

PRIORITIZING ATHLETE WELL- BEING THROUGH EFFECTIVE FUELING AND SPORT CULTURE

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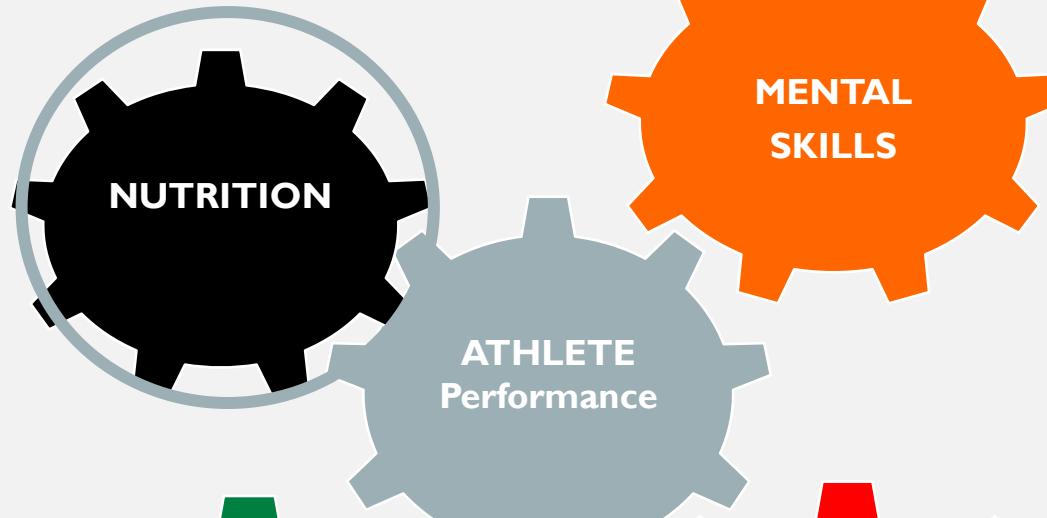
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MAIN OBJECTIVES

- Increased awareness of effective fueling
- Understand consequences of ineffective fueling on health & performance
- Importance of personal wellness & healthy team environment
- Personalized plan to support effective fueling and team mentality

**Nutrition is Critical
To Maximize Your
Training Response**

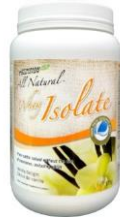


How Many Training Sessions in a Week?

How Many Races in a Week?

**Training is the Stimulus
Training Breaks you Down –
Nutrition is Essential to Build Back**

NUTRITION FOUNDATION STARTS WITH **FOOD!**



Little ENERGY



FUEL

**AMPLE
ENERGY**

NUTRIENTS

KNOW YOUR MACROS YOUR **FUEL** SOURCES



Carbohydrates: grains (cereal, pasta, rice), all fruit, all vegetables, Legumes (lentils, chickpeas, etc.), milk, regular yogurt, sport drinks & gels



Proteins: eggs, fish, meat, chicken, turkey, whey, cottage cheese, Greek yogurt, tofu, tempeh, “Veggie” protein foods, cheese* & nut butters* (PB, AB)

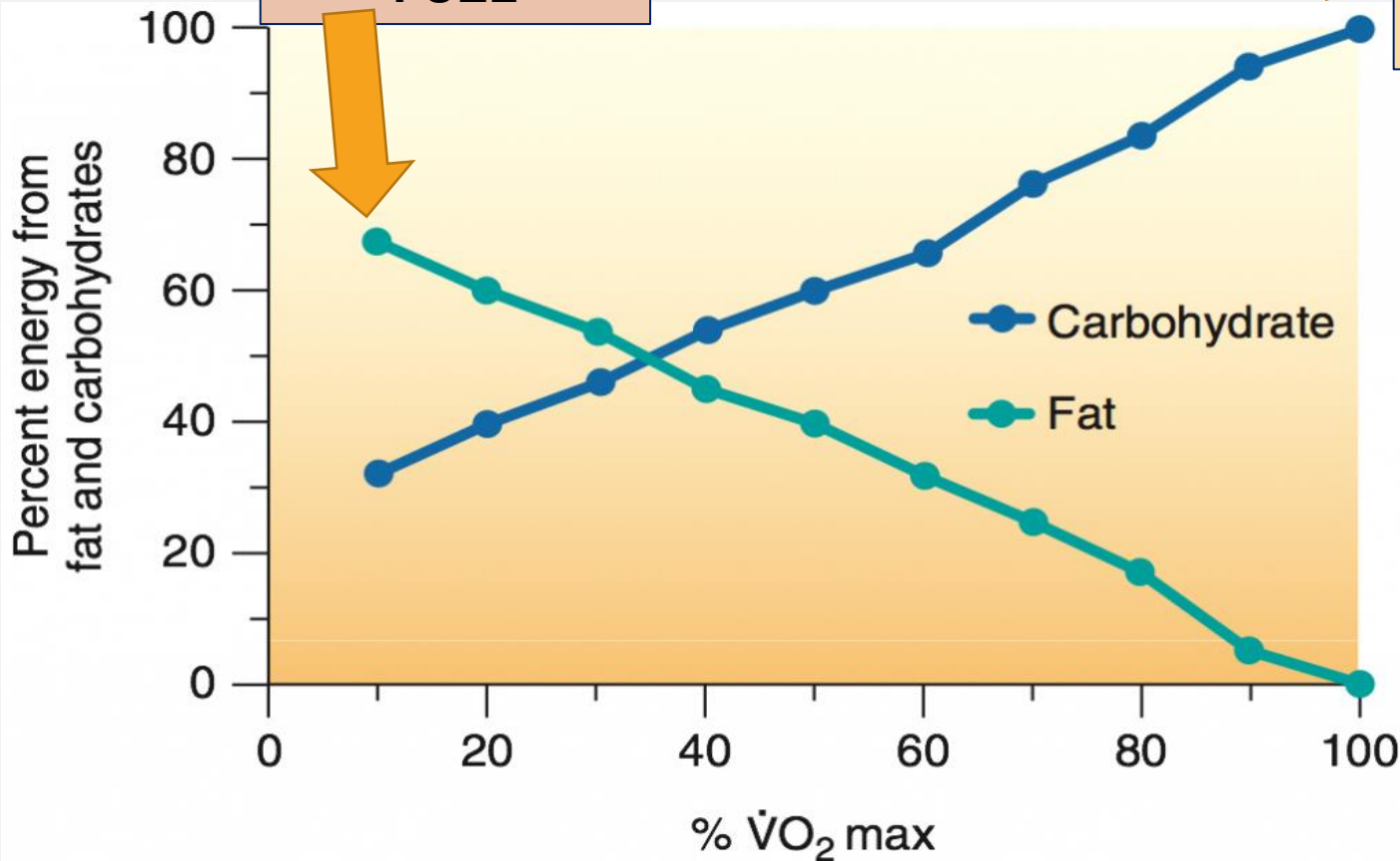


Fats: oils, butter, nuts, seeds, cheese* & nut butters* (PB, AB), avocado, chia seeds, hemp hearts

EXERCISE FUELS

Low Intensity =
Fats are your
FUEL

High Intensity =
Carbs are the
FUEL,
The Fuel for
Racing & Hard
Training!



