substitute cave-man activity to make our bodes & our mind "normal" in the 21st century. And merely Normal, fir most worthwhile humans, is not good enough."

Mark Rippetoe ,Starting Strength

LIFT HEAVY!

Reason #1: You have full control

MANY OTHER SPORTS

YOU DO NOT HAVE FULL CONTROL

STRENGTH TRAINING

YOU HAVE FULL CONTROL ON YOUR ROUTINES AND THE EXECUTION OF THE EXERCISES

LIFT HEAVY!

Reason #2: You can achieve multiple goals with lifting

Want to look great naked? Lift!

Want to lose fat? Lift!

Want to be stronger? Lift heavy stuff!

Want better conditioning? Lift faster!

Want to live longer? Lift yourself off the couch!

LIFT HEAVY!

Reason #3: you will need strength to go about your daily activities

CARDIO?

THE MANY BENEFITS OF RESISTANCE TRAINING:

Physiological adaptations:

- Muscle strength & power
- Muscle mass
- Neuromuscular functioning.

Functional benefits:

- Mobility & movement quality
- Performance in activities of daily living
- Psychosocial well-being
- Resistance to falls & other injuries.

LIFT HEAVY!

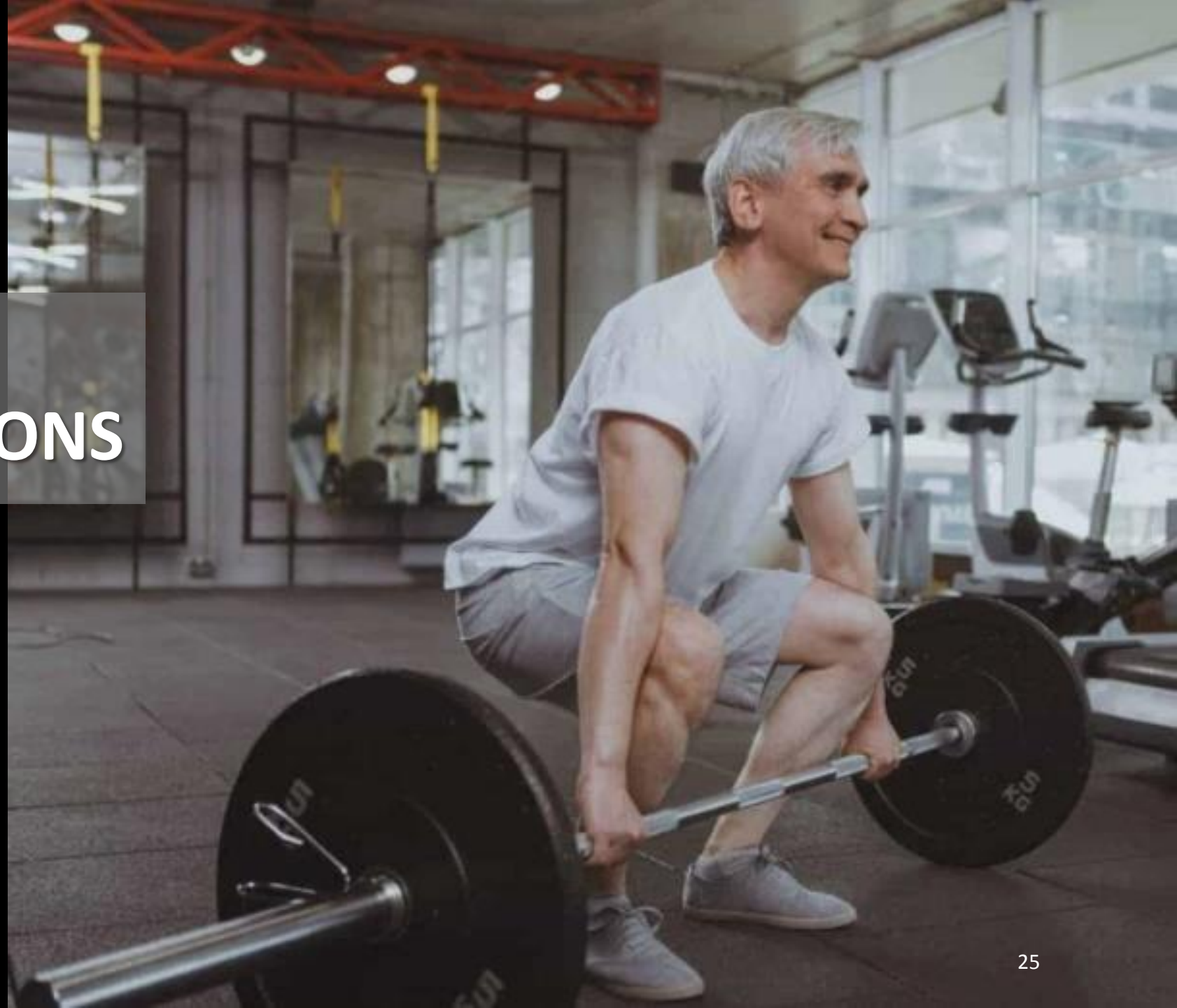
MANY MORE BENEFITS

- **Improve cognition + mood**
- **Stress reliever**
- **Increase testosterone levels**
- **Combat natural decline in muscle & bone density**
- **Anti-inflammatory**
- **Improve insulin sensitivity**

THE REAL ENEMY:
A SEDENTARY LIFESTYLE

GET UP AND BE ACTIVE!

EXERCISE RECOMMENDATIONS



HOME WORKOUT EQUIPMENT NEEDED

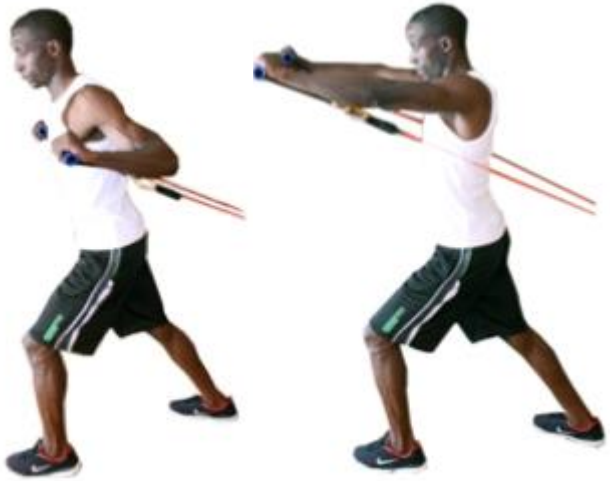
RESISTANCE BANDS

DOOR ANCHOR FOR RESISTANCE BANDS

CHAIR

... or anything that's heavy!

HORIZONTAL PUSH



CHEST PRESS (RESISTANCE BAND)

KNEELING PUSHUP

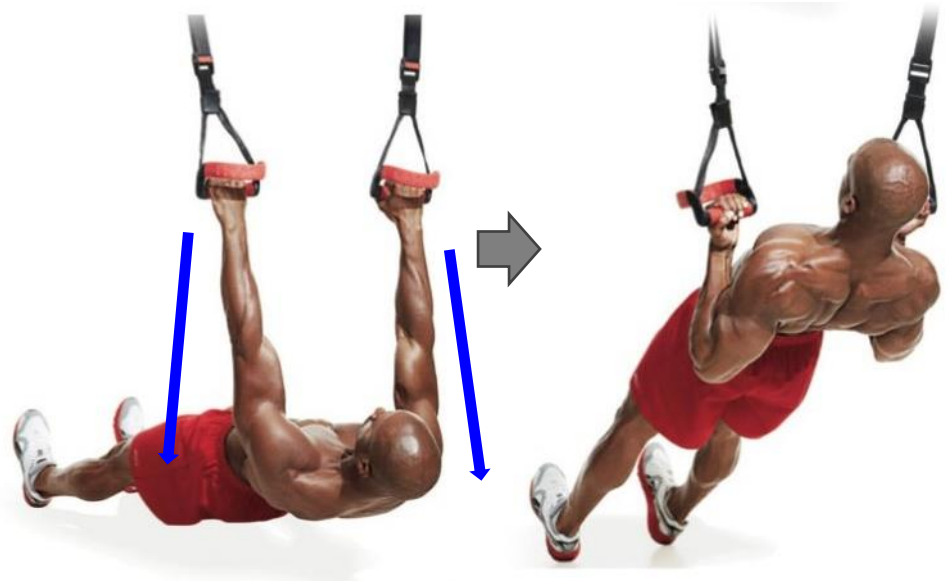
PUSHUP

DECLINED PUSHUP

DIFFICULTY

HORIZONTAL PULL

ROW (RESISTANCE BAND)

