



SPORT SCIENCE WORKSHOP: ATHLETE'S NUTRITION FOR PEAK PERFORMANCE

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MELBOURNE, AUSTRALIA



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BY THE END OF THIS WORKSHOP, YOU WILL...

- Know **how many calories and protein** you need to fuel your body optimally
- Have learned how to **set up your nutrition for peak performance**
- Have design your personal **eating routine on game day**
- Have gained an insight in what the pros are doing
- Have explored which **supplements** may be beneficial for leveling up your game
- Have **debunked common nutritional pitfalls** and supplement marketing scams
- Know how to **stay clear of increasing your risk of cancer, diabetes and cardiovascular disease**
- And so much more!

WHAT ARE YOUR NUTRITIONAL NEEDS?

- **Maintenance calories** = Amount of calories you need to eat per day to maintain your weight
- **Caloric deficit** = when you eat less calories than you burn per day, you lose weight
- **Calculate your TDEE:** Total daily energy expenditure (How many calories do you burn per day?)
- Online tool: <https://tdeecalculator.net/>
- Understand that the TDEE varies within a range from day to day depending on your activity level!
- **Macros** = Macronutrients are classified as **protein, fat and carbohydrates**

HOW CAN YOU TRACK YOUR DAILY CALORIES?

- Learn how many calories are in the foods you are eating and how the macros vary
 - Focus on education not restriction, curiosity not perfection
 - Pro-tip: Track your calories in myfitnesspal for 1-2 weeks and weight yourself every day. See whether the average of your weight remains unchanged, that is your TDEE baseline.
-
- Track your calories with Myfitnesspal, Macrofactor, or another app
 - Create your own recipes
 - Share your progress with friends



myfitnesspal

HOW MUCH PROTEIN DO YOU REALLY NEED?

- Recommended Daily amount (RDA) guideline : 0.8 g per kg of body weight
- NOT ENOUGH!
- Good rule of thumb: 2 g per kg of (ideal) body weight (1 g per lbs) but at least 1.4g per kg of bodyweight
- Timing: focus on meeting your daily protein goal, incorporate throughout the day as part of each meal for ideal update
- Consume more protein on heavy training days
- Calculate your specific protein needs now!



DESIGNING YOUR PLATE

- What foods are allowed?



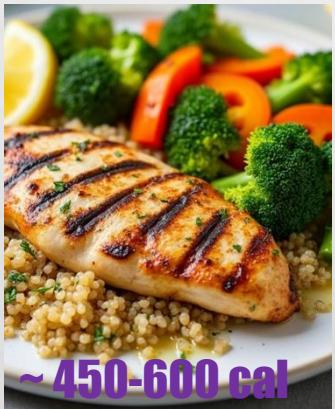
EVERYTHING!
It is all about balance.



NUTRIENT DENSE VS CALORIE DENSE FOODS



~ 500-700 cal



~ 450-600 cal



~ 750-980 cal

Nutrient-Dense Foods	Calorie-Dense Foods
High in nutrients like vitamins, minerals, fiber, lean protein, and healthy fats, but low to moderate in calories per serving.	High in calories due to added sugars, unhealthy fats, or refined carbs, but low in essential nutrients.
Supports overall health, weight management, and reduces risk of chronic diseases like diabetes, heart disease, and cancer.	Can contribute to weight gain, nutrient deficiencies, and increased risk of chronic diseases.
Often high in fiber and water, keeps you full and satisfied for hours with fewer calories	Often low in fiber, leaving you less full and starving not long after, potential overeating and sugar crashes
Fresh fruits, vegetables, whole grains, lean meats, nuts, seeds, legumes	Potato chips, sugary drinks, candy, fried food, processed meats, baked goods.



1400-1800 cal



~ 910 cal



~ 1010 cal

DO THE DEAL

DESIGNING YOUR PLATE

- Aim for 80% healthy whole foods
- Try to limit ultra-processed foods, refined sugar & saturated fats
- Include low calorie high volume whole foods to feel full (honor your hunger)



HIGH VOLUME & LOW-CALORIE FOODS

(nutrition facts per 150g of each item)

WATERMELON	STRAWBERRIES	BLUEBERRIES	PEACH	GREEK YOGURT
45 cals	48 cals	86 cals @faustipeve	59 cals	90 cals 1 cup
CARROTS	BUTTERNUT SQUASH	CAULIFLOWER	POPCORN (PLAIN)	GREEN BEANS
53 cals	60 cals	35 cals	44 cals 1 cup	53 cals
EGG WHITE	SPAGHETTI SQUASH	CUCUMBER	CELERY	PICKLES
133 cals 1 cup	40 cals	22 cals	24 cals	18 cals
TOMATO	BEET	BANANA PEPPERS	BELL PEPPERS	ASPARAGUS
27 cals	66 cals	40 cals	41 cals	33 cals

DESIGNING YOUR PLATE

- 5 Finger Food Rule (FFR) for each day:
 - 1 Soul Food
 - 2 Fruits
 - 3 Protein
 - 4 Vegetables
 - 5 Glasses of Water



One Serving of Lean Protein Equivalents



4 oz lean (raw) meat or about the palm of your hand is about 25 grams of protein



Lean meat examples: Turkey, sirloin beef, fish, pork loin, etc.

This is equivalent to:



2 whole eggs plus 3 egg whites



1 cup of plain yogurt or cottage cheese



1 scoop (serving) of protein powder



1 cup of tofu



4 oz of seafood

#HealthyDietTemplate
#DocsWhoLift
DrSpencer.com

DESIGNING YOUR PLATE

- Eat the rainbow:
- IIN Rainbow Eating Method PDF &

Shopping List

➤ **Challenge:** Have at least 3 meals this week with at least 4 different rainbow colours

The Nutrition Rainbow

The pigments that give fruits and vegetables their bright colors represent a variety of protective compounds. By eating all the colors of the nutrition rainbow, you'll harness the power of these cancer-fighting and immune-boosting foods!



Lycopene reduces breast and prostate cancer risk; boosts heart, brain, eye, and bone health.

Beta-carotene fights cancer, reduces inflammation, supports immune system, and boosts vision.

Vitamin C and flavonoids inhibit tumor cell growth, detoxify harmful substances, boost immune system, reduce inflammation, and boost heart health.

Folate builds healthy cells and genetic material and boosts heart health.
Calcium strengthens bones, muscles, and heart health.

Indoles and lutein eliminate excess estrogen and carcinogens and support eye health.

Allyl sulfides destroy cancer cells and reduce cell division.

Anthocyanins destroy free radicals, reduce inflammation, and boost brain health.