EFFECTIVE FUELING: EAT OFTEN

Breakfast

Snack

Lunch

Snack =
Pre-Train

Immediate
Training
Recovery

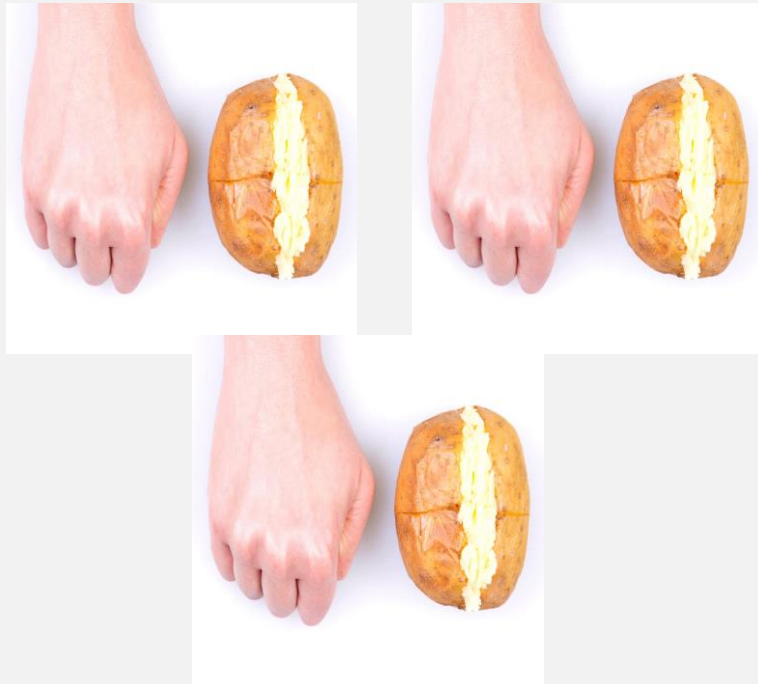
Dinner

Evening
Snack

**Keep Eating Often
On REST DAYS!**

**Take at Least
1 Day Off a Week
From Training**

MEAL PLANNING



2-3 Clenched Fists **STARCH**
1 Palm of cooked **PROTEIN**
1-2 Cups **Veggies or Fruits**
+ Healthy Fats, Fluids



HARD TRAINING / RACE DAY:

FATS

2 Tablespoons



Grains

Pasta
Rice
Potatoes
Cereals
Breads



Fresh Fruit
Stewed Fruit
Dried Fruit



Water
Dairy/Nondairy
Beverages
Diluted Juice
Flavored
Beverages



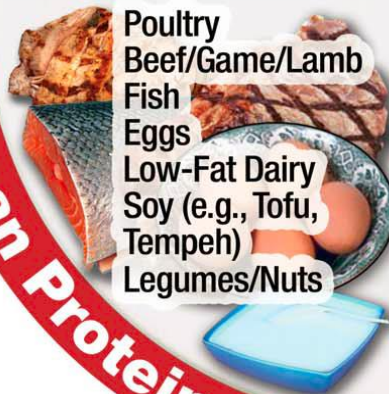
Coffee
Tea

Avocado
Oils
Nuts
Seeds
Cheese
Butter



Lean Protein

Poultry
Beef/Game/Lamb
Fish
Eggs
Low-Fat Dairy
Soy (e.g., Tofu,
Tempeh)
Legumes/Nuts



Cooked Veggies
Veggie Soups
Raw Veggies



Vegetables

FLAVORS

Salt/Pepper
Herbs
Spices
Vinegar
Salsa
Mustard
Ketchup



LIGHTER TRAINING

FATS

1 Tablespoon

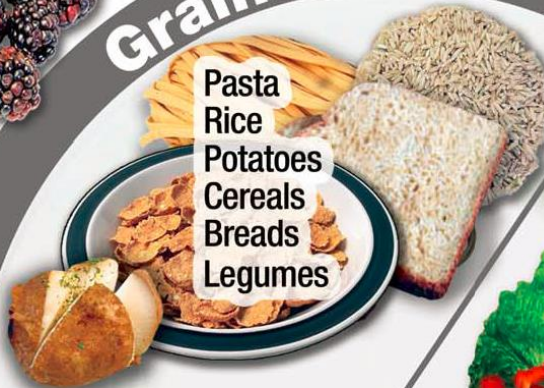


Avocado
Oils
Nuts
Seeds
Cheese
Butter



Grains

Pasta
Rice
Potatoes
Cereals
Breads
Legumes



Lean Protein

Poultry
Beef/Game/Lamb
Fish
Eggs
Low-Fat Dairy
Soy (e.g., Tofu, Tempeh)
Legumes/Nuts

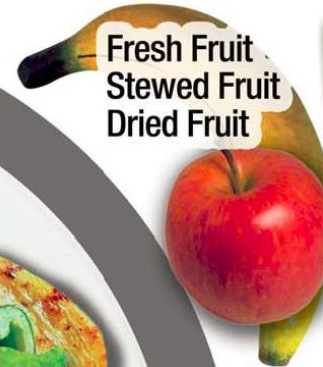


Raw Veggies
Cooked Veggies
Veggie Soups



Vegetables

Fresh Fruit
Stewed Fruit
Dried Fruit



Water
Dairy/Nondairy
Beverages
Diluted Juice
Flavored
Beverages



Coffee
Tea

FLAVORS

Salt/Pepper
Herbs
Spices
Vinegar
Salsa
Mustard
Ketchup



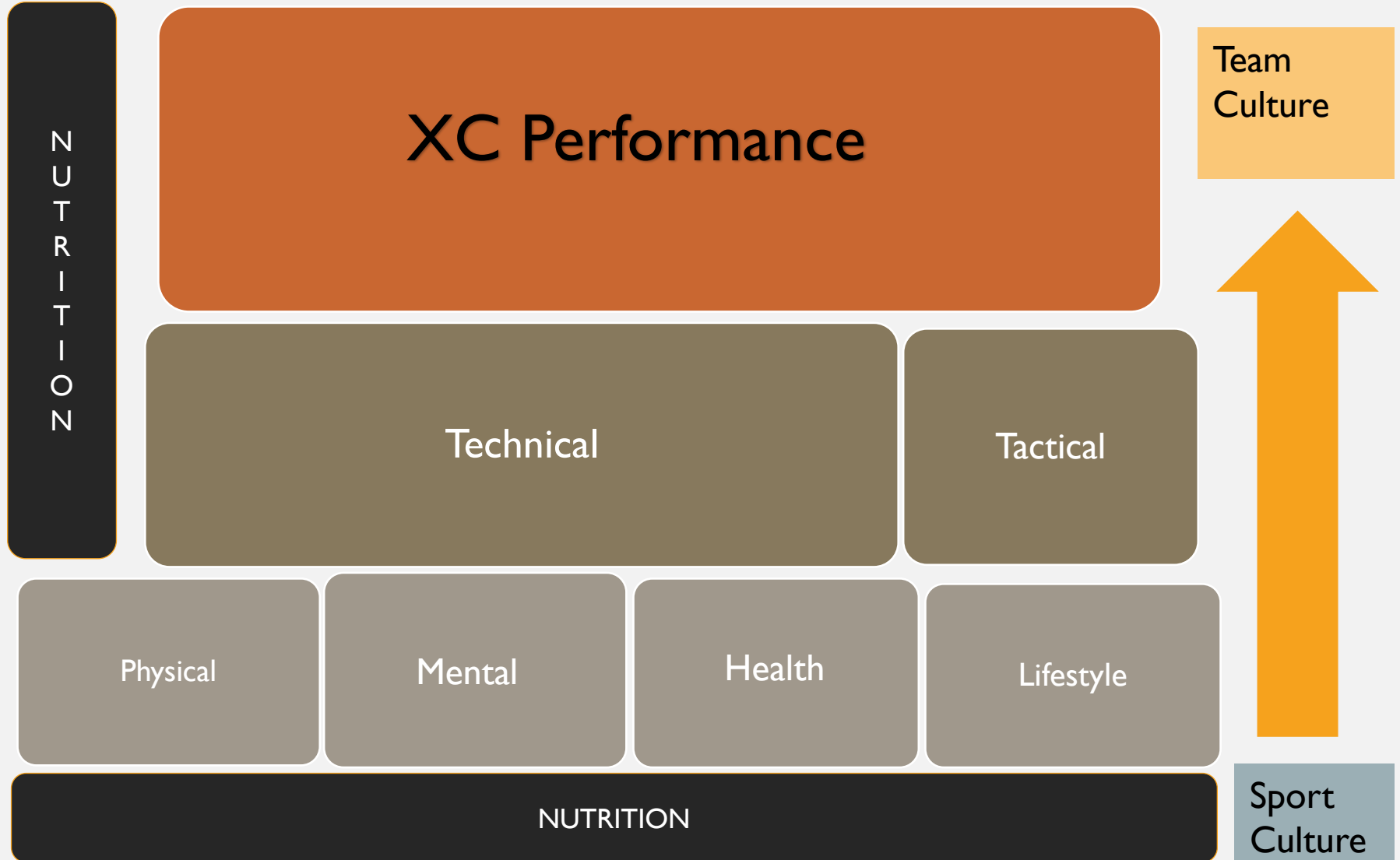
RECOVERY NUTRITION

The 5 R's

- **R**estore Energy (**carbs**)
- **R**epair Muscle (**protein**)
- **R**ehydrate (**fluids**)
- **R**eplenish Minerals (**electrolytes** – sodium & potassium)
- **R**eal Quickly!



Personal Building Blocks of Performance



RISKS OF INEFFICIENT FUELING ON HEALTH

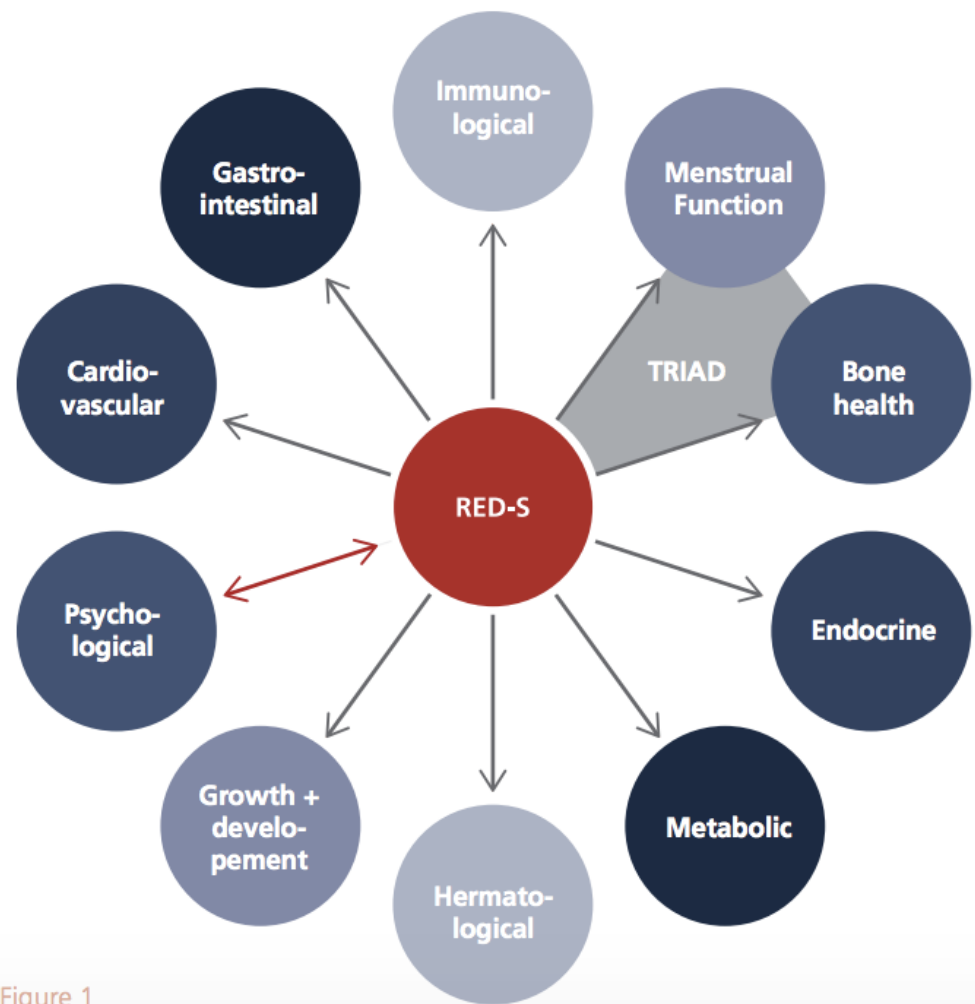


Figure 1

RISKS OF INEFFICIENT FUELING ON PERFORMANCE

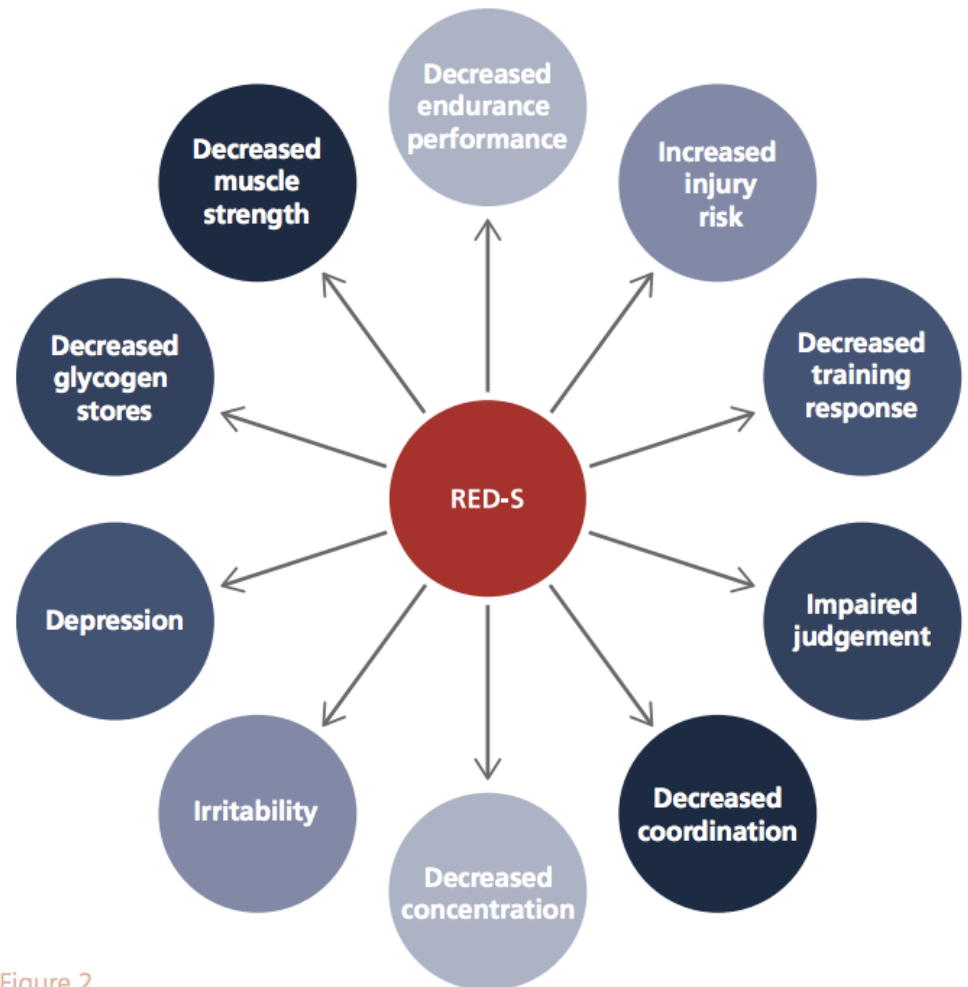


Figure 2

SIGNS AND SYMPTOMS OF INEFFECTIVE FUELING



- Irregular or absent menstruation (female athletes)
- Frequent Injury (e.g., stress fracture)
- Fatigue (e.g., heavy limbs and unable to think clearly)
- Frequent illness and slow recovery
- Decreased Performance Capacity (e.g., to achieve realistic goals)
- Reduced body temperature and being sensitive to cold—cold hands and feet
- Low iron (e.g., Anemia; tired, short of breath)
- Sleep Disturbances (e.g., inability to fall and stay asleep)
- Mood changes (e.g., Increased impatience, crankiness)
- Exercising beyond what is required for sport (e.g., perfectionism)
- Change in eating habits (e.g., buzz diets)
- Decreased testosterone in male athletes (i.e., difficulty building muscle)

INTERNAL AND EXTERNAL INFLUENCES ON FUELING:

Relationship with food
(e.g., eating habits)

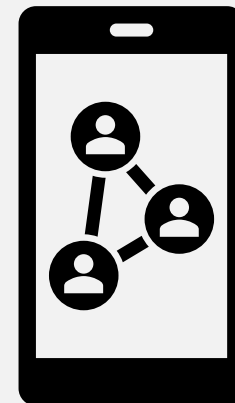
Relationship with
training/exercise

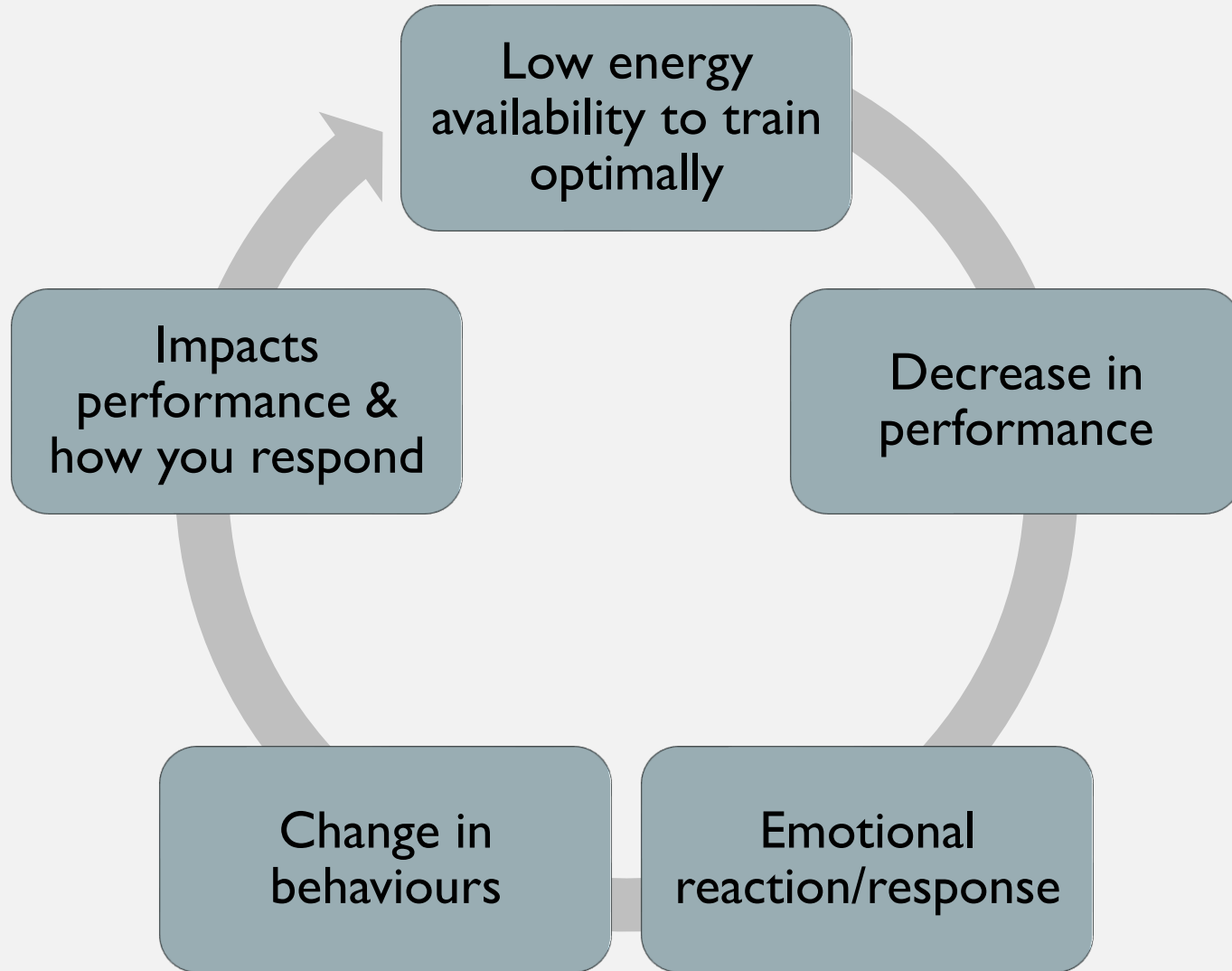
Body Image
(.e.g., how you feel in your
skin)

Perfectionist tendencies or
a strong desire to succeed

Coping mechanisms with
stressors/change/challenges

- Sport culture
- Team culture
- Athlete/coach relationship
- Athlete/athlete relationship
- Parent/athlete relationship
- Influence of social media





PROTECTIVE FACTORS



Awareness around personal warning signs and symptoms of inefficient fueling



Mindful Fueling



Prioritizing Rest and Recovery



Creating a fueling plan



Creating a support network

- Healthy/positive body image
- Psychological safety in team culture
- Inclusive/supportive team environment



SMALL GROUP CASE STUDIES

- THREE CASES – EACH GROUP RECEIVES A UNIQUE ATHLETE CASE
- WORK TOGETHER (5 MINUTES), COME UP WITH IDEAS TO HELP WITH THESE CASES
- PRESENT TO EVERYONE

CASE #1: NICK

15 yrs of age; Struggles to gain weight past year, grew 172-175 cm (5'8 to 5'9"), stayed 61 kg (134 lb)

Breakfast: Honey Nut Cheerios, almond milk, banana, juice

AM Snack: Nothing except water

Lunch: Sandwich, apple, granola bar, water

BEFORE Training: 1 Toast & PB, grapes, water

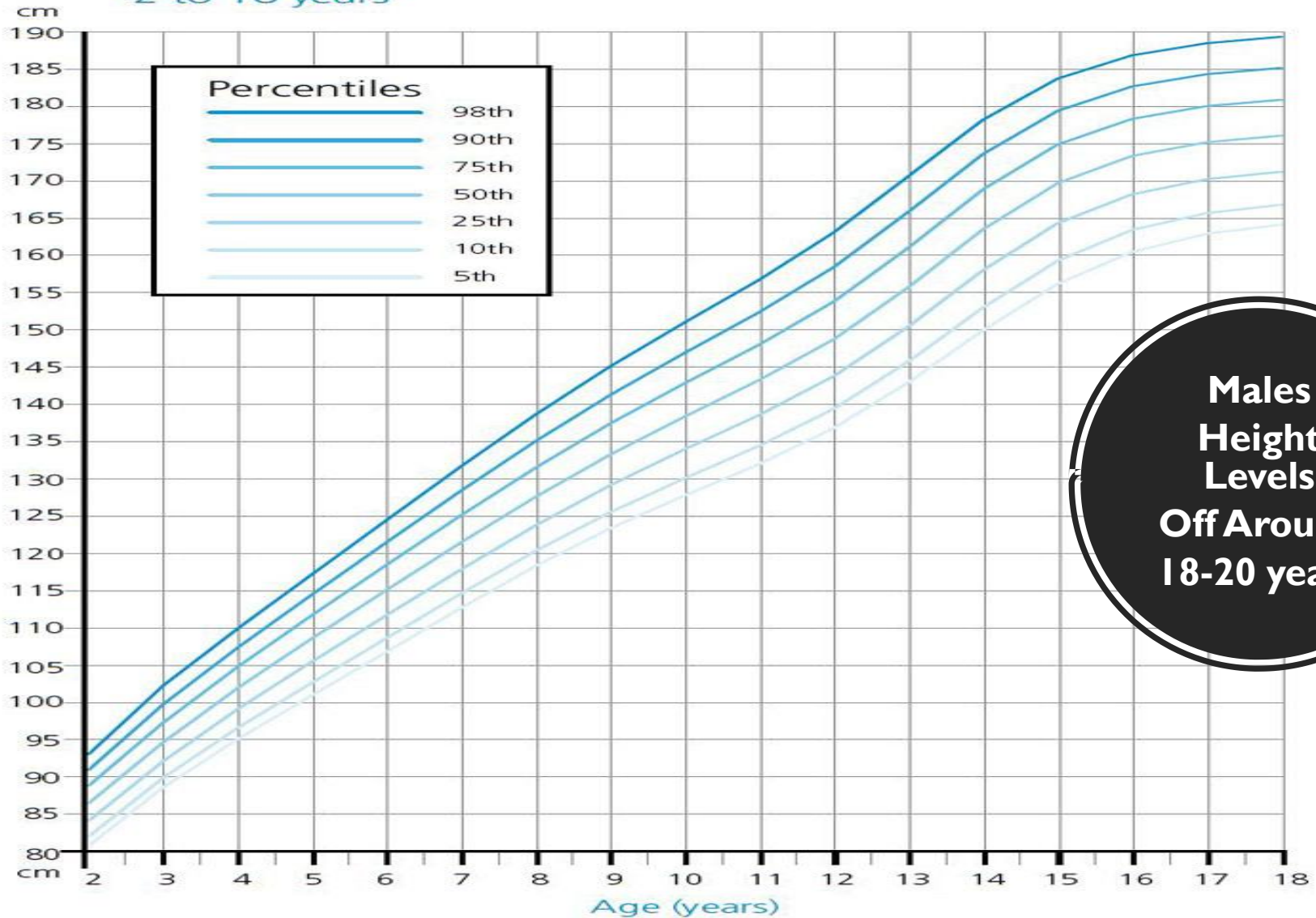
AFTER Training: protein powder & water

Dinner: large plate of chicken & veg stir fry, with "fist" of rice, water

Evening: cup of yogurt & berries

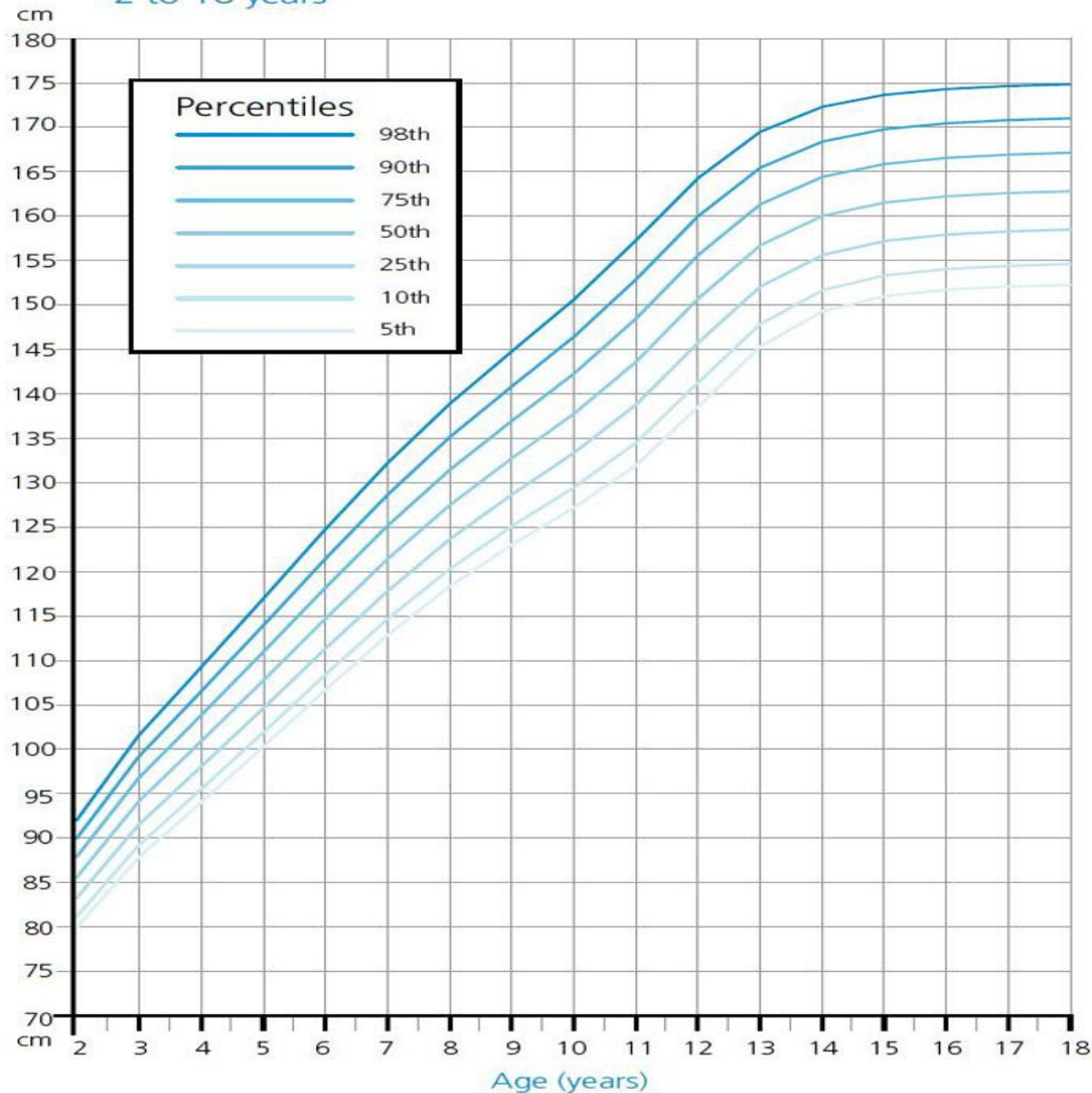
- ***Your observations with nutrition to help gain weight?***
- ***Changes suggested to help put on muscle/gain weight?***

Boys height-for-age percentiles 2 to 18 years



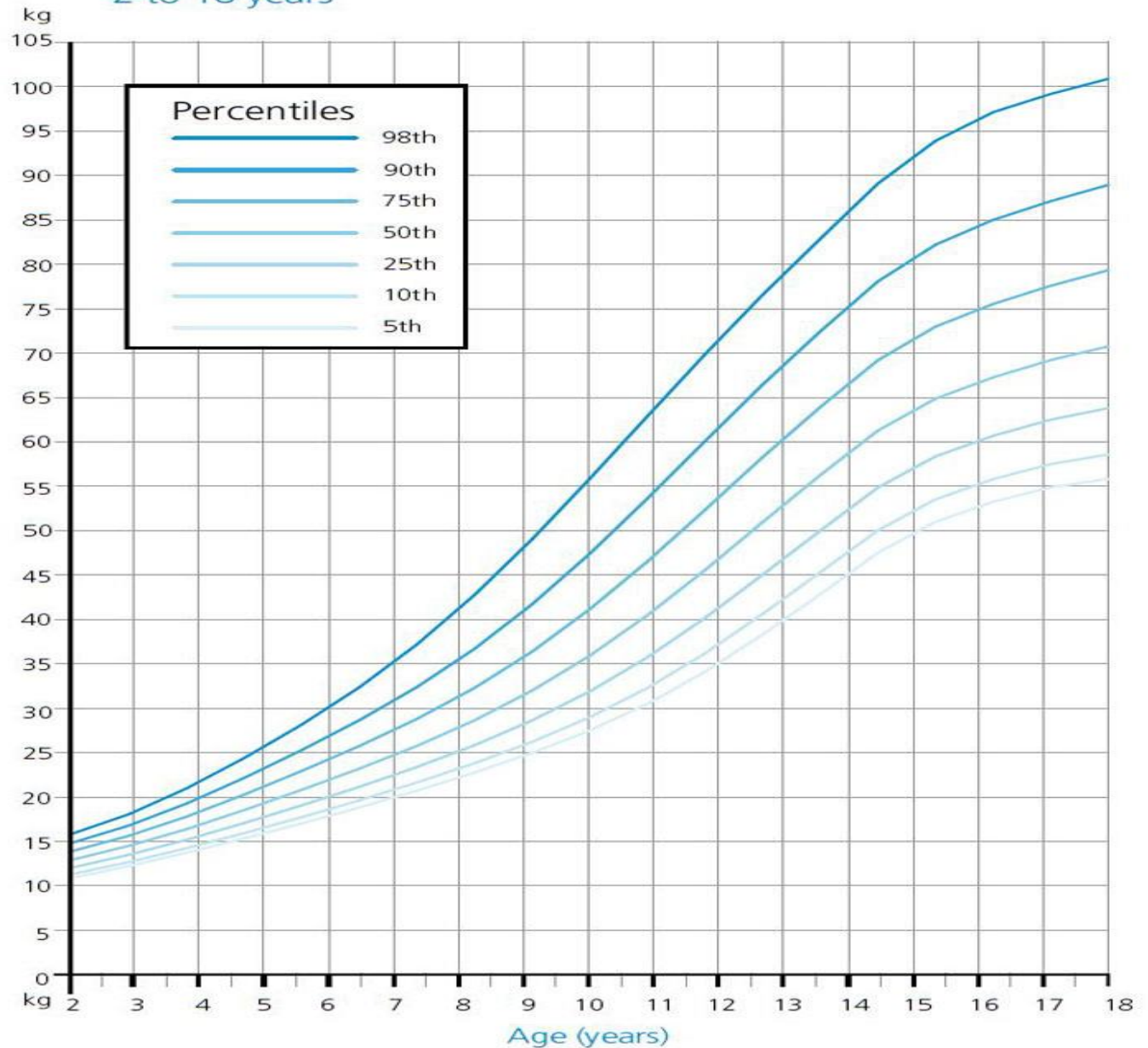
**Males
Height
Levels
Off Around
18-20 years**

Girls height-for-age percentiles 2 to 18 years



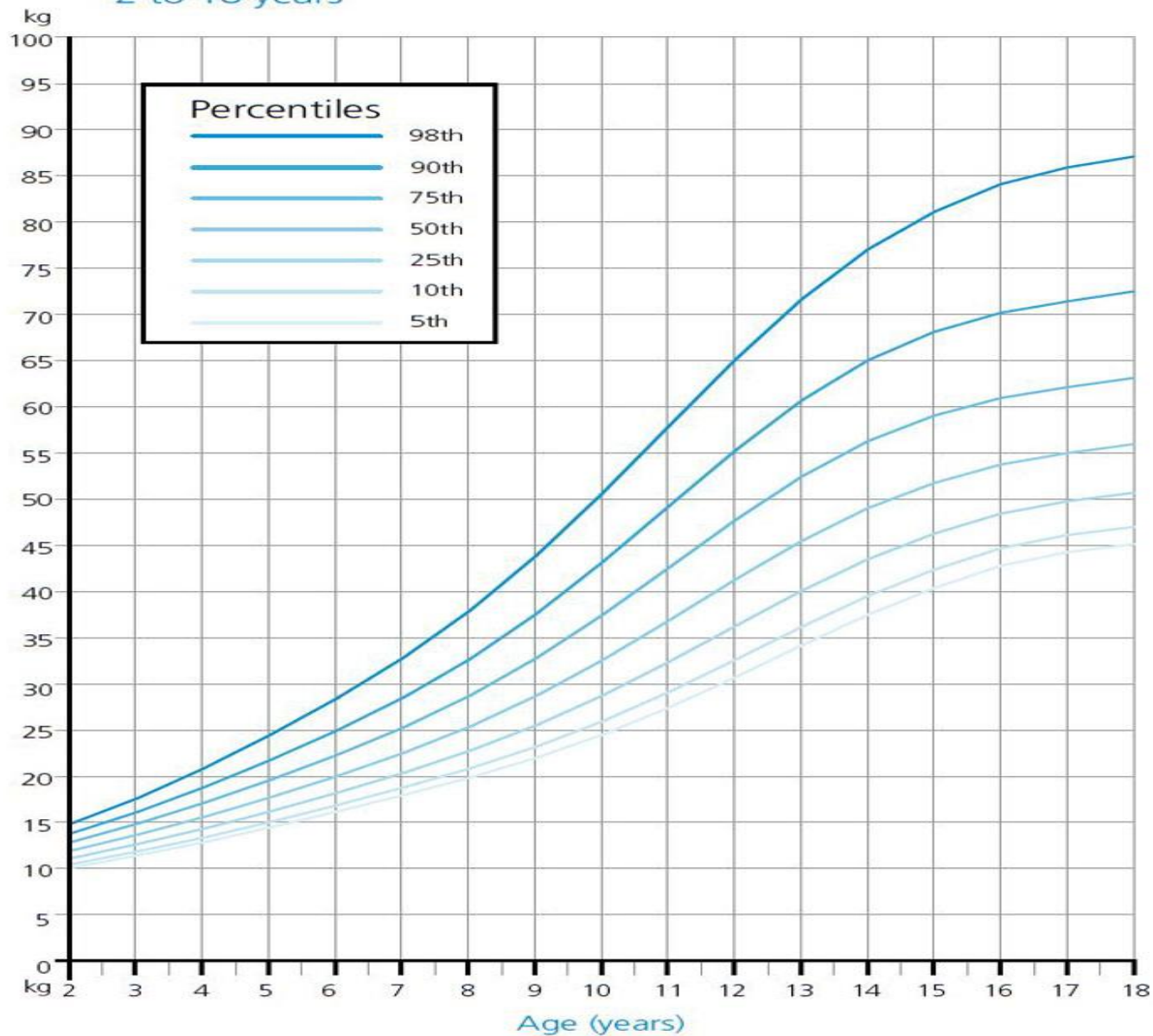
**Females: Height
Levels
Off Around
15-16 years**

Boys weight-for-age percentiles
2 to 18 years



Males
Weight levels
Off around 25

Girls weight-for-age percentiles
2 to 18 years



Females
Weight levels
Off around 22-25

CASE #1: NICK (A FEW SOLUTIONS)

15 yrs of age; Struggles to gain weight past year

*** Choose foods with higher energy density: nuts, nut butter, cheese, ice cream, shakes; include protein with meals; eat 3 meals and 3-4 snacks; add carbs to training recovery; include a protein rich bedtime snack; take at least one day off a week; meet w a dietitian for a customized nutrition plan**

Breakfast: Honey Nut Cheerios, almond milk, banana, juice

AM Snack: Nothing except water

Lunch: Sandwich, apple, granola bar, water

BEFORE Training: 1 Toast & PB, grapes, water

AFTER Training: protein powder & water

Dinner: large plate of chicken & veg stir fry, with “fist” of rice, water

Evening: cup of yogurt & berries

CASE #2: CINDY

16 yrs of age; switched to vegetarian diet 2 years ago; Past year changes felt – period stopped, sick easily w colds, moody, struggles to recover from intensity training and races

Breakfast: Toast, Avocado, Almond Milk, black tea AM Snack: handful almonds & water

Lunch: PB Sandwich, orange or apple, 2 Dad's oatmeal cookies, water

Before Training: veggies, hummus, water After Training: banana & water

Dinner: bowl vegetarian chili, whole wheat bun, salad with Oil & vinegar, water

Evening Snack: apple slices, PB

- ***Observations relative to changes/symptoms described?***
- ***Any blood tests helpful to explore any health issues?***
- ***Recommendations to improve nutrition as vegetarian?***

CASE #2: CINDY (SOME SOLUTIONS)

16 yrs of age; switched to vegetarian diet 2 years ago; Past year changes felt – period stopped, sick easily w colds, moody, struggles to recover from intensity training and races

**** Get iron stores checked & Vit B12; increase intake iron rich foods along w vit C for absorption; include protein w meals & snacks; need protein in training recovery; might want to include fish as a protein source; add more Greek yogurt, eggs, cottage cheese, cheese for protein;***

Breakfast: Toast, Avocado, Almond Milk, black tea AM Snack: handful almonds & water

Lunch: PB Sandwich, orange or apple, 2 Dad's oatmeal cookies, water

Before Training: veggies, hummus, water After Training: banana & water

Dinner: bowl vegetarian chili, whole wheat bun, salad with Oil & vinegar, water

Evening Snack: apple slices, PB

CASE #2: KYLE SAME AS CINDY CASE

16 yrs of age; switched to vegetarian diet 2 years ago; Past year changes felt – sick easily w colds, moody, struggles to recover from intensity training and races

Breakfast: Toast, Avocado, Almond Milk, black tea AM Snack: handful almonds, Water

Lunch: PB Sandwich, orange or apple 2 Dad's oatmeal cookies, water

Before Training: veggies, hummus, water After Training: banana

Dinner: bowl vegetarian chili, whole wheat bun, salad with Oil & vinegar, water

Evening Snack: apple slices, PB

- ***Observations relative to changes/symptoms described?***
- ***Any blood tests helpful to explore any health issues?***
- ***Recommendations to improve nutrition as vegetarian?***

CASE #3: SELENA

Selena is a 15-year-old athlete. Last year she was the top ranked female. This season now behind two teammates that she typically outperforms, which has impacted her self-confidence.

Selena decides to commit to extra training on her off days & forgets to pack snacks. At night she spends more time on social media comparing herself to other athletes & feels no matter how hard she trains, she is never going to be good enough to beat them. As a result, Selena is curious about starting the keto diet.

CASE #3: SELENA

Despite reassurances from her coaches about focusing on long-term goals vs. taking short-term drastic measures to improve performance. Selena recently hurt herself in the gym due to difficulty focusing. She hasn't told anyone how she is feeling because she is convinced there is no other way to improve in 4 weeks.

Teammates describe Selena as preoccupied with herself and notice she is more irritable at practice.

GROUP ACTIVITY: SELENA



1. List 2-3 Characteristics of a positive team environment. How could this environment support Selena in sharing how she feels?
2. What behaviours would you be concerned about that may be related to ineffective fueling?
3. List 2-3 things that would be **helpful** to do in this scenario?
4. List 2-3 things that would be **unhelpful** to do in this scenario?
5. How could you seek help/support for Selena?

CASE #3: CONNOR

Connor is a 15-year-old athlete. Last year he was the top ranked male. This season now behind two teammates that he typically outperforms, which has impacted his self-confidence.

Connor decides to commit to extra training on his off days & forgets to pack snacks. At night he spends more time on social media comparing himself to other athletes & feels no matter how hard he trains, he is never going to be good enough to beat them. As a result, Connor is curious about starting the keto diet.

CASE #3: CONNOR

Despite reassurances from his coaches about focusing on long-term goals vs. taking short-term Connor makes drastic measures to improve performance. He recently hurt himself in the gym due to difficulty focusing. He hasn't told anyone how he is feeling because he is convinced there is no other way to improve in 4 weeks.

Teammates describe Connor as preoccupied with himself and notice he is more irritable at practice.

GROUP ACTIVITY: **CONNOR**

1. List 2-3 Characteristics of a positive team environment.
2. What behaviours would you be concerned about that may be related to ineffective fueling?
3. List 2-3 things that would be **helpful** to do in this scenario?
4. List 2-3 things that would be **unhelpful** to do in this scenario?
5. How could you seek help/support for Connor?



WHAT SHOULD I DO IF AM
WORRIED I (OR SOMEONE
I KNOW) MIGHT BE AT
RISK?

- Talk to a coach or supportive adult you trust
- Express your concern (e.g., observations and curiosity)
- Make an appointment to see a registered professional:
- Registered Dietitian
- Family Doctor or Sport Medicine Doctor
- Registered Counsellor or Psychologist

TREATMENT



- **Medical Management:**

- **Sports Doctor:** monitor physical health
- **Psychologist or Counsellor:** address underlying concerns contributing to signs and symptoms (e.g., fueling and exercise)
- **Dietitian:** food as fuel for goals and eating habits
- **Coaching staff:** return to training (e.g., safe and appropriate level)
- Reduce training volume (e.g., at least 50%)

- **Objective:**

- Prioritize health and wellbeing above all else
- Replenish energy to support health and performance to return to sport

Please note:

- Treatment differs considerably from person to person
- Length of treatment varies case to case.

TAKEAWAYS

Increased **awareness** of effective fueling

Understanding of the **consequences** of ineffective fueling on health and performance

Importance of **personal wellness** and healthy team **environment**

Personalized plan to support effective fueling and team **mentality around fueling**