THE XF WAY

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Guide to Recovery

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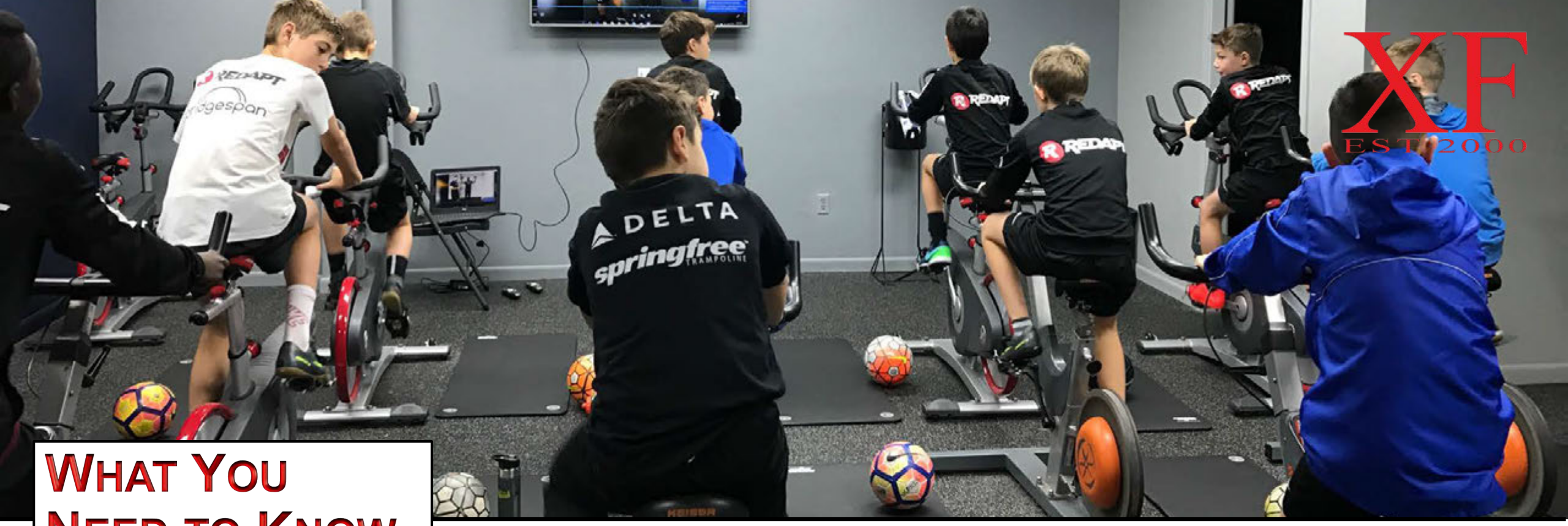
INTRODUCTION

To understand why we need to recover, it is first important to understand what we are recovering from. Exercise and the stress involved with sporting competition is varied and can come in many forms.

Having an understanding of the contributing factors that cause fatigue can help guide targeted recovery strategies. There is never a one-size-fits-all approach.

There are many different applications and options when it comes to selecting the right type of recovery to undertake. It is important that every athlete takes the time to try different approaches, so that they are able to identify the routine that works best for them. What works for you will not necessarily be the best option for someone else.



WHAT YOU NEED TO KNOW

1

RECOVERY IS A KEY DRIVER OF ADAPTATION TO EXERCISE.

If you don't recover adequately, your fitness won't improve.

2

THERE ARE MANY COMMON RECOVERY TECHNIQUES USED BY ATHLETES.

Recovery techniques include active recovery, sleep, self-massage and nutritional practices.

3

IT IS IMPORTANT TO USE WHAT WORKS BEST FOR YOU.