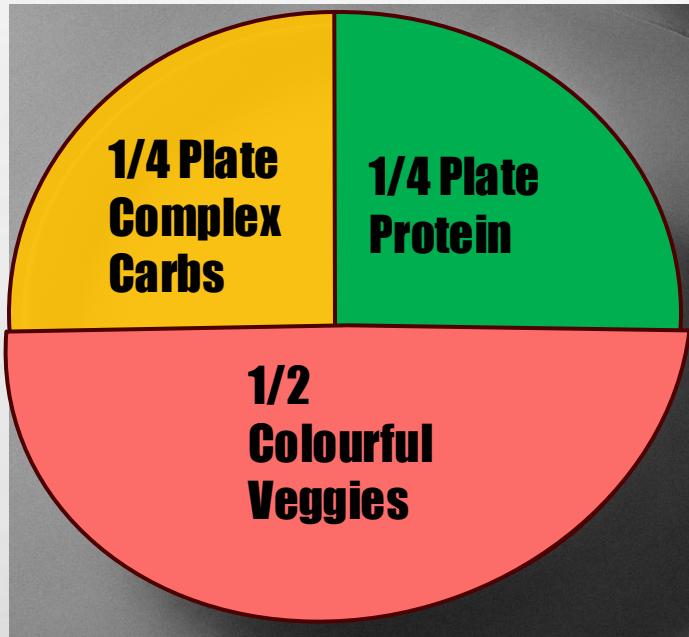
Resveratrol may decrease estrogen production, boosts heart and brain health.

Fiber boosts digestion and weight loss, removes carcinogens.

THE ATHLETE'S PLATE

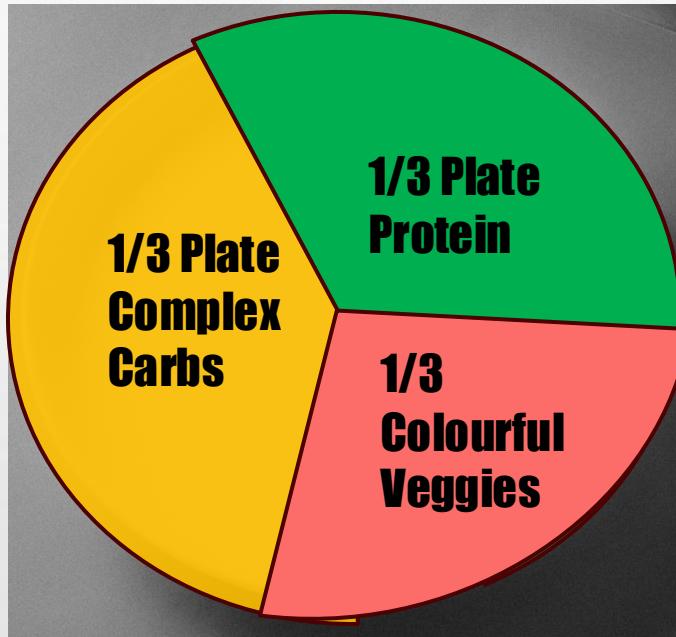
TRAINING LOAD:

LIGHT



+ 1 TEASPOON HEALTHY FATS

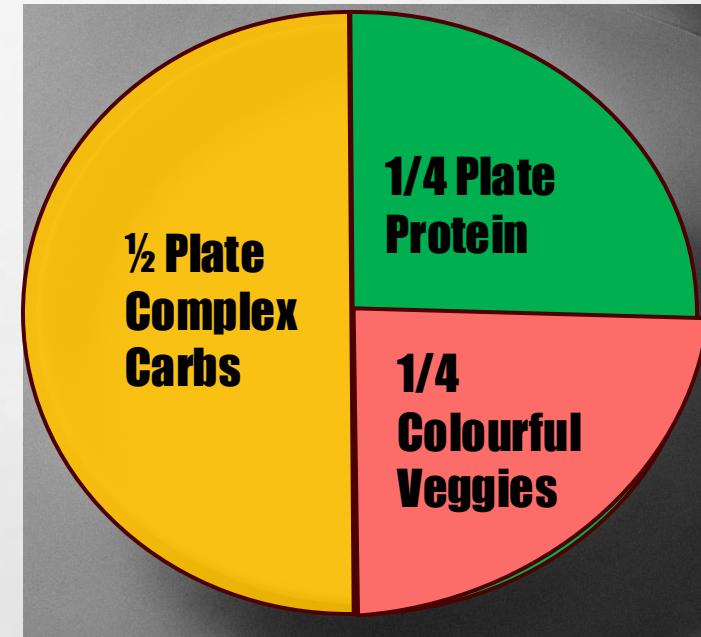
MODERATE



+ 1 TABLESPOON HEALTHY FATS

+ SERVING OF FRUITS

HARD

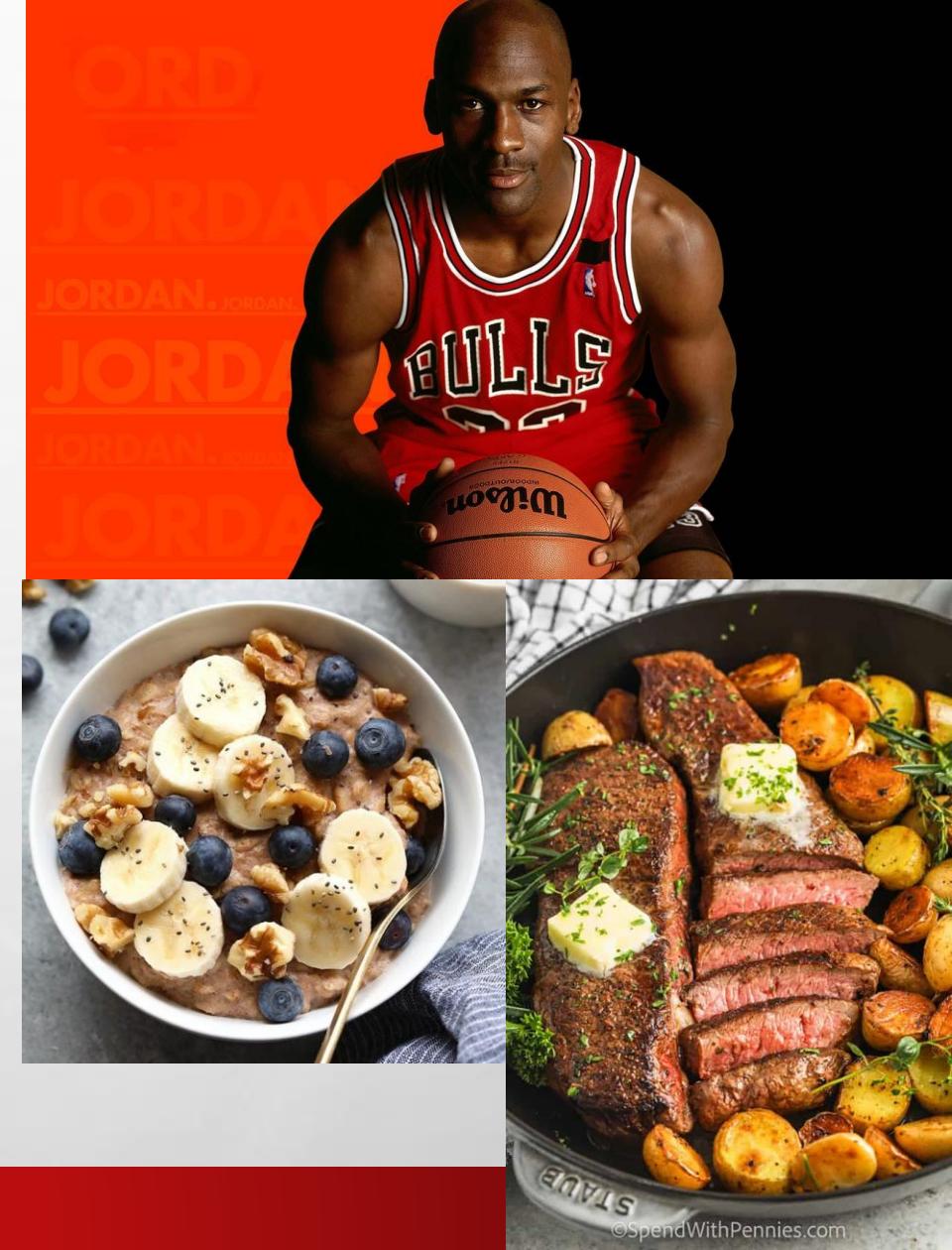


+ 2 TABLESPOONS HEALTHY FATS

+ 2 SERVING OF FRUITS

MICHAEL JORDAN

- Widely regarded as the greatest basketball player of all time, Chicago Bulls legend, six-time NBA champion
- Game Day Nutrition:
 - Early career: **Steak before games**, McDonald's breakfast routine.
 - Later career: **Five to six small meals/day: high-carb breakfast** (oatmeal, fruit, egg whites, juice), lean proteins with carbs and greens for lunch, protein shake snacks, larger dinner, often steak and potatoes before games.



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LEBRON JAMES

Los Angeles Lakers forward, one of the greatest basketball players in history, multi-time NBA MVP and champion.

Game Day Nutrition:

- Breakfast: Egg white omelet with smoked salmon, gluten-free pancakes with berries.
- Lunch: Whole wheat pasta, salmon, vegetables.
- Pregame: Peanut butter and jelly sandwich.
- Halftime Snack: Apples with almond butter.
- Post-game: Protein shake (usually plant-based).
- Dinner: Chicken parmesan with salad; organic, natural foods, little processed sugar, high hydration



CRISTIANO RONALDO

- Soccer Star
- Record-setting goal scorer, International superstar for Portugal and Real Madrid/Manchester United/AI-Nassr; known for his physicality, dedication, and longevity.
- Game Day Nutrition:
 - Six small, frequent meals every day.
 - Proteins: Chicken, **fish** (tuna, cod, swordfish), egg whites, veal.
 - Carbs: Brown rice, **quinoa**, whole wheat, black rice, fruit, wholegrain bread.
 - Fats: **Avocado**, coconut oil.
 - Always hydrated; avoids processed food/sugar.



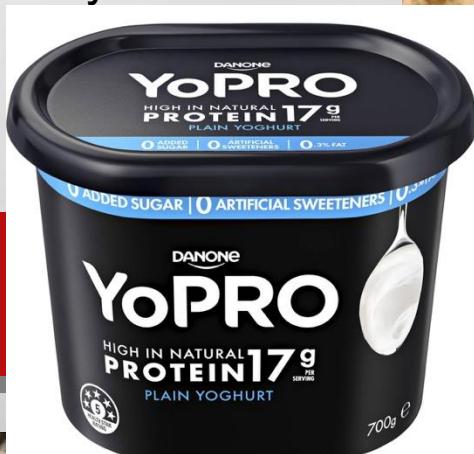
SERENA WILLIAMS

- Tennis Champion
- 23 Grand Slam titles, one of the most dominant athletes in tennis history; advocate for plant-based/vegan eating.
- Game Day Nutrition:
 - Pregame: Carbs (pasta or rice night before), greens, protein, occasional fruit.
 - Breakfast: Oats, fruit, almond butter
 - Lunch/Dinner: Salads, nuts, beans, legumes, seeds, sprouted quinoa; sometimes animal protein or vegan burgers.
 - Hydration: Vital.



SCOTT PENDLEBURY

- AFL player, Collingwood captain, known for elite midfield performance, leadership, and endurance.
- Game Day Eating Plan:
 - Prefers a balanced macronutrient intake focusing on carbs, protein, and fats with plenty of vegetables.
 - Main staples include lean meats, rice, potatoes, peanut butter, **Greek yogurt**.
 - Prefers macro counting to hit protein targets particularly for recovery and muscle repair.
 - Typical pre-game meal choice: **Chicken mushroom risotto**.



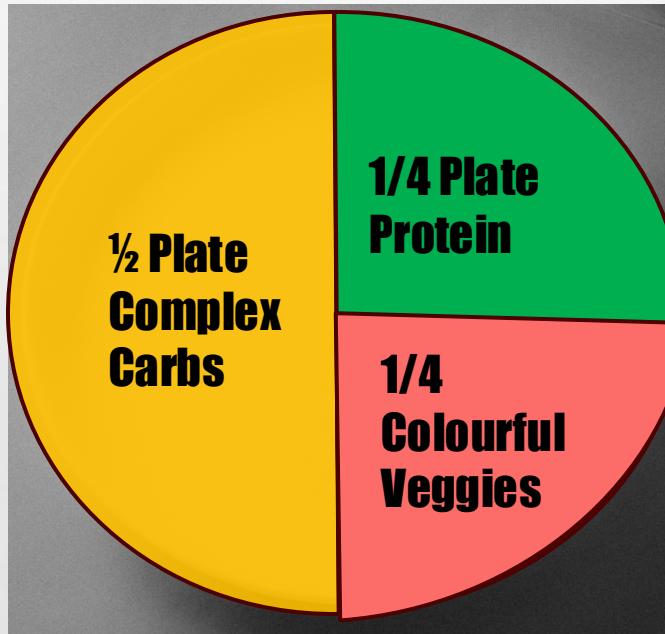
CHRISTIAN PETRACCA

- AFL star, Melbourne Demons midfielder, reigning Norm Smith Medalist, known for strength, skill, and athleticism.
- Game Day Eating Plan:
 - Balanced meals emphasizing **whole foods**.
 - Favorites include **eggs and toast for breakfast, chicken and rice, steak with vegetables, pasta for energy**.
 - Nutrition emphasizes **carbs the day before** a game and **lighter meals on game day** itself with good protein and fats.



PRE-GAME PLATE: 4-2 HOURS PRIOR

- COMPLEX CARBS FOR CONSISTENT ENERGY:
 - 1-4G PER KG OF BODY WEIGHT (EG. 70 KG ATHLETE 70-280G CARBS)
- TOO FULL?
 - PRIORITIZE LOWER FIBER CARBS & LEAN PROTEIN SOURCES WITH LOWER FATS



PROTEIN FOR POWER:

- 1.4-2 G PER KG OF BODY WEIGHT PER DAY
- MIN 15-30G OF PROTEIN

COLOUR FOR RESILIENCE:

- FOR MICRONUTRIENTS & FIBRE
- 1-2 FIST SIZE PORTIONS PER MEAL (1-2 CUPS)

1-2 TBSP FOR FUEL

PRE-GAME PLATE: COMPLEX CARBS

GRAINS

- QUINOA
- BROWN, WHITE AND WILD RICE
- OATS
- CORN & CORNMEAL (POLENTA, TORTILLAS)
- COUSCOUS
- BARLEY
- MILLET
- FARRO
- BUCKWHEAT



STARCHY VEGETABLES

- POTATOES
- SWEET POTATOES
- TARO, YAMS



PASTA

- WHOLE WHEAT PASTA
- LEGUME-BASED PASTA

BREAD PRODUCTS

- WHOLE WHEAT BREAD
- SOURDOUGH & RYE BREAD



PRE-GAME PLATE: PROTEIN

RED MEAT

- BEEF STEAK
- PORK
- LAMB
- VENISON
- KANGAROO



POULTRY

- CHICKEN
- TURKEY
- DUCK
- QUAIL
- ...



FISH & SEAFOOD

- SALMON
- TUNA
- MACKAREL
- COD
- TILAPIA
- SHRIMP
- SHELLFISH (E.G., MUSSELS, CLAMS)



PRE-GAME PLATE: PROTEIN

EGGS & DAIRY

- EGGS
- COTTAGE CHEESE
- GREEK YOGURT
- REGULAR YOGURT
- CHEESE (LOW-FAT OPTIONS, HARD OR SOFT VARIETIES)
- MILK



PLANT-BASED PROTEINS

- TOFU
- TEMPEH
- SEITAN
- EDAMAME
- PEAS
- LENTILS
- CHICKPEAS
- KIDNEY BEANS
- BLACK BEANS



PRE-GAME PLATE: COLOURFUL VEGGIES

RED/ORANGE

- CARROTS
- RED BELL PEPPERS
- PUMPKIN
- SWEET POTATO
- TOMATOES

GREEN

- BROCCOLI
- ZUCCHINI
- KALE
- COLLARD GREENS
- PAK CHOY
- ASPARAGUS
- BEANS, PEAS

PURPLE/BLUE

- EGGPLANT
- PURPLE CABBAGE
- BEETS

YELLOW/ WHITE

- CAULIFLOWER
- YELLOW SQUASH
- ONIONS
- CORN



PRE-GAME PLATE: HEALTHY FATS

HEALTHY FATS

- OLIVES
- OLIVE OIL
- AVOCADO
- COCONUT
- NUTS (ALMONDS, WALNUTS, CASHEWS)
- SEEDS (CHIA FLAX, SUNFLOWER, PUMPKIN)
- NUT BUTTERS (PEANUT, ALMOND, CASHEW)
- WILD CAUGHT SALMON

HOW MUCH?

- MODERATE: 10-20G OF HEALTHY FATS (UNSATURATED!)
- $\frac{1}{4}$ - $\frac{1}{2}$ AVOCADO
- 1-2 TABLESPOONS OF OLIVE OIL
- SMALL HANDFUL OF NUTS OR SEEDS



PRE-GAME SNACK: SIMPLE CARBS + HYDRATION

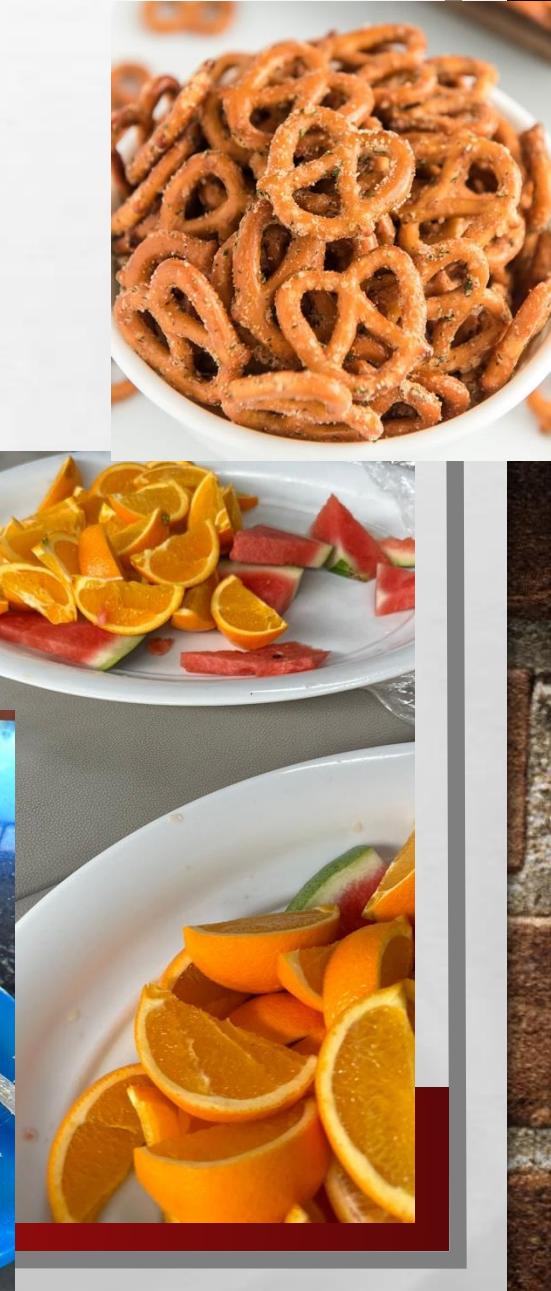
- 1 HOUR PRIOR TO GAME TIME
- PRIORITIZE SIMPLE, EASILY DIGESTED CARBOHYDRATES: 30-60G TO MAXIMIZE AVAILABLE ENERGY
- HYDRATE WITH WATER OR A SPORTS DRINK BEFORE PLAYING.
- AVOID: NEW FOODS, HEAVY, GREASY MEALS, OR ANYTHING HIGH IN FIBER
- FOR CAFFEINE JUNKIES: THIS IS THE ONLY TIME FOR ENERGY DRINKS



PRE-GAME SNACK: SIMPLE CARBS + HYDRATION

SIMPLE CARBS (30-60G)

- FRUITS: BANANA, APPLE, ORANGE, MANGO, ...
- GRANOLA, CEREAL OR ENERGY BAR (LOW FIBER, MODERATE/SIMPLE CARBS)
- RICE CAKES, TOAST, PANCAKE, BAGEL WITH HONEY OR JAM
- YOGURT OR PROTEIN SHAKE (WHEY ISOLATE WITH FRUITS)
- FRUIT SMOOTHIE (WITH LOW-FAT MILK OR YOGURT)
- DRIED FRUIT PORTION (OR TRAIL MIX WITH MINIMAL NUTS)
- LOW-FAT CRACKERS OR PRETZELS
- SPORTS DRINK OR ORANGE JUICE FOR HYDRATION



MID-GAME HYDRATION: SPORT DRINKS

Type	Carb % (per 100 mL)	Main Purpose	Best For	Examples (Australia)
Isotonic	6–8%	Energy + hydration balance	Games & endurance events (>60 min)	Gatorade, Powerade, Pocari Sweat, Staminade, Coconut water
Hypotonic	<4%	Rapid hydration, low calorie	Hot climates, heavy sweaters, short duration	Mizone, Nuun tablets, High5 Zero
Hypertonic	>10%	High carb fuel, glycogen replenishment	Ultra-endurance events, recovery	Maurten 320, SIS Beta Fuel, Gatorade Endurance, Milk

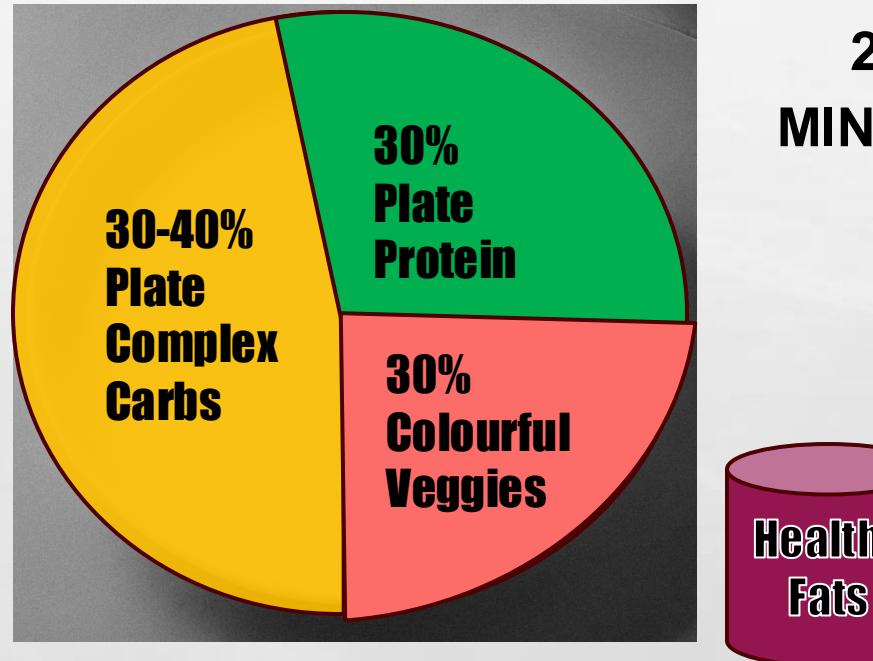
Key electrolytes to replenish: Sodium (Na^+) and Potassium (K^+)

- Without risk of cramping, fatigue and dizziness



POST-GAME PLATE: RECOVERY

- 1 HOUR AFTER GAME IDEAL
- REPLACE LOST FLUIDS:
MILK, PROTEIN SHAKE
(CASEIN), HYPERTONIC
SPORT DRINKS
- 30-40% MIX OF COMPLEX &
SIMPLE CARBS: REPLENISH
ENERGY AND MUSCLE
GLYCOGEN STORAGES
- 1-1.2G/ KG OF BODY WEIGHT

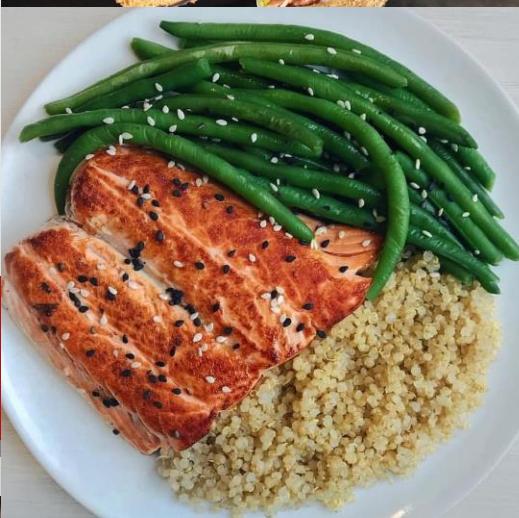


- 30% PROTEIN FOR
MUSCLE REPAIR:
20-25G OF LEAN PROTEIN
MINIMUM
- 30% COLOURFUL
VEGGIES FOR
REPAIR (1-2 CUPS)
- 1-2 TBSP FOR
RESTORATION

POST-GAME PLATE: RECOVERY

EXAMPLES

- GRILLED CHICKEN BREAST, BROWN RICE, STEAMED BROCCOLI, SLICED MELON, WATER OR TART CHERRY JUICE
- TURKEY SUB SANDWICH, PRETZELS, APPLE SLICES, SPORTS DRINK
- PASTA WITH MARINARA SAUCE AND MEATBALLS, SALAD, BREADSTICKS, WATER
- ROASTED SALMON, QUINOA, GREEN BEANS, DINNER ROLL, LOW-FAT MILK
- BAGEL WITH NUT BUTTER, BANANA, CHOCOLATE MILK



FUEL FOR THE BUSY

- **Microwavable Ready Meals** (Muscle Chef, Macro Meals, Aldi Carb Control, World Kitchen, Lite & Easy Meal Delivery)
- **Wholegrain Wraps or Sandwiches**
 - Fill with deli meats, cheese, salad, and avocado for balanced, portable meals.
 - Ready-made protein and carbs; add seeds or honey for extra energy.
- **Smoothies:** Use fresh or frozen fruit, protein powder or Greek yogurt, nut butter, and milk/plant milk
- **Instant Oats or Porridge** (Add nuts, seeds, dried fruit, or fresh fruit for a balanced meal rich in carbs and fiber)



FUEL FOR THE BUSY

Choose your protein:

- Rotisserie or Pre-cooked Chicken
- Canned beans, tuna, or pre-cooked chicken
- Eggs (Boiled or Scrambled)
- Greek Yogurt with Nuts and Fruit



Combine with carbs & colourful veggies:

- Fresh or Pre-washed Salad Kits
- Microwavable Steamable Vegetables
- Microwavable Grain Bowls



KEY SUPPLEMENTS FOR ATHLETES

- OMEGA 3
- VITAMIN D3
- CREATINE
- MAGNESIUM
- PERSONALISE IT!



OMEGA-3 SUPPLEMENTS

- Improved Muscle Strength and Endurance
- Enhanced Recovery and Reduced Muscle Soreness
- Better Cardiovascular Health
- Improved Cognitive Function and Reaction Time
- Injury Prevention
- Potential Sleep Improvement



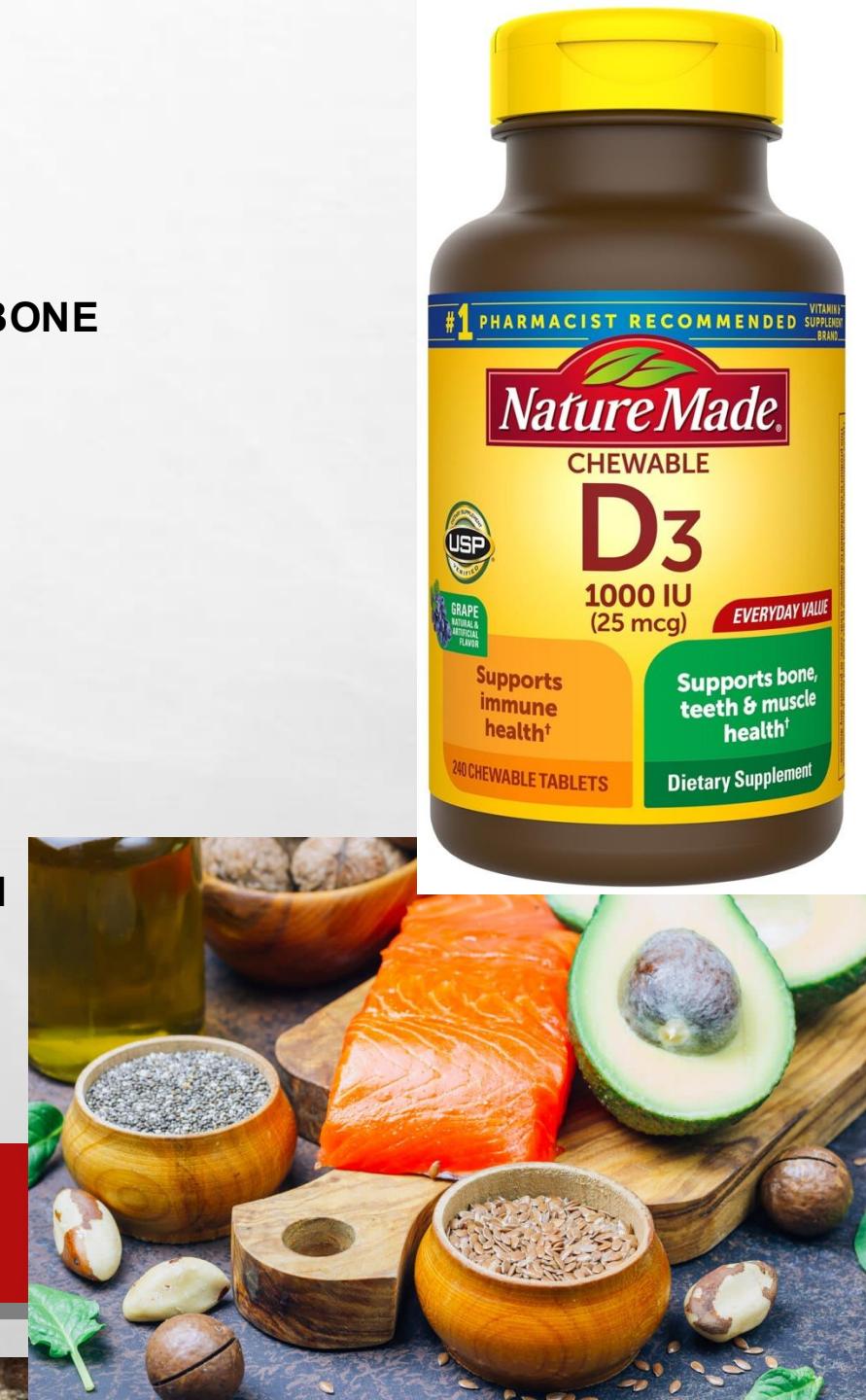
OMEGA-3 SUPPLEMENTS

- FISH OIL/ KRILL OIL: EPA & DHA (MARINE OMEGA-3S): 1.5-3 G COMBINED PER DAY (START WITH 1G, DO NOT EXCEED 5G/DAY)
- VEGAN OPTION ALGAL OIL : ALA (PLANT-BASED OMEGA-3): 1.1 GRAMS PER DAY, BUT NOT SUFFICIENT ON ITS OWN
- TAKE WITH FOOD CONTAINING HEALTHY FATS FOR BEST ABSORPTION
- CHOOSE HIGH-QUALITY, PURIFIED OMEGA-3 SUPPLEMENTS THAT ARE THIRD-PARTY TESTED FOR HEAVY METALS AND CONTAMINANTS:
 - Blackmores Omega Triple High Strength Fish Oil (900 mg per capsule)
 - Swisse Ultiboost Odourless High Strength Wild Fish Oil (1500mg per capsule)
 - Healthy Care Wild Salmon Oil 1000mg
 - Cenovis Mega Omega-3



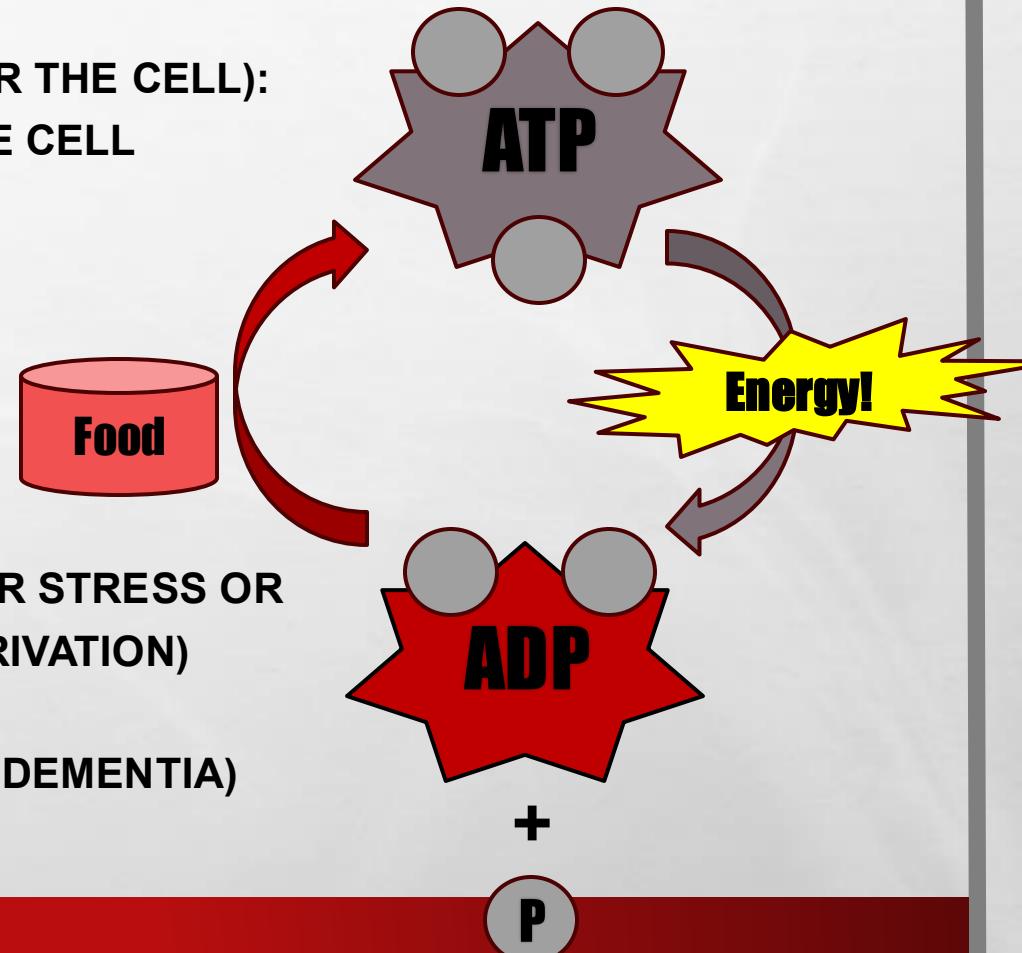
VITAMIN D3

- ESSENTIAL FOR BONE HEALTH: CALCIUM ABSORPTION & MAINTAINING BONE MINERAL DENSITY; REDUCES RISK OF FRACTURES & OSTEOPOROSIS
- IMPORTANT FOR BRAIN HEALTH, REDUCES RISK OF DEPRESSION
- SUPPORTS MUSCLE STRENGTH, RECOVERY
- BOOSTS IMMUNE DEFENSE
- 600 IU (15 MCG) PER DAY
- VITAMIN D3 (CHOLECALCIFEROL) IS FAT SOLUBLE
- TAKE IT WITH A HEALTHY FAT SOURCE TO ALLOW OPTIMAL ABSORPTION (PRO TIP: PAIR WITH OMEGA 3/ FISH OIL SUPPLEMENT)
- EXAMPLES: NUTS, SEEDS, EGGS, AVOCADO, OLIVES, COCONUT,..



CREATINE FOR ATHLETES

- BOOSTS ENERGY WHEN THE CELL NEEDS IT (POWERBANK FOR THE CELL):
→ INCREASES ENERGY PRODUCTION/ ATP PRODUCTION IN THE CELL
WITHOUT RELYING ON FOOD
- ENHANCES HIGH-INTENSITY PERFORMANCE
→ IMPROVES POWER, SPRINTS, SURGES, FAST INTERVALS
- BUILDS & PRESERVES LEAN MUSCLE MASS
SUPPORTS BRAIN HEALTH & MOOD
- ENHANCES COGNITIVE FUNCTION & FOCUS ESPECIALLY UNDER STRESS OR
SLEEP DEPRIVATION (20G SINGLE DOSAGE AFTER SLEEP DEPRIVATION)
→ FIGHTS MENTAL FATIGUE, DEPRESSION, AND BRAIN FOG
→ MAY HELP NEURODEGENERATIVE DISEASES (ALZHEIMER'S, DEMENTIA)



CREATINE FOR ATHLETES

- LOADING PHASE (OPTIONAL): 20 G/DAY, 4X 5G FOR 5–7 DAYS
- MAINTENANCE PHASE: 5-10 G/DAY
- TAKE DAILY WITH PLENTY OF WATER (HOT OR COLD) & WITH MEALS (BOOSTS CARB ABSORPTION AND GLYCOGEN STORAGE)
- CONSISTENCY IS KEY!
- EXPECT WATER RETENTION: 0.5-1 KG WEIGHT GAIN POSSIBLE
- ESPECIALLY BENEFICIAL FOR WOMEN AND VEGETARIANS/VEGANS



MAGNESIUM

- CRUCIAL FOR MUSCLE CONTRACTION AND RELAXATION, NERVE FUNCTION, ENERGY PRODUCTION, AND REDUCING FATIGUE
- HELPS TO PREVENT AND RELIEVE MUSCLE CRAMPING
- GENERAL ADULTS: 400–420MG/DAY FOR MEN, 310–320MG/DAY FOR WOMEN
- ATHLETES: 10-20% MORE IF TRAINING INTENSELY (UP TO 500–800MG/DAY DEPENDING ON TRAINING LOAD).
- DO NOT EXCEED 350MG FROM SUPPLEMENTS ALONE (RISK OF DIGESTIVE DISTRESS).
- BEST ABSORBED FORMS OF MAGNESIUM:
 - MAGNESIUM GLYCINATE: HIGHLY BIOAVAILABLE, GENTLE ON THE STOMACH.
 - MAGNESIUM CITRATE: WELL-ABSORBED, COMMONLY USED FOR MUSCLE HEALTH AND CRAMP PREVENTION.
- AVOID MAGNESIUM OXIDE AND SULFATE!



PREVENT CRAMPING

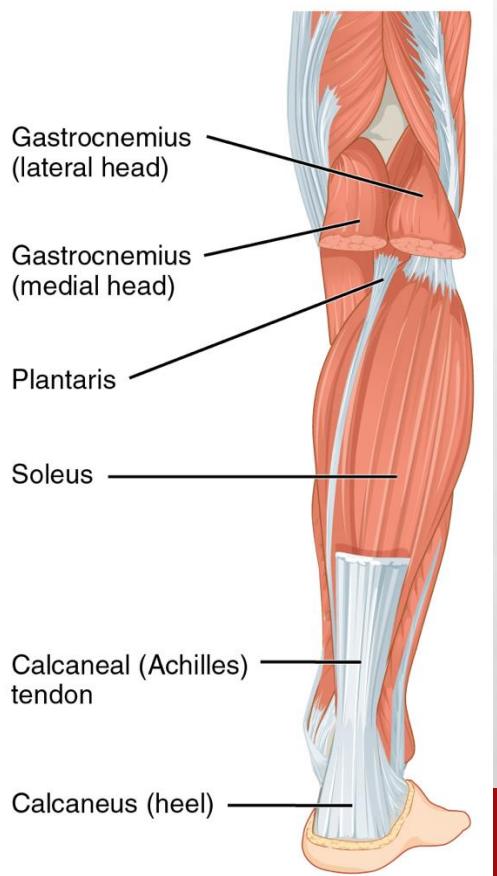
- MAINTAIN HYDRATION AND ELECTROLYTE BALANCE
- DRINK PLENTY OF WATER THROUGHOUT THE DAY
- REPLENISH ELECTROLYTES:
 - SODIUM (SPORTS DRINKS, PICKLES, SALTED NUTS, COCONUT WATER—ESPECIALLY USEFUL DURING LONG BOUTS IN THE HEAT)
 - POTASSIUM (BANANAS, SWEET POTATOES, POTATOES, MELONS, AVOCADO, ORANGE JUICE)
 - MAGNESIUM (LEAFY GREENS, NUTS, SEEDS, LEGUMES, YOGURT, BONE BROTH)
 - CALCIUM (MILK, YOGURT, LEAFY GREENS, CHEESE, FORTIFIED PLANT MILKS)

High-Electrolyte Snack Ideas

- Banana with salted peanut butter
- Greek yogurt with berries
- Trail mix (nuts, seeds, dried fruits)
- Sweet potato wedges
- Watermelon and cantaloupe slices
- Coconut water (unsweetened)
- Low-fat milk or chocolate milk



PREVENT CRAMPING: STRETCHING



- **STRETCH REGULARLY! IT IS NOT OPTIONAL BUT ESSENTIAL!**
- **IMPROVES FLEXIBILITY AND RANGE OF MOTION**
- **DECREASES MUSCLE STIFFNESS AND TENSION**
- **DIRECTLY RELIEVES AND MANAGES CRAMPS**
- **REDUCES INJURY RISK**
- **INCREASES BLOOD FLOW AND CIRCULATION**
- **IMPORTANT FOR TENDON ELASTICITY AND VISCOSITY, ALLOWING TENDONS TO BETTER ABSORB AND RELEASE ENERGY DURING ACTIVITY.**



KEY NUTRITION FOR YOUNG ATHLETES

- **5-6 small balanced meals & snacks per day (3 hours apart)**
- **Carbohydrates: 45–65% of daily calories—main fuel for sports**
- **Protein: 10–30% of calories—builds/repairs muscle, supports growth.**
- **Healthy Fats: 25–35% of calories—for energy and cell growth**
- **Avoid skipping meals or restricting food access**
- **Avoid “Clean the plate principle”**

(and filling the same size plates as adults)



KEY NUTRITION FOR YOUNG ATHLETES

Micronutrients:

- **Calcium:** Essential for bone strength (milk, yogurt, cheese, leafy greens).
- **Iron:** Needed for oxygen delivery (lean meat, beans, eggs, iron-fortified foods, leafy greens).

Hydration:

- Water is best before, during, and after exercise.
- Sports drinks only for exercise >1hr or intense training in heat

WOULD YOU EAT?

Phthalates:

Plastic chemicals
linked to cancer

Acrylamide:

forms during frying of starchy
foods, carcinogen

Tertiary Butylhydroquinone (TBHQ):

A synthetic preservative used in frying
oils and processed meats, toxic



Trans Fats:

raises "bad" cholesterol and
promote inflammation, associated
with increased cardiovascular risk

Sodium Nitrite and Nitrate:

Used in processed meats
preserving color and flavor.
Classified as probable
carcinogens linked to colorectal
cancer.

Polyfluoroalkyl Substances (PFAS):

Found in greaseproof packaging for fast
food, linked to cancer and immune
disruption.

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Sodium Nitrite and Nitrate:

Used in processed meats
preserving color and flavor.
Classified as probable
carcinogens linked to colorectal
cancer.

Polyfluoroalkyl Substances (PFAS):

Found in greaseproof packaging for fast
food, linked to cancer and immune
disruption.

PLEASE STOP THE BRAIN WASHING...

Fast Food

- High in saturated and trans fats
- Associated with obesity and obesity-related cancer and metabolic function risks
- Frequent intake of processed red meat increases **colorectal cancer risk by about 18-27%** per 50-100g/day, depending on processed meat amount.
- increases **type 2 diabetes risk by about 30-40%** due to high glycemic load, unhealthy fats
- Fast food consumption is linked to a **25-35% increased risk of heart disease and stroke** due to poor blood lipid profiles and hypertension.

Highly Processed Foods (Ultra-Processed)

- Increases **overall cancer risk by about 12-20%** per additional daily serving.
- **40-50% increased type 2 diabetes risk**, driven by poor nutrient quality and metabolic disruption
- **30-40% higher risk of cardiovascular disease** due to dyslipidemia, inflammation, and obesity

HAVE A TREAT!



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HAVE A TREAT! HAVE A POISON!

- **Artificial Colors/Dyes:** Red 3 (E127), Yellow 5 (Tartrazine), Yellow 6, Blue 1 – carcinogenic potential in animal studies.
- **Titanium Dioxide (E171):** Used for whitening in gummies and coated candy. Classified as possibly carcinogenic and recently banned in the EU for food use.
- **Artificial Sweeteners** (in sugar-free versions): Aspartame, Acesulfame K, Sucratose – Some controversial data regarding cancer risk, mainly from animal studies.
- **Preservatives/Emulsifiers:**
 - *BHA, BHT* – Linked to carcinogenicity in rodent models and possibly harmful in large quantities.
 - *Polysorbate 80 & 60* – Linked to gut inflammation, possibly increasing cancer risk
- **High Fructose Corn Syrup and Added Sugars:**
 - Indirectly carcinogenic via promoting obesity, insulin resistance, and chronic inflammation, which are risk factors for various cancers.



PLEASE STOP THE BRAIN WASHING...

Fruit juices and sugary sodas/drinks:

- Lack fiber & cause rapid blood sugar spikes & crashes
- Lead to ADHD-like symptoms: hyperactivity, trouble focusing

Daily 250 ml have been shown to...

- increases your **cancer risk** (colorectal, melanoma, thyroid,...) **by 14-31%**
- Increase your chance of getting **type 2 diabetes** **by 7-14%**
- Increase your **cardiovascular disease risk** **by 18-43%**



Candy as “treats” (high added sugar sweets)

- Makes your brain addicted to sugar and your body less metabolically flexible
- **18% higher risk of colorectal cancer** in women
- **20-30% higher risk of type 2 diabetes**
- **15-25% increase of cardiovascular disease**

➤ Challenge: find a new fruit or vegetable in your local supermarket and try it out as a new treat!

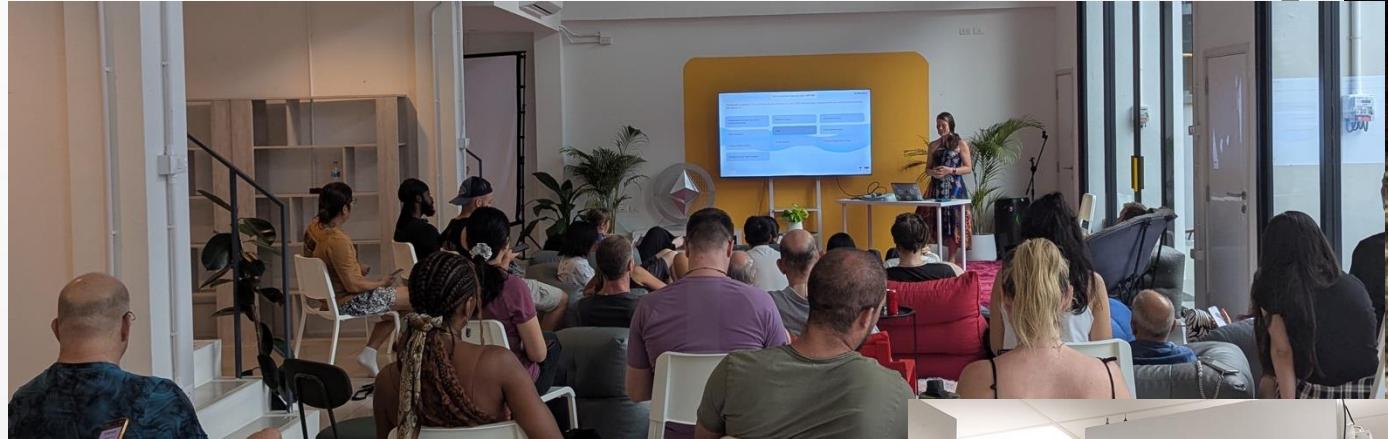


SO WHAT CAN WE DO?

- **Choose Whole, Minimally Processed Foods most of the time**
- **Read Ingredient Labels Carefully:** Avoid products with artificial dyes, sweeteners, preservatives (BHA, BHT), and high fructose corn syrup.
- **Substitute Processed Candy:**
 - Try roasted chickpeas, air-popped popcorn, whole-grain crackers, or homemade granola bars.
 - Make frozen “nice cream” with blended banana or avocado and cocoa.
- **Substitute refined sugar with monk fruit sweetener, erythritol, stevia....**
- **Pack Smart Snacks for On-the-Go:** Nuts, seeds, pre-cut vegetables, string cheese, and fruit snacks
- **Limit Sugary Drinks/Juice:** go for the sugar free alternatives, opt for water, sparkling water with fresh lemon/lime, or herbal tea.

WORK WITH ME

❖ www.levelupwithlin.com



- Fundamental scientific education on how our body works
- Nutritional guidance
- Holistic Health Assessment
- Biomedical health coaching on natural reversal of inflammation
- Regular online workshops: Women's health (sync exercise and nutrition to your cycle), nutrigenomics (heal inflammation with food), gut microbiome reset,...