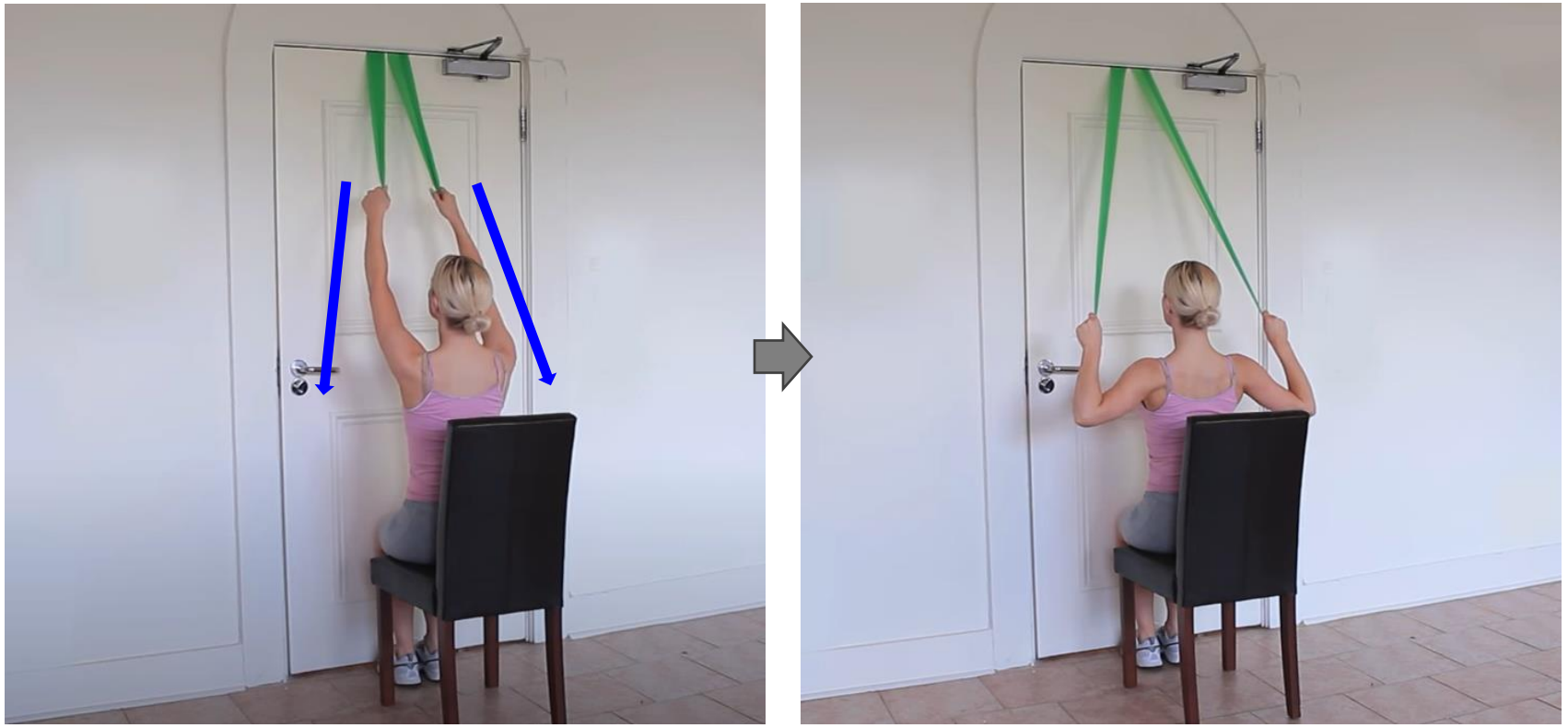


INVERTED ROW

VERTICAL PUSH

SHOULDER PRESS
(RESISTANCE BAND)

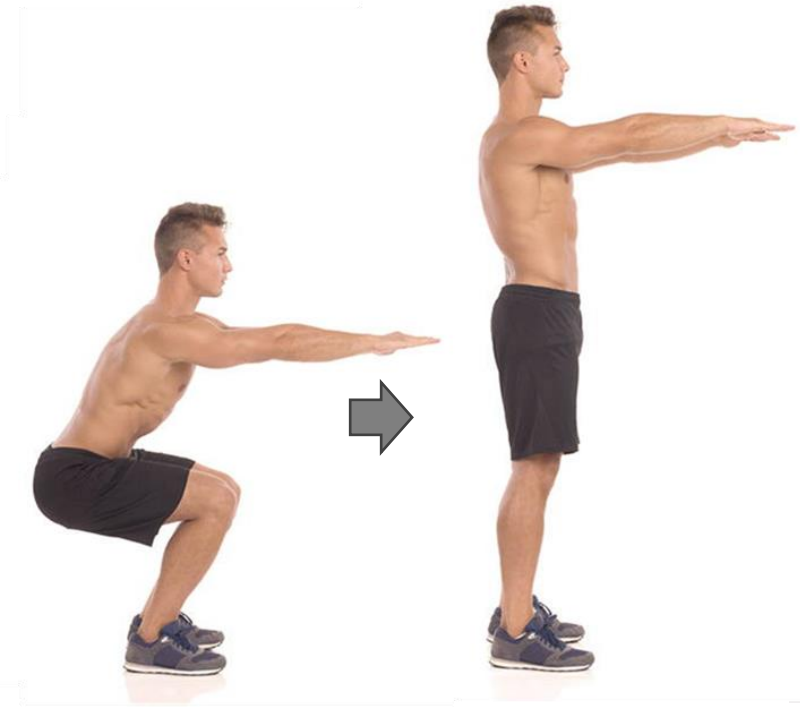
VERTICAL PULL



SEATED LAT PULL
DOWN
(RESISTANCE BAND)

LOWER BODY PUSH

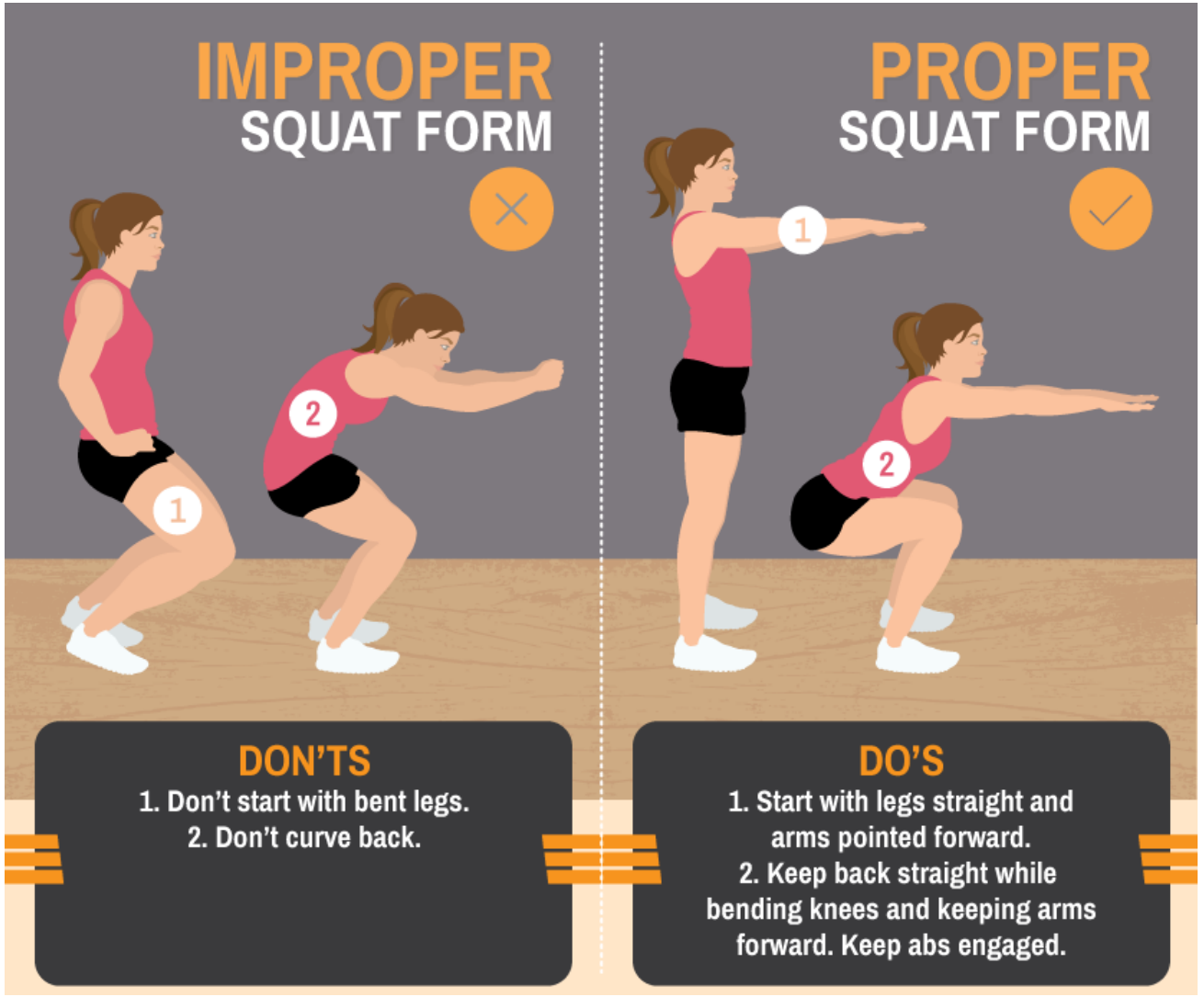
CHAIR SQUAT



SQUAT

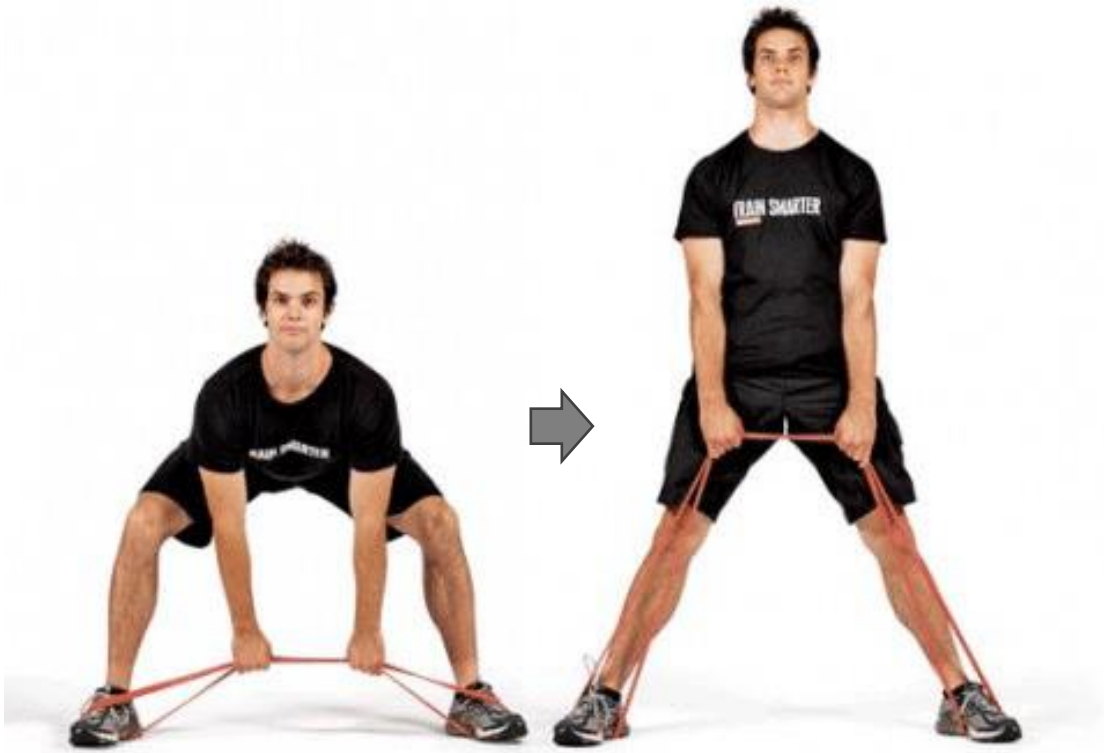
SQUAT
(RESISTANCE BAND)


NEUTRAL NECK ALIGNMENT
FORWARD FOCUS
SHOULDERS BACK
CHEST UP
SPINAL ALIGNMENT
NO ROUNDING THE LOWER BACK
HIPS BELOW PARALLEL
KNEES TRACK OVER TOES
LEGS SHOULDER-WIDTH APART
FEET FLAT/WEIGHT ON HEELS

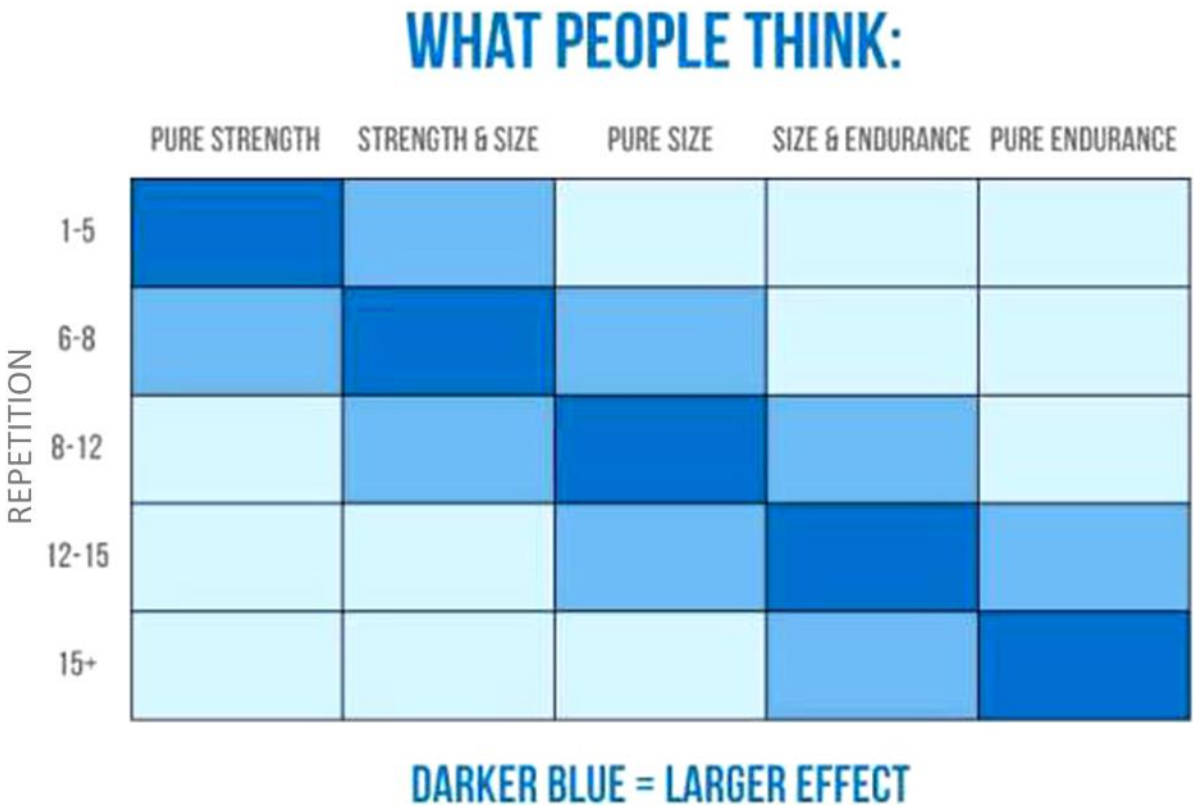

IMPROPER
SQUAT FORM
PROPER
SQUAT FORM
1
2
1
2
DON'TS
1. Don't start with bent legs.
2. Don't curve back.
DO'S
1. Start with legs straight and arms pointed forward.
2. Keep back straight while bending knees and keeping arms forward. Keep abs engaged.

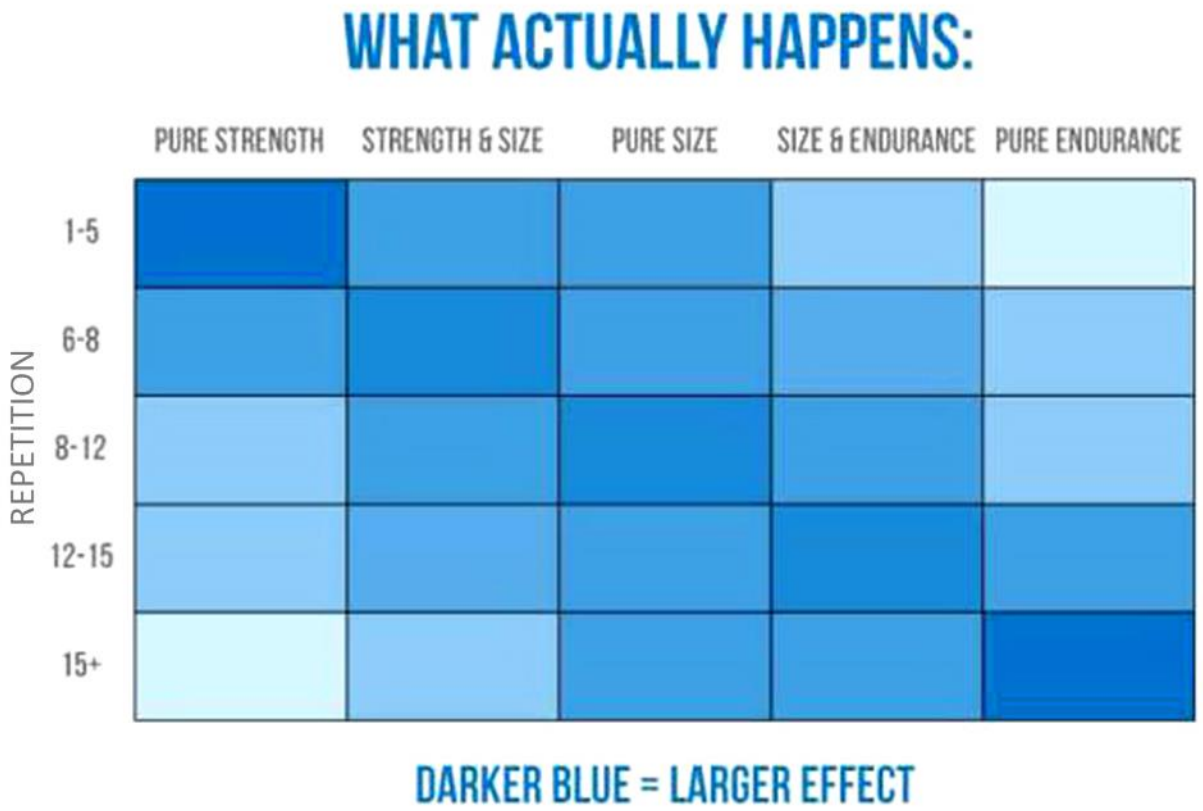
LOWER BODY PULL

DEADLIFT
(RESISTANCE BAND)



SUMO DEADLIFT
(RESISTANCE BAND)





<u>Finding resistant / weights that allow you to perform these repetition ranges (say between 6-15 reps)</u>

- When performing these reps:
  - **Too Difficult** & unable to complete the reps? ➔ **REDUCE the weight!**
  - Feels **too easy**? ➔ **INCREASE the weight!**

TRAIN THESE EXERCISE 1-2 TIMES PER WEEK; 3-5 SETS PER EXERCISE

The key is to get stronger than yesterday / last week / last month (progressive overload)

THESE EXERCISES ARE ESSENTIALLY THE FUNCTIONAL EXPRESSION OF HUMAN SKELETAL & MUSCULAR ANATOMY UNDER A LOAD.

Get stronger with these exercise ➔ Daily activities feel much easier

Horizontal Push ➔ Pushing a car / pushing a heavy door

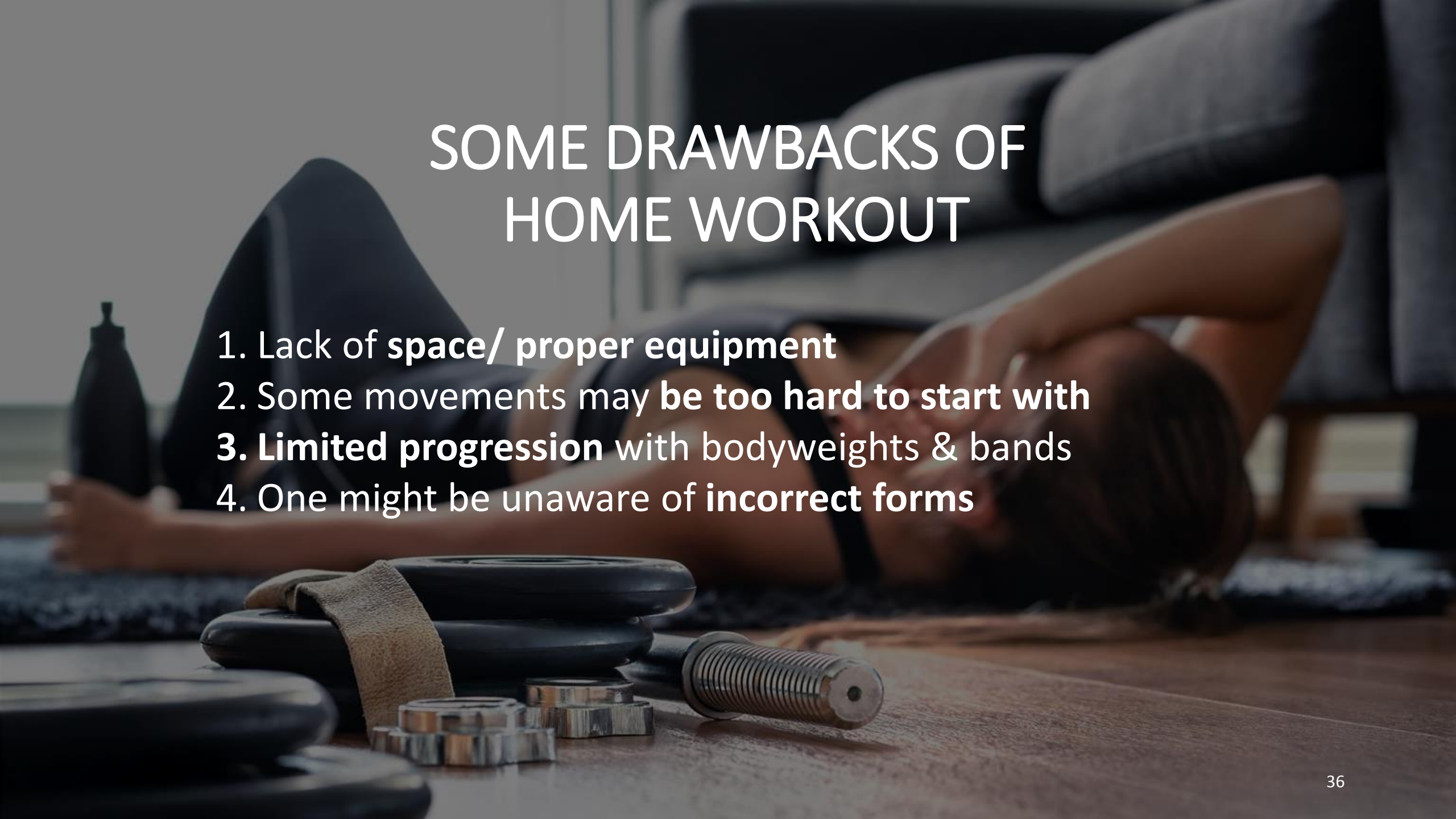
Horizontal Pull ➔ Pulling a big dog / dragging a heavy bag

Vertical Push ➔ Putting a heavy box onto a shelf

Vertical Pull ➔ Pulling yourself up to a ladder / climbing a tree / climbing up from the swimming pool

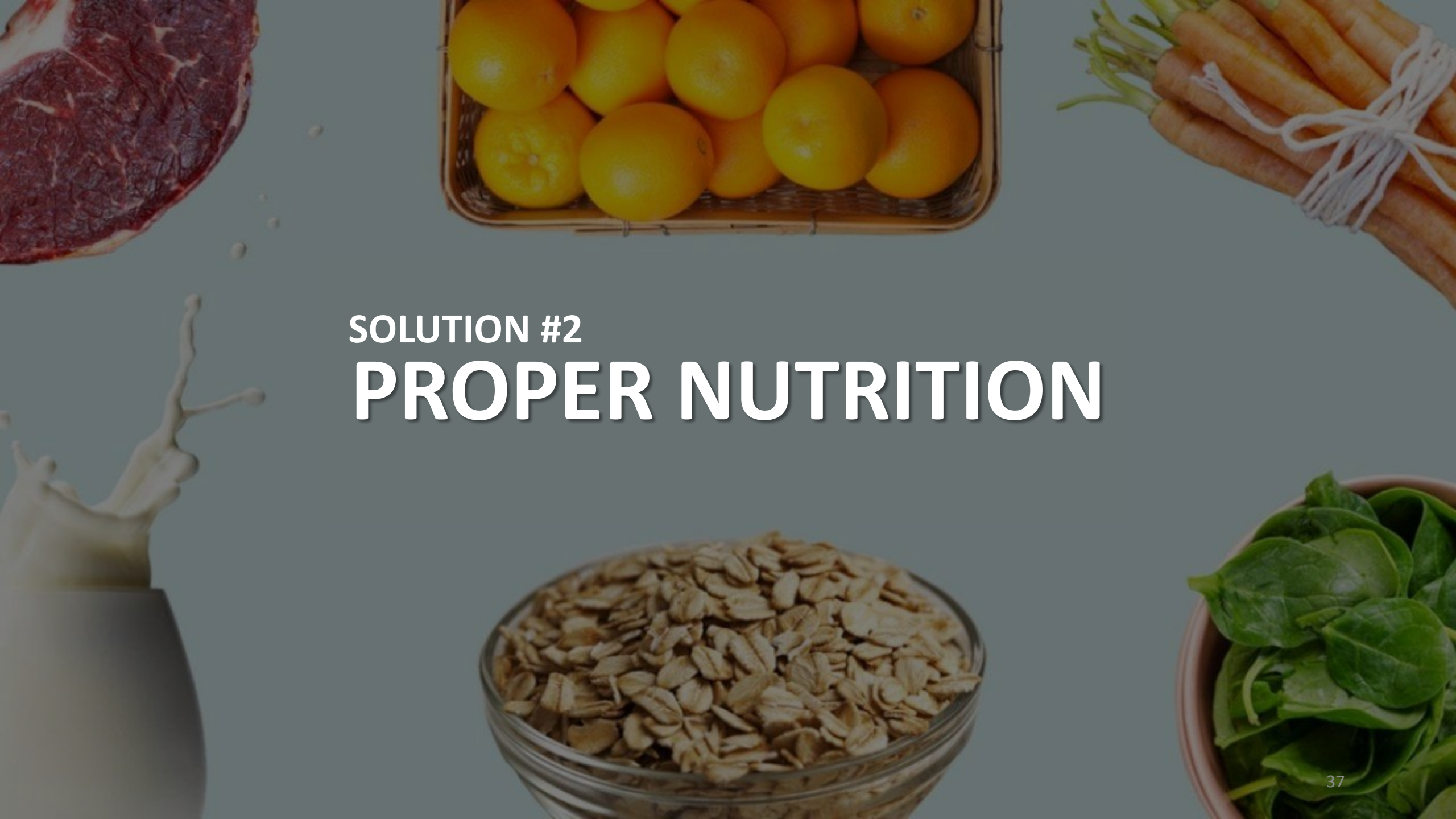
Lower Body Push ➔ Getting up from a chair/ climbing some stairs / hiking

Lower Body Pull ➔ Lifting a heavy box from the ground / carrying heavy grocery bags



SOME DRAWBACKS OF HOME WORKOUT

1. Lack of **space/ proper equipment**
2. Some movements may **be too hard to start with**
3. **Limited progression** with bodyweights & bands
4. One might be unaware of **incorrect forms**



SOLUTION #2

PROPER NUTRITION

HOW MUCH SHOULD YOU EAT ?

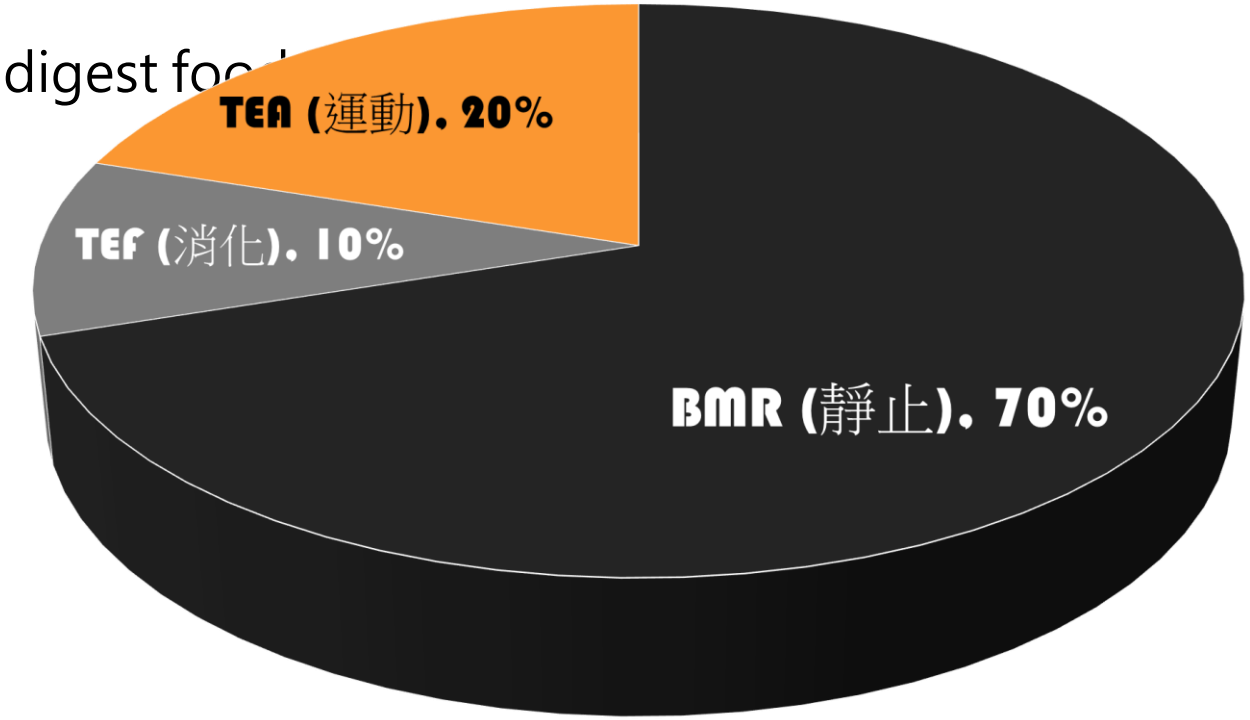
DEPENDS ON HOW MUCH ENERGY YOU BURN

TDEE : Total Daily Energy Expenditure

= BMR (Basal Metabolic Rate) + TEA (Thermic Effect of Activity) + TEF (Thermic Effect of Food)

- **BMR :** The amount of energy it takes us to stay alive without any level of physical activity
- **TEA** : The amount of energy you burn each day doing physical activity. (Non-exercise + exercise)
- **TEF :** The energy required to process and digest fo

For an average person,
BMR accounts for 70% of his/her TDEE



***TIP: EXERCISE ISNT A GREAT TOOL TO HELP YOU BURN MORE CALORIES. YOU ARE ALREADY BURNING A LOT WHEN RESTING.**

https://www.amazon.com/Leangains-Method-Researched-Practiced-Perfected-ebook/dp/B07G3GFLTX

TDEE : Total Daily Energy Expenditure

= BMR (Basal Metabolic Rate) + TEA (Thermic Effect of Activity) + TEF (Thermic Effect of Food)

1. FINDING YOUR BMR

The Mifflin-St Jeor equation:

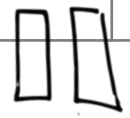
BMR = 10 x body-weight (kg) + 6.25 x height (cm)
− 5 x age (year) + S (kcal / day)

where S is +5 for male and -161 for female.

You can just Google "BMR Calculator"

2. MBR x ACTIVITY Multiplier

Activity Level	TDEE Calculation
Sedentary, No Exercise	TDEE = 1.2 x BMR
Exercise 1-3 days / week	TDEE = 1.375 x BMR
Exercise 3-5 days / week	TDEE = 1.55 x BMR
Exercise 6-7 days / week	TDEE = 1.725 x BMR
Exercise 6-7 days / week + + a physically demanding job job	TDEE = 1.9 x BMR



TDEE

A SIMPLER WAY TO FIND YOUR BALL-PARK TDEE FIGURE:

Body Weight (lbs) x 15

A SIMPLER WAY TO FIND YOUR BALL-PARK TDEE FIGURE

TDEE = BODY WEIGHT (LBS) X 15

160 lbs

TDEE = 160 x 15 = 2400 kcal

110 lbs

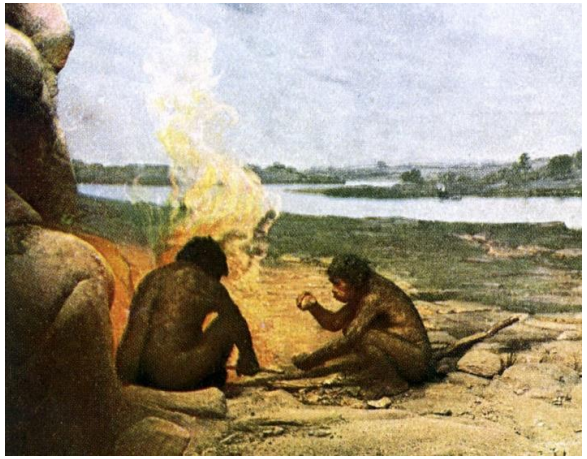
TDEE = 110 x 15 = 1650 kc

If he eats more than 2400 kcal ➔ he'd gain weight
If he eats Less than 2400 kcal ➔ he'd lose weight

If she eats more than 1650 kcal ➔ she'd gain weight
If she eats Less than 1650 kcal ➔ she'd lose weight

Our bodies are far more complex than that. No TDEE calculator is 100% accurate.
One should adjust calories based on scale change every 2-3 weeks.

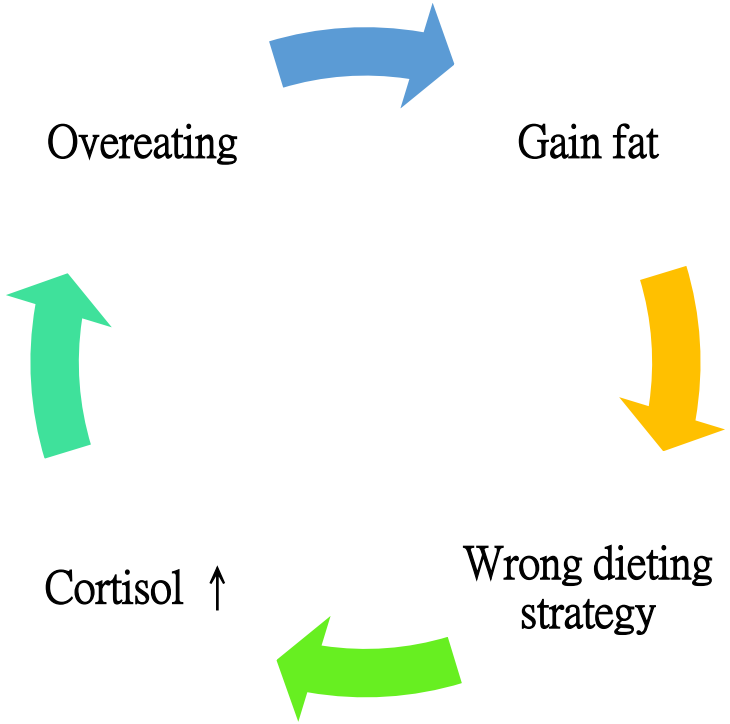
CALORIE DEFICIT, STRESS & OVEREATING



Anger, anxiety are stress

Dieting is also Stress

Anything that raises stress hormones like *adrenaline* and *cortisol* can be thought of as stress



Short term: Stress will SHUT DOWN appetite.
Adrenal glands (腎上腺) ➔ adrenaline ➔ fight-or-flight response

If stress persists, it will INCREASE appetite.
Adrenal glands (腎上腺) ➔ cortisol ➔ increases appetite ➔ Stress eating

MOST OF THE TIME YOU SHOULD BE
EATING AT MAINTANENCE (i.e. FOOD INATKE ~ TDEE)

https://www.health.harvard.edu/staying-healthy/why-stress-causes-people-to-overeat

MACROS/CALORIE 101

4 KCAL / GRAM

CARBOHYDRATE

fruit, grains, potatoes, vegetables, table sugar

PROTEIN

meat, seafood, eggs, dairy, fish, protein powder

4 KCAL / GRAM

CALORIES

9 KCAL / GRAM

FAT

butter, oils, avocados, egg yolks, nuts

ALCOHOL

wine, beer, spirits, cocktails

7 KCAL / GRAM

KNOWING THE MACROS OF YOUR FOOD

Given:
Fat : 9 kcal / g
Alcohol : 7 kcal / g
Carbohydrate : 4 kcal / g
Protein : 4 kcal / g

Fat: 8 g x 9 kcal = 72 kcal

Carbs: 37 g x 4 kcal = 148 kcal

\+ *Protein: 3 g x 4 kcal = 12 kcal*

Total = 232 kcal

Nutrition Facts

Serving Size 2/3 cup (55g)
Servings Per Container About 8

Amount Per Serving	
Calories 230	Calories from Fat 72
	% Daily Value*
Total Fat 8g	**12%**
Saturated Fat 1g	**5%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 160mg	**7%**
Total Carbohydrate 37g	**12%**
Dietary Fiber 4g	**16%**
Sugars 12g	
Protein 3g	
Vitamin A	10%
Vitamin C	8%
Calcium	20%
Iron	45%

A Bowl of Rice ~ 200 kcal

My TDEE is 2500 kcal, does it mean I can eat **12.5 bowls** of rice and expect myself to be fit & healthy?

WHAT TO EAT?

MACROS MATTER!

ART & SCIENCE OF FAT, CARBS, AND PROTEIN INTAKES

DIETARY FAT

Myths:
- All fats are evil, they cause high cholesterol.
- I am fat *only* because I' ve eaten too much fat

TRANS-FATTY ACIDS are man-made fat made by bubbling hydrogen through vegetable oil to make it semisolid with a long-shelf life.

➔ Have the **WORST EFFECT** on blood lipids and overall health.

AVOID!

Margarine

Coconut Oil

Pork Lard

SATURATED FATS are found almost exclusively in animal products (two exceptions are coconut and palm kernel oil) and are solid at room temperature.

➔ Tends to have a **negative effect** on blood lipids and health.

➔ Causing an increase in **Cholesterol**?

CONSUME WITH CAUTION

MONOUNSATURATED/ POLYUNSATURATED FATS

are found primarily in vegetable oils and are liquid at room temperature.

➔ Neutral, if not beneficial, effect on health

➔ Excess **omega-6 can be harmful to health**, especially if the intake of **omega-3** is low.

➔ **Oxidized easily when over-heated**

Omega 3 ✓
Omega 6 ×
Do not overheat

DIETARY FAT : OMEGA 3

Protect Against

- Cardiovascular Disease
- Eye Disease
- Renal Disease
- Neurological Disorders
- Inflammation

Support Proper

- Behavioral Development
- Cognitive Function
- Pregnancy
- Bone Health
- Joint Health

What's the Recommended Intake for Omega 3s?

There's currently no recommended dietary allowance (RDA) for omega 3s. But research tells us, to gain the optimal health benefits of omega 3 fatty acids, you should consume 2.6 to 3 g combined of EPA and DHA per day!

A healthy ratio of omega-6 to omega-3 fatty acids appears to be between 1:1 and 4:1*

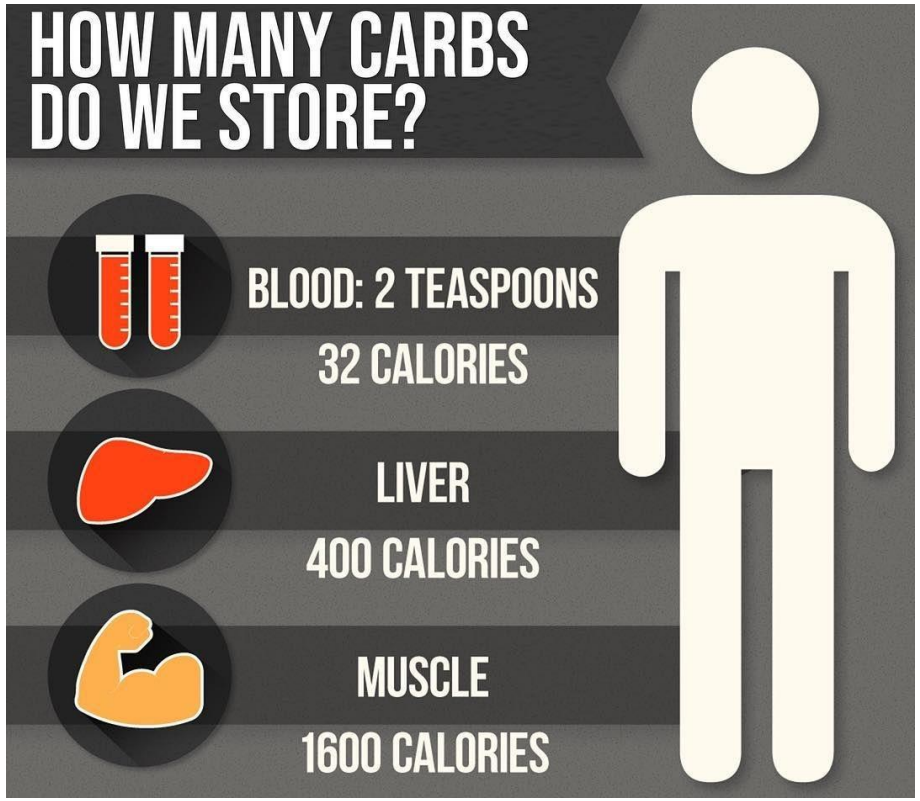
TIP : AVOID TRANS FAT & CONSUME MORE OMEGA-3.

*Omega-3 Versus Omega-6 Polyunsaturated Fatty Acids in the Prevention and Treatment of Inflammatory Skin Diseases: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7037798/
*Health Implications of High Dietary Omega-6 Polyunsaturated Fatty Acids: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3335257/
*Importance of a balanced omega 6/omega 3 ratio for the maintenance of health. Nutritional recommendations http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S0212-16112011000200013&lng=en&nrm=iso&tlng=en

CARBOHYDRATES

Myths:

- Carbs (rice in particular) is a must.
- More rice, less oil ➔ makes me fitter and healthier.



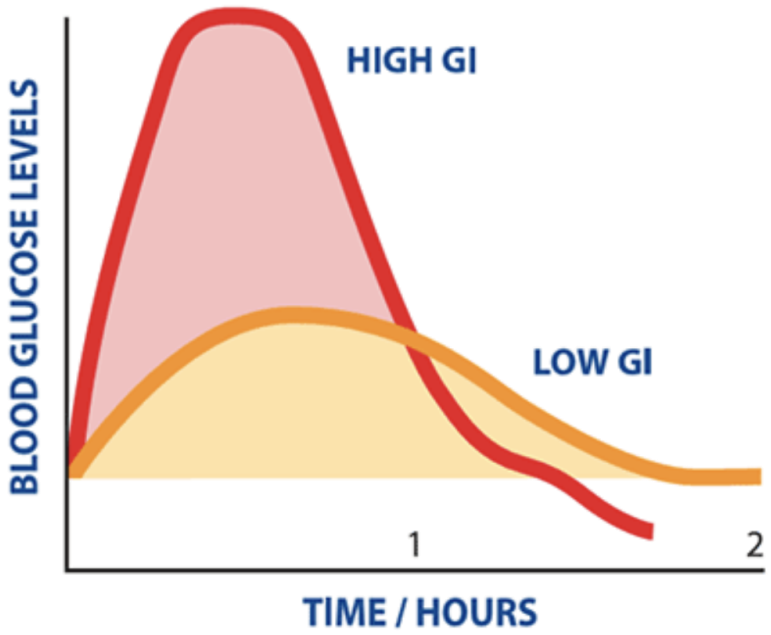
OVER-EATING CARBS ➔ FAT GAIN
➔ INSULIN RESISTANCE
➔ DIABETES

CARBOHYDRATES

Some carbs are better than others

GLYCEMIC INDEX (GI)

LOW (<55)	MEDIUM (56-69)	HIGH (70>)
• Steel-cut oats • Muesli • Ezekiel bread • 100% whole wheat • Barley • Quinoa • Sweet potatoes • Yams • Lima beans • Peas • Lentils • Legumes	• Rye bread • Pita bread • Whole grain • Puffed wheat • Quick oats • Brown rice • Wild rice • Basmati rice • Couscous • Chickpeas • Popcorn	• White bread • White rice • Rice cakes • Puffed rice • Pasta • Bagels • Biscuits • Muffins • Most cereals • Granola • White potatoes • Pretzels • Crackers



The **Glycemic Index (GI)** : Ranks foods according to their effect on your blood sugar levels.

Low GI food: slowly digested and absorbed, causing a **slower and smaller rise in blood sugar levels** ➔ helps with reversing insulin resistance.

TIPS :

1. **WORKOUT & EARN YOUR CARBS**
2. **LOW GI, HIGH-FIBRE CARBS ARE MORE PREFERRED**

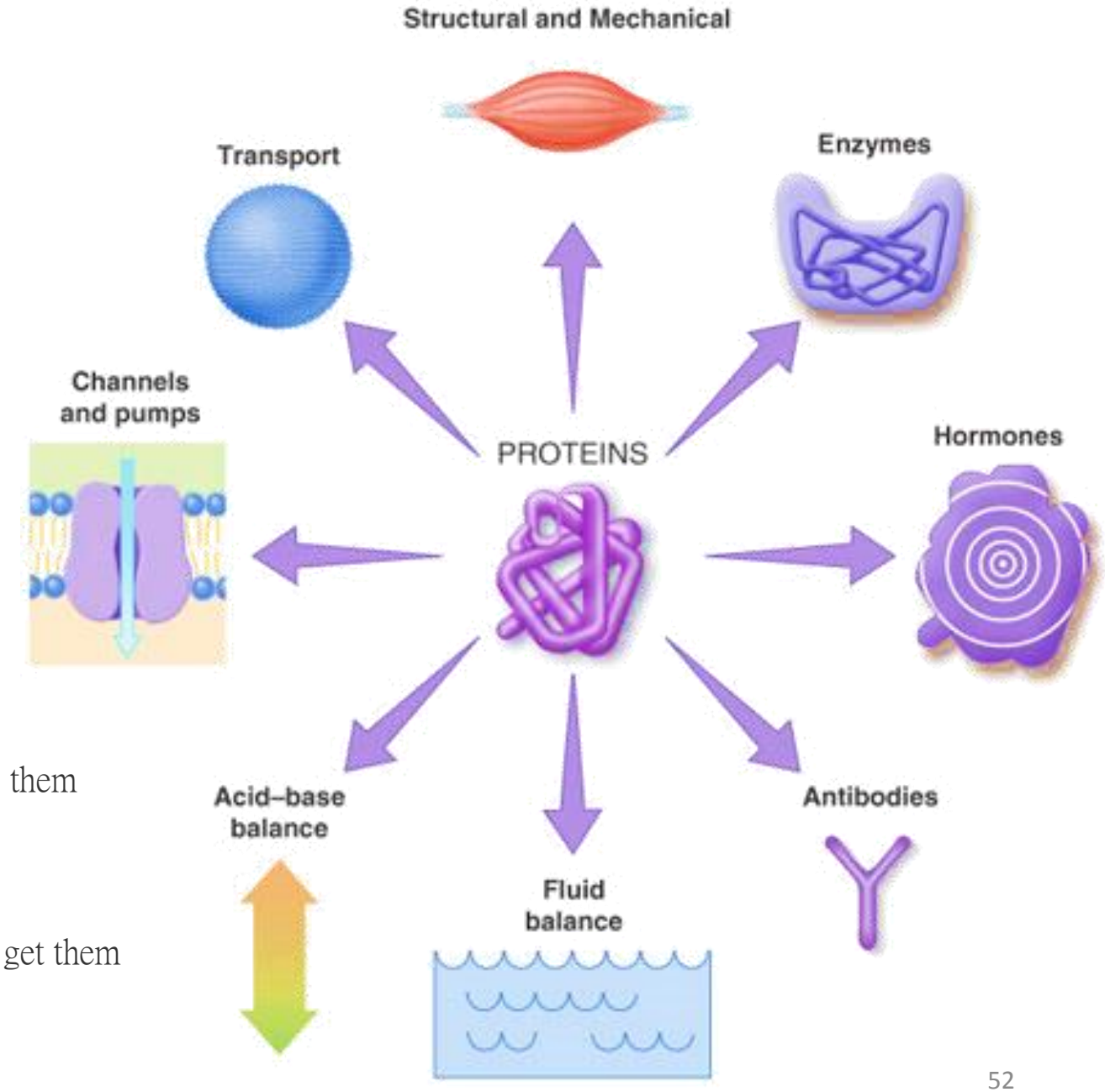
PROTEIN

Myths:

- Eating meat makes me fat;
- I only need protein when I want to build muscles.
- I eat 2 eggs per day – I have enough protein!
- Eating / drinking more protein = more muscles

Protein is derived from the Greek word πρώτειος (proteios), meaning "primary", "in the lead", or "standing in front ".

Our **Brain, nerves, muscles, internal organs, blood, skin and even nails, hair, hormones, enzymes** etc. are all built with protein



- Once our own proteins serve their purpose, our body breaks them back down to the amino acids pool.
- A little bit of amino acids end up in urine.

Our bodies are losing protein every day. To replenish, we must get them from dietary protein sources

PROTEIN

Optimal daily protein intake for adults (g/kg*)

	Of healthy weight			Overweight or obese
	Maintenance	Muscle gain	Fat loss	
Sedentary	≥1.2*			1.2–1.5
Active	1.4–1.6**	1.4–2.4***	1.8–2.7***	

Examples:

Active Man @ 160 lbs (72.5 kg)

Maintenance: 100 - 116g

Muscle Gain: 100 - 174g

Fat loss: 130 – 195g

Active Woman @ 110 lbs (50kg)

Maintenance: 70 - 80g

Muscle Gain: 70 – 120g

Fat loss: 90 – 135g

* Keep in mind that you'll get better body composition results by adding consistent activity than merely by hitting a protein target.

** People who are trying to keep the same weight but improve their body composition (more muscle, less fat) may benefit from the higher end of the range.

*** For experienced lifters, intakes up to 3.3 g/kg may help minimize fat gain while bulking.

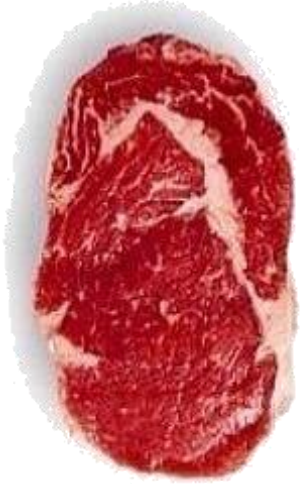
TIPS : EAT SUFFICIENT PROTEIN TO MAINTAIN / BUILD PRECIOUS MUSCLES TISSUE

HOW 30 GRAMS PROTEIN LOOK LIKE

130G CHICKEN

138 CALORIES
30G PROTEIN 2G FAT

170G RIBEYE



425 CALORIES
30G PROTEIN 34G FAT

120G SALMON

255 CALORIES
30G PROTEIN 15G FAT

120G TURKEY MINCE

134 CALORIES
30G PROTEIN 1.5G FAT

40G WHEY

140 CALORIES
30G PROTEIN 2.5G FAT

5 EGGS

318 CALORIES
30G PROTEIN 22G FAT

100G TUNA

128 CALORIES
30G PROTEIN 1G FAT

100G PEANUTS

645 CALORIES
30G PROTEIN 10G CARBS
***54G FAT**

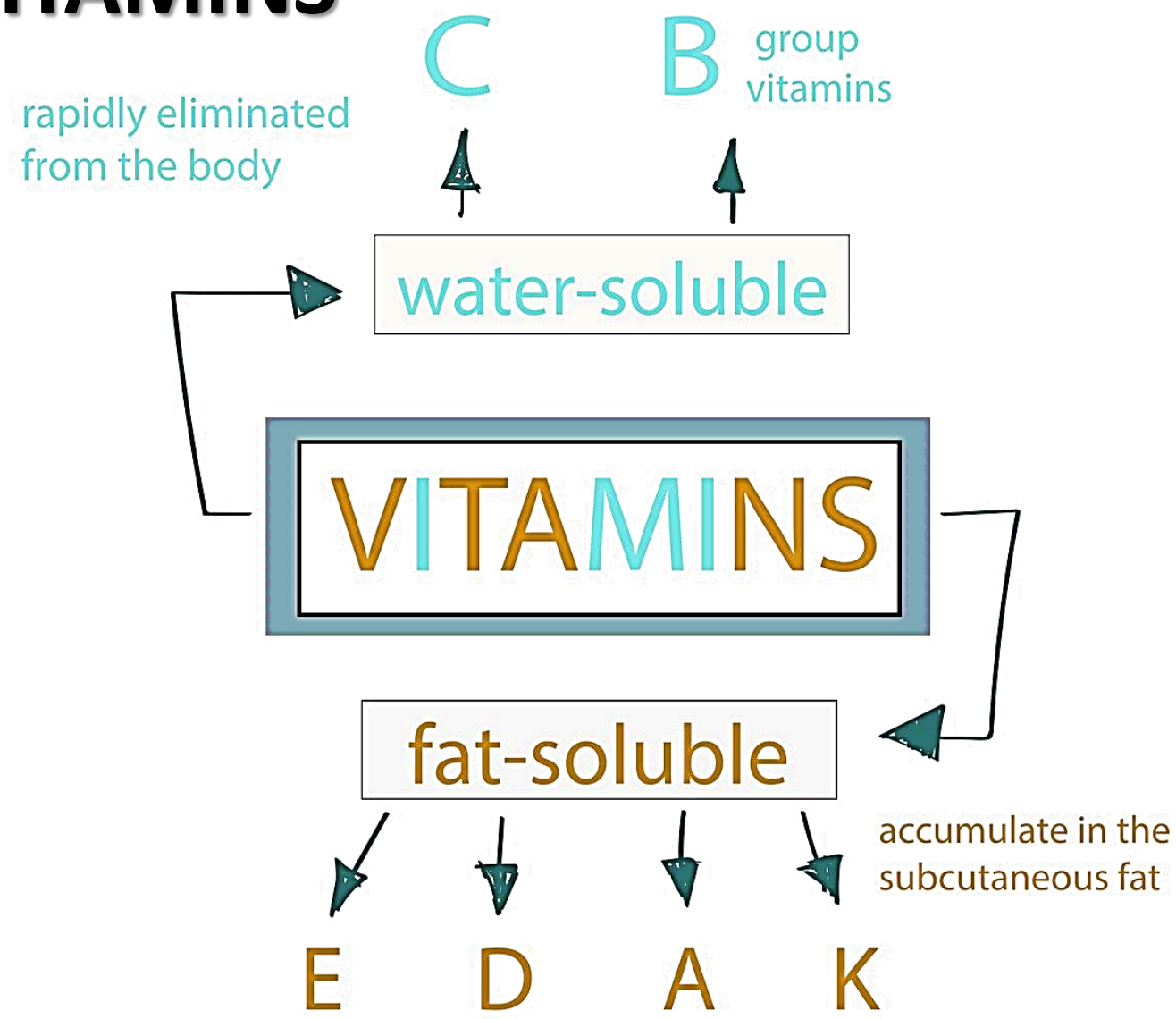
SPECIAL SIDE NOTE: THERMIC EFFECT OF FOOD:

The calorie cost of processing food for use & storage during digestion

	CALORIE	TEF %	NET CALORIE AFTER TEF
	4 kcal / gram	5-10%	3.6-3.8 kcal / gram
	4 kcal / gram	20-30%	2.8-3.2 kcal / gram
	9 kcal / gram	0-3%	8.7-9.0 kcal / gram
	7 kcal / gram	15%	6.0 kcal / gram

MICRONURIENTS RECOMMENDATIONS
FOR THE GOLDEN AGE

VITAMINS



Fat vs Water Soluble

Water-soluble vitamins are metabolized more quickly than fat-soluble vitamins.

We excrete any excess water-soluble vitamins when we urinate, while fat-soluble vitamins stick around longer in the body for later use.

Cooking Method Matters

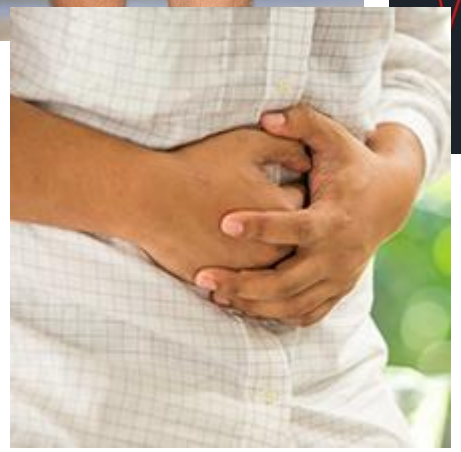
Boiling involves cooking in a large amount of water—which can cause water-soluble vitamins to leach out

When we' re **steaming or microwaving**, on the other hand, we' re often cooking for a shorter amount of time, and there' s minimal (if any) liquid involved

POTASSIUM

Potassium Deficiency:

- Weakness/ Fatigue
- Muscle cramps or twitching
- Constipation
- Arrhythmia (abnormal heart rhythms)

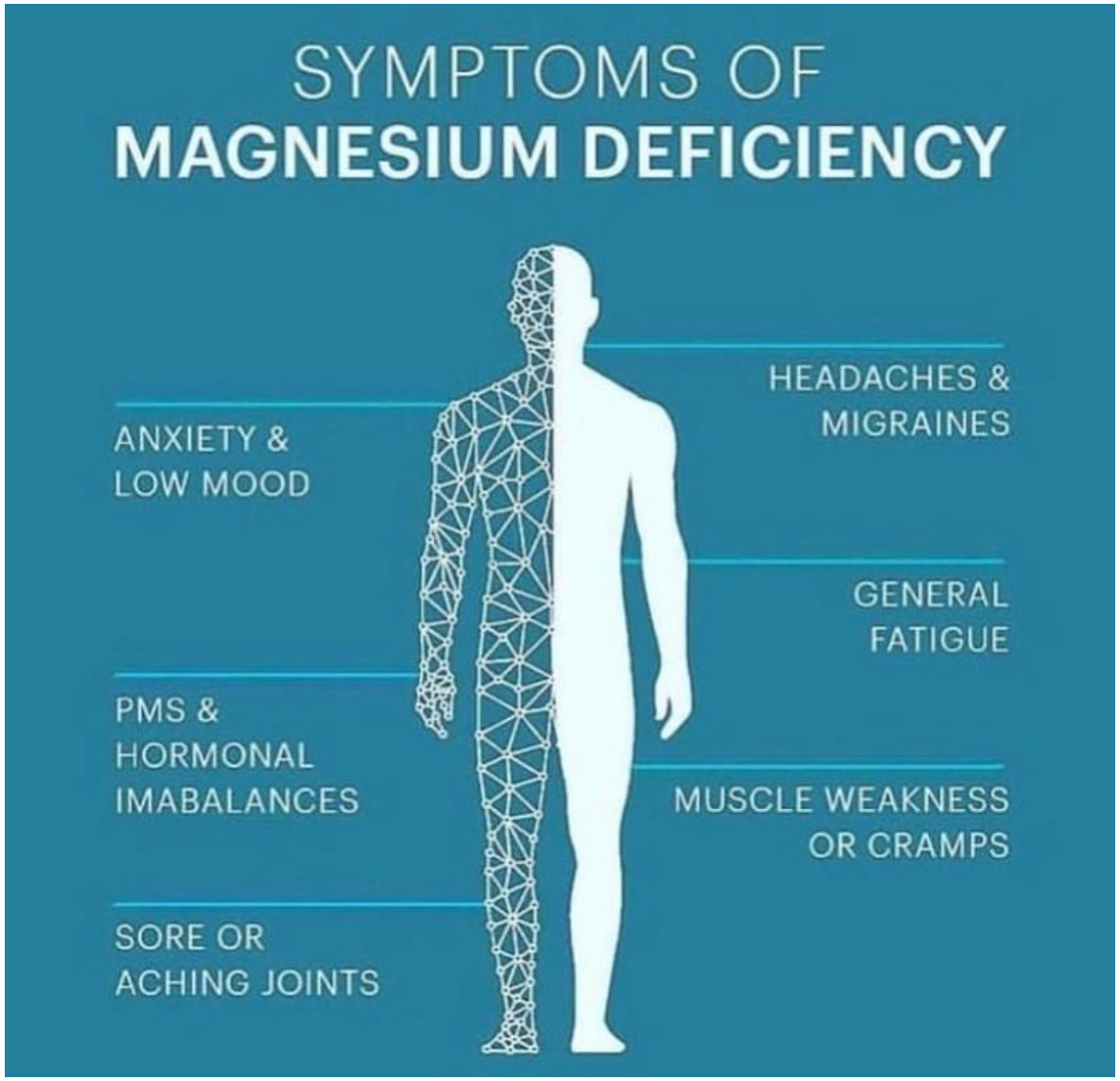


Adequate Intakes for potassium (mg)/day)

Age	Male	Female
0-6 months	400	400
7-12 months	860	860
1-3 years	2000	2000
4-8 years	2300	2300
9-13 years	2500	2300
14-18 years	3000	2300
19-50 years	**3400**	**2600**
51+ years	**3400**	**2600**

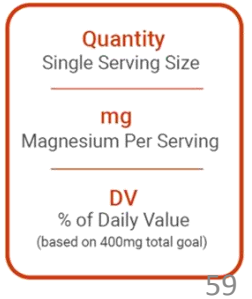
Food	Serving Size	Potassium(mg)
Salmon, baked	1 medium fillet	1050
Potato, baked, flesh and skin	1 medium	610
Butternut squash	1 cup, cubes	582
White beans, cooked	½ cup	500
Edamame	½ cup	461
Banana	1 medium (7”)	422
Plain low-fat yogurt	1 6-oz container	398
Dried apricots	¼ cup	378
Chicken breast, no skin	3 oz	295
Cashews	1 oz (about 18 cashews)	179
Spinach, raw	1 cup	140
Coffee, unsweetened	8 oz	118
Black tea	8 oz	89

MAGNESIUM



Adequate Intakes for Magnesium (mg)/day)

Age	Male	Female
Birth to 6 months (AI)	30 mg	30 mg
7–12 months (AI)	75 mg	75 mg
1–3 years (RDA)	80 mg	80 mg
4–8 years (RDA)	130 mg	130 mg
9–13 years (RDA)	240 mg	240 mg
14–18 years (RDA)	410 mg	360 mg
19–50 years (RDA)	**420 mg**	**320 mg**



FOR BONE HEALTH

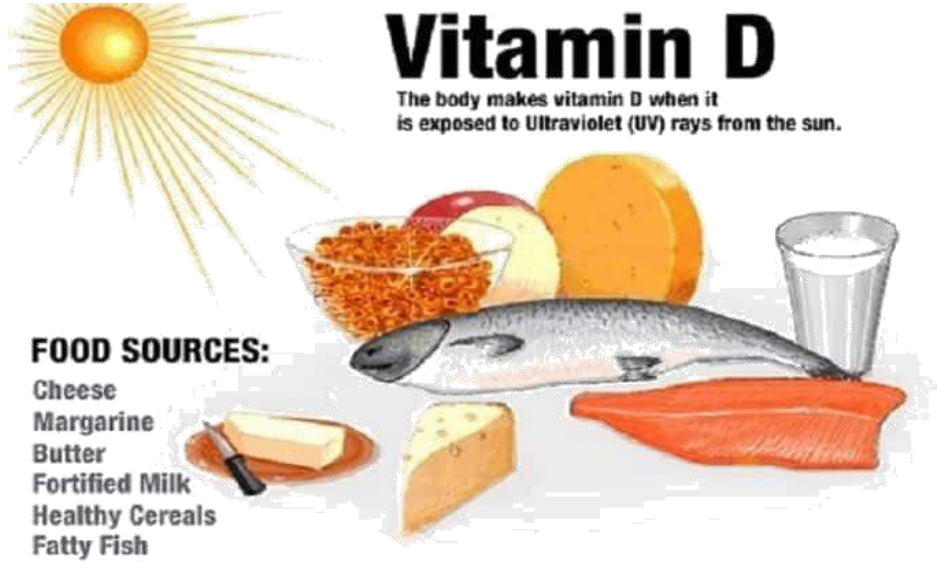
Vitamin D & Calcium Absorption

Recommended calcium intakes	
Life-stage group	**mg/day**
Infants 0 to 6 months	200
Infants 6 to 12 months	260
1 to 3 years old	700
4 to 8 years old	1,000
9 to 13 years old	1,300
14 to 18 years old	1,300
19 to 30 years old	1,000
31 to 50 years old	**1,000**
51- to 70-year-old males	**1,000**
51- to 70-year-old females	**1,200**
70 years old	**1,200**
Source: Food and Nutrition Board, Institute of Medicine, National Academy of Sciences, 2010.	

Selected calcium-rich foods	
Food	**Calcium (mg)**
Fortified oatmeal, 1 packet	350
Sardines, canned in oil, with edible bones, 3 oz.	324
Cheddar cheese, 1½ oz. shredded	306
Milk, nonfat, 1 cup	302
Milkshake, 1 cup	300
Yogurt, plain, low fat, 1 cup	300
Soybeans, cooked, 1 cup	261
Tofu, firm, with calcium, ½ cup	204
Orange juice, fortified with calcium, 6 oz.	200–260 (varies)
Salmon, canned, with edible bones, 3 oz.	181
Pudding, instant (chocolate, banana, etc.) made with 2% milk, ½ cup	153
Baked beans, 1 cup	142
Cottage cheese, 1% milk fat, 1 cup	138
Spaghetti, lasagna, 1 cup	125
Frozen yogurt, vanilla, soft serve, ½ cup	103
Ready-to-eat cereal, fortified with calcium, 1 cup	100–1,000 (varies)
Cheese pizza, 1 slice	100
Fortified waffles, 2	100
Turnip greens, boiled, ½ cup	99
Broccoli, raw, 1 cup	90
Ice cream, vanilla, ½ cup	85
Soy or rice milk, fortified with calcium, 1 cup	80–500 (varies)

Vitamin D

The body needs vitamin D to absorb calcium. Without enough vitamin D, one can't form enough of the hormone calcitriol (known as the "active vitamin D"). This in turn leads to insufficient calcium absorption from the diet.

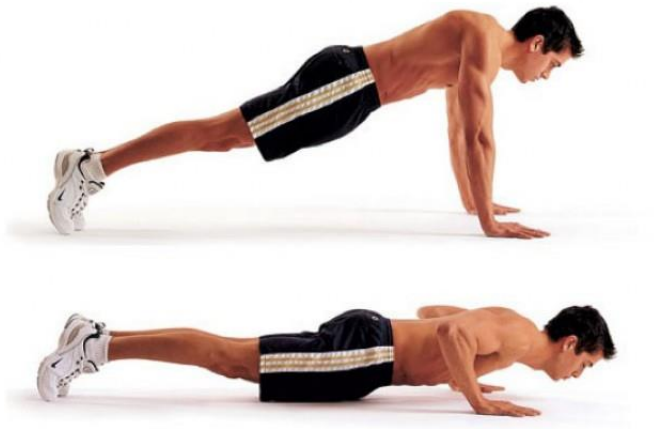


KEY TAKEAWAYS

PRACTICAL GUIDE FOR THE GOLDEN AGE

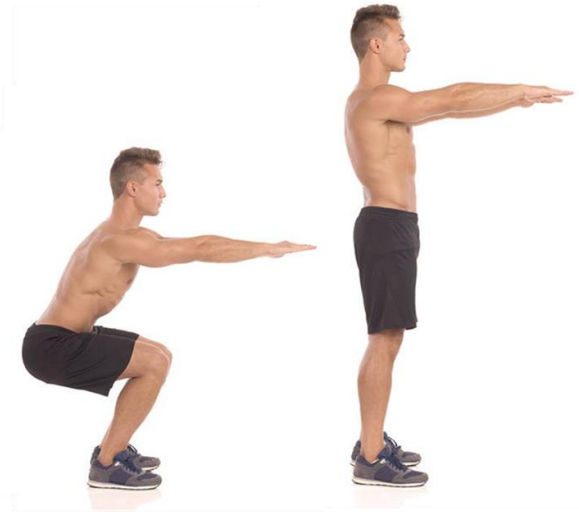
STAY ACTIVE TRAIN 1-2 TIMES PER WEEK; 3-5 SETS x 6-15 REPS PER EXERCISE

Horizontal Push



Horizontal Pull

Lower Body Push



Vertical Push

Vertical Pull

Lower Body Pull

A BALANCED DIET

- Eat sufficient calories from real food
- Remember the below hints on each macros:

CARBS

- Workout & earn your carbs
- Low GI, high-fiber carbs are more preferred

PROTEIN

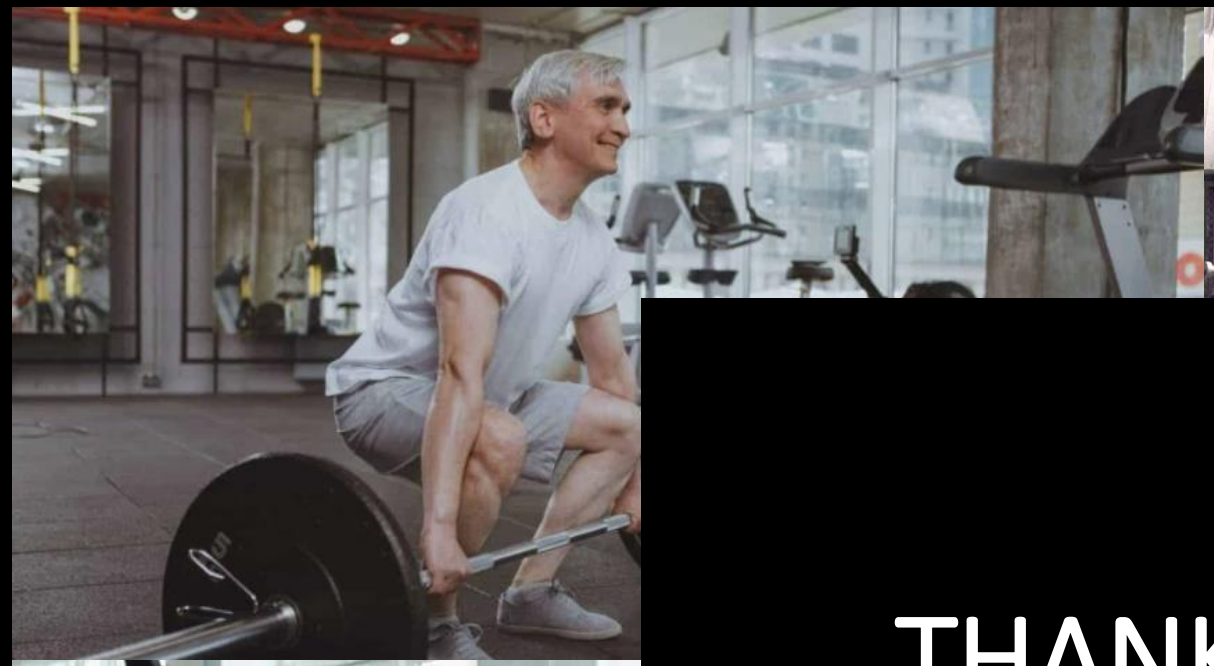
- Eat sufficient protein to maintain / build precious muscles tissue

FAT

- Avoid trans fat
- Consume more omega-3

MICRONURIENTS

- Eat vegetables or vitamins with oil
- Variety of real food for adequate Mg & K
- More sunlight for stronger bones



THANK YOU

Any questions are welcome

THE GOLDEN AGE:
AGE STRONG AND HEALTHY

LEUCINE
FITNESS CONSULTING