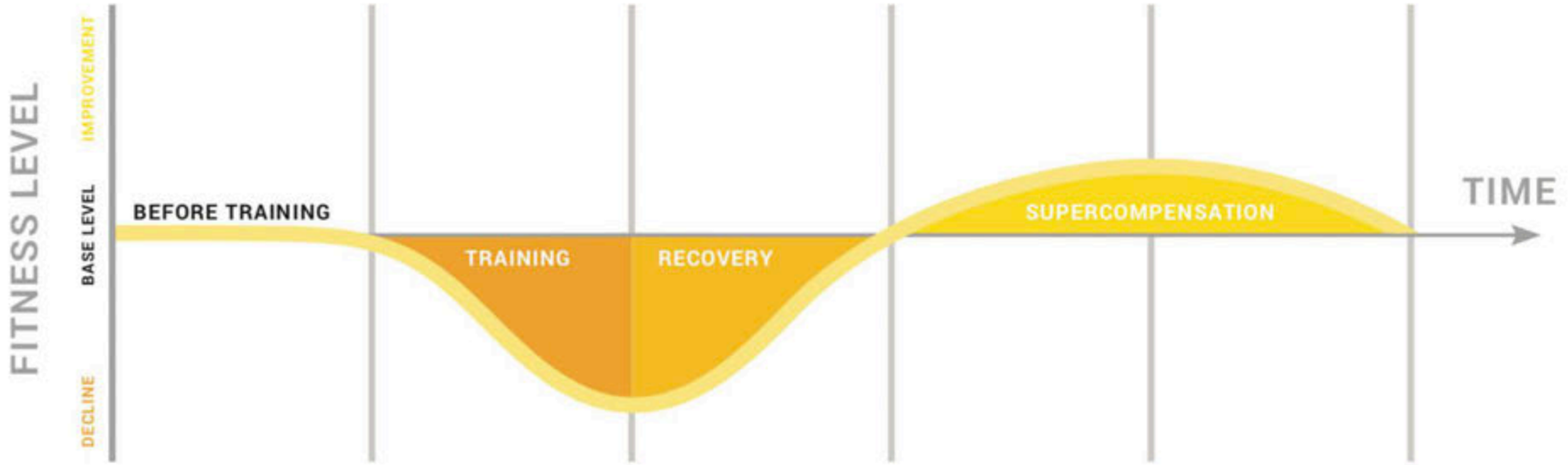
Conflicting scientific evidence exists across a range of recovery techniques.

Performance Factors

BELOW ARE SOME OF THE MANY FACTORS THAT MAY AFFECT ATHLETIC PERFORMANCE.

TRAINING & COMPETITION	Training Volume Training Duration Training Intensity Type of Exercise Training Frequency
PSYCHOLOGICAL STRESS	Stress Mood Fatigue
ENVIRONMENT	Weather conditions Altitude
LIFESTYLE	Diet Sleep Social Life Work School
HEALTH STATUS	Injury Illness Soreness

PHYSIOLOGICAL BENEFITS



Improvements in physical capacity and performance do not actually occur DURING exercise, improvement comes while you are recovering AFTER exercise.

If an athlete undertakes a fatiguing bout of exercise (e.g. a preseason training session or a significant block of training), their theoretical performance level or fitness will decline due to increased fatigue.

It is only once the athlete commences the recovery process (and fatigue reduces) that the performance benefits are realized.

This process is termed as 'super compensation', the above graph demonstrates this theorical process.

It is important for an athlete to prioritize recovery in the exact same way that they would prioritize training. It would be counterproductive to train hard all the time with little to no recovery time factored into the weekly schedule.

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Psychological Benefits

Athletes train to withstand the physical rigors of competition, and as a result, they put a lot of time and energy into their training. With that comes the expectation to recover physically, but often athletes will neglect the psychological element of recovery.

Match days for athletes encompass more than just the competition itself. The night before, the morning of, and directly after a match all demand large amounts of mental capacity.

Do not take mental recovery for granted, there is a large body of scientific evidence supporting the need to undertake recovery specific to psychological load. Competition and training can be very emotionally taxing.

Take the time to ‘decompress’.

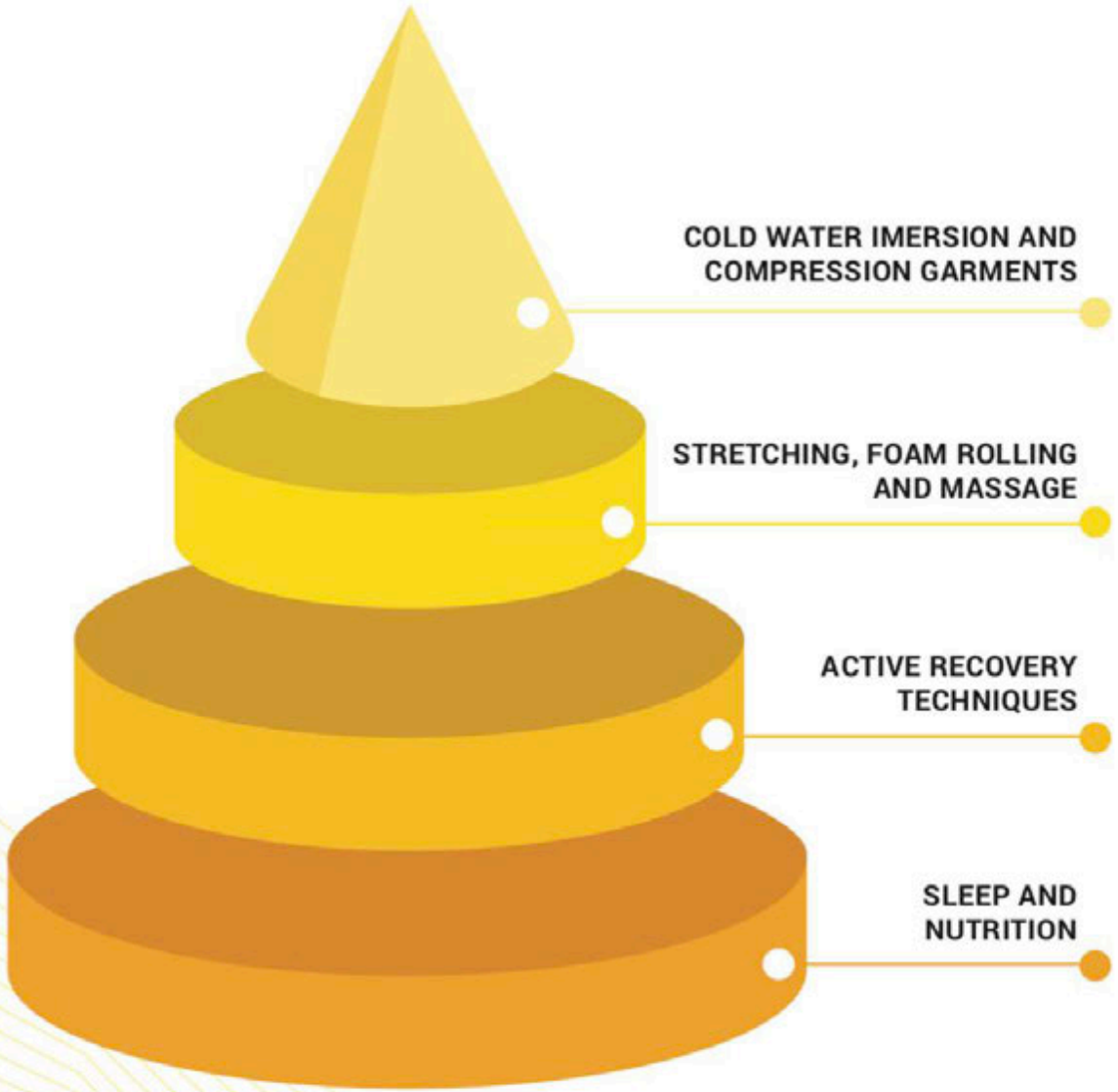
As a starting point, athletes should consider the following methods to aid in mental decompression following a prolonged period of heightened awareness and stress: Minimize time spent on mobile devices, in particular on social media, and spend time undertaking recovery methods that promote mental relaxation such as reading or meditation.

Recovery Modalities

This section will detail what recovery modalities are the most important to consider along with specific protocols associated with each method.

With the information provided, you will be able to implement or experiment and find the structure that works best for you. These recommendations are by no means hard and fast rules to follow; use them as a guide and then change them as needed from there.

It is important to consider the individual variability that comes with recovery and what works well for one athlete may not necessarily work well for another.



SELECTING MODALITY

Elements closer to the bottom of the pyramid should be your recovery priorities. These are your 'big rocks;' they will provide you with the most value and ensure that you are giving yourself every opportunity to appropriately recover.

If you neglect to undertake elements relating to recovery such as adequate sleep and eating food high in nutritional value, other methods you choose to employ may have minimal effect. Choose wisely and prioritize accordingly.

Benefits of appropriate recovery modalities and prescription:

- Promotes blood flow and facilitates the transport of oxygen around the body.
- Stimulates the Central Nervous System (CNS).
- Allows for re-synthesis of protein/hormones integral to tissue repair.
- Decreases acute inflammation, this can be beneficial during heavy competition phases when the aim is to recover as quickly as possible.

TYPE	APPROPRIATE PRESCIPTION	OVERVIEW
Cold Water Immersion	2x5min Temp @ 9-12°C	Water temperatures of <11°C for short periods of time have been shown to decrease levels of muscle soreness. While the mechanism is largely unknown, it appears that a reduction in acute inflammation is the main driver for the benefits of cold water immersion.
Active Recovery	3x6x60m 20min Sub-Max Aerobic Activity	Active recovery can be undertaken in many forms. Typically we are looking to undertake some form of aerobic exercise (intensity 50-60%) for 20 minutes. Active recovery promotes blood flow around the body, facilitating the transport of oxygen and in turn aiding in the restoration of damaged tissue.
Stretching	15-20min	Stretching promotes blood flow around the body and elevates athlete your heart rate, in turn this facilitates the transport of oxygen around the body.
Compression Garments	24hrs Post	There is a growing body of evidence that wearing compression garments (lower body) for up to 24h post exercise may aid in decreasing muscle soreness. The working theory is that the compression aids in decreasing acute inflammation and thus muscle soreness.
Massage	15min of Self-Massage	Massage promotes blood flow around the body, facilitating the transport of oxygen and in turn aiding in the restoration of damaged tissue.
Sleep	8-10hrs of Quality Sleep Every Night	Ensure your bedroom is pitch black, avoid using your phone or laptop before bed and ensure your bedroom is cool.


ATHLETE
NUTRITION &
HYDRATION
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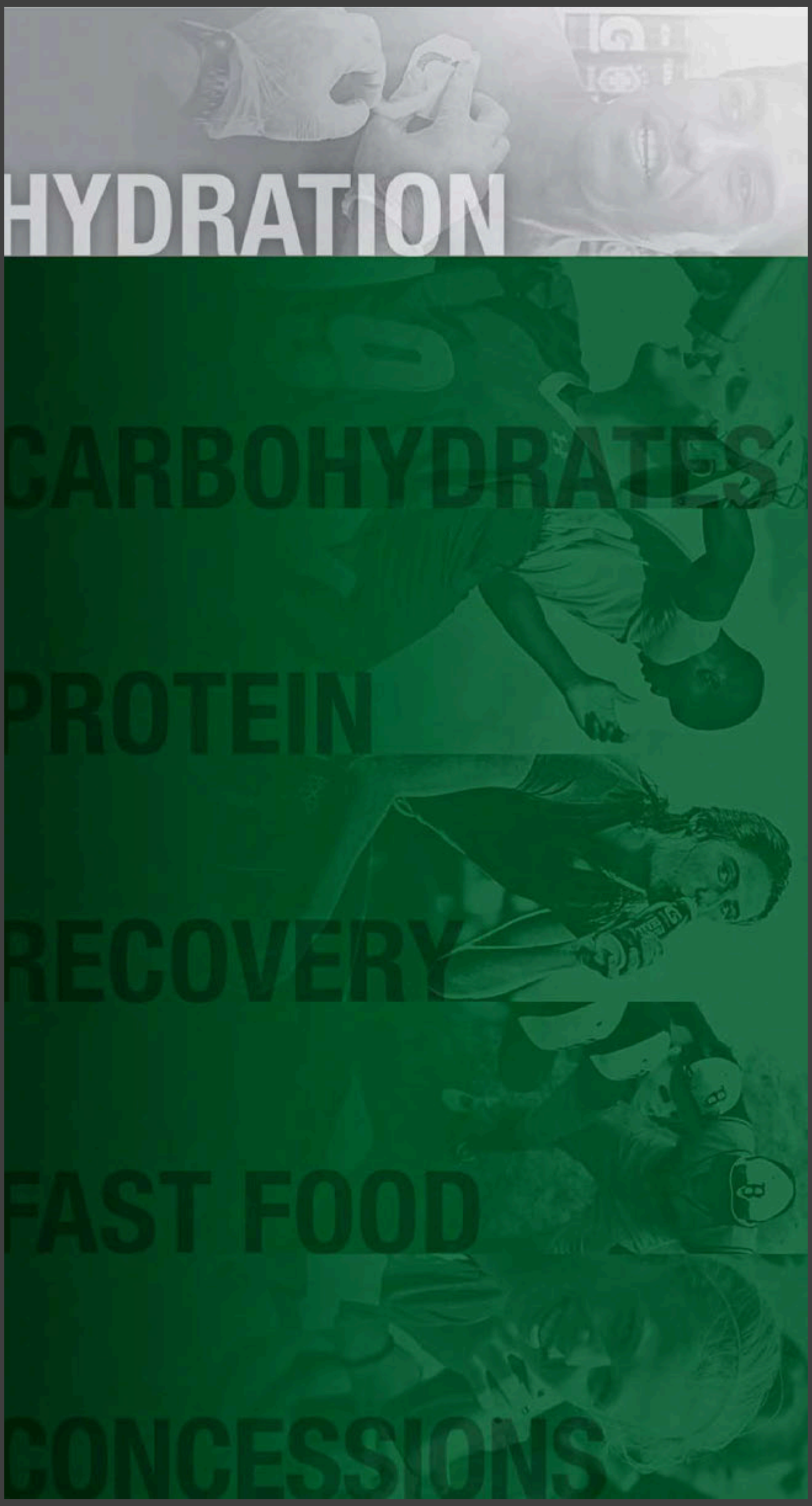
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PROTEIN
RECOVERY
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CONCESSIONS

Keeping Them Safe, Hydrated & In The Game

SIGNS OF DEHYDRATION:

- Feeling weak
- Lightheadedness
- Dizziness
- Nausea

EFFECTS OF DEHYDRATION:

- Decrease of mental function
- Deterioration of motor skills
- Lower fluid absorption
- Heat intolerance
- Decrease in performance

HELP KEEP THEM HYDRATED:

- Have them drink fluids throughout the day
- Incorporate into their diet foods with high water content such as fruits, vegetables, soups, smoothies and popsicles
- Send them to practice and games with water bottles and/or sports drinks like Gatorade® Thirst Quencher so they can take sips during breaks
- Have them watch their urine color
  — it should look light, like lemonade

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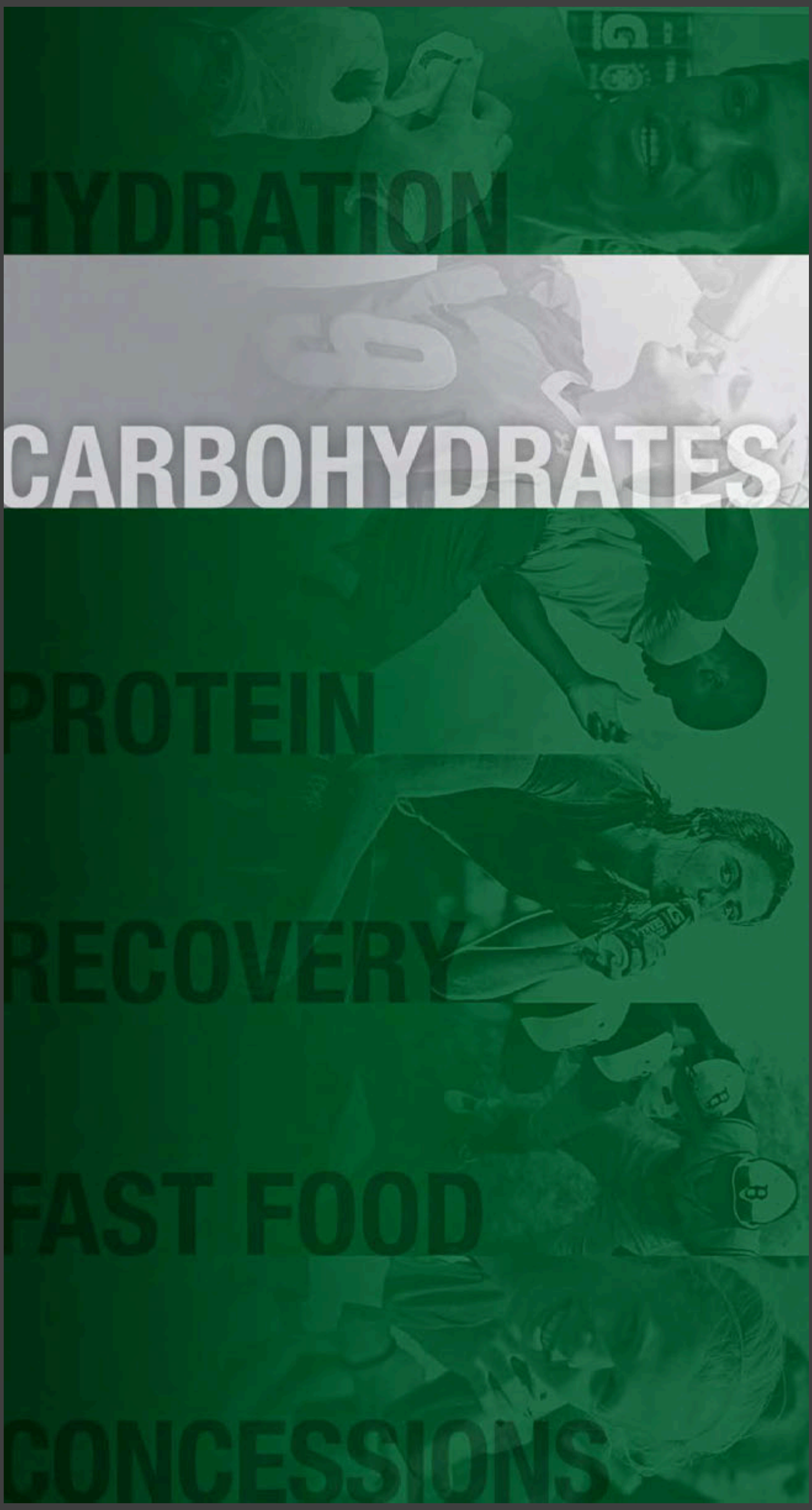
NUTRITION

- Improve performance
- Recover faster
- Improve concentration
- Prevent injury
- Heal faster from injury
- Make workouts easier
- Boost immunity
- Get better grades
- Be happier/ make your coaches happier

Nutrition Science

- Hydrate. Always.
- Meet energy needs
- Breakfast
- Balance carbs, protein, fat
- Color and variety
- Eat q 3 hours minimum
- Bookend workouts
- Sleep
- Stress management
- Practice mindful eating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Fueling Their Performance With Carbohydrates

WHY CARBS ARE IMPORTANT:

- Primary fuel for the body during exercise
- Replenish energy stores during recovery
- Help performance when consumed in the appropriate amount (30-60 g/h) during training or competition lasting more than an hour
- A small amount consumed with water can help promote fluid absorption

SOURCES:

- Breads
- Pasta
- Rice
- Potatoes
- Beans
- Fruits & Vegetables
- Gatorade® Thirst Quencher

HOW MANY CARBS:

- Make sure about 2/3 of every meal is carbs with grains, fruits, vegetables and drinks
- Include carbs in snacks and meals

WHEN*:

- Several hours before activity
  — eat a meal rich in carbs *(e.g., pasta)*
- Up to 1 hour before activity
  — eat a small snack *(e.g., granola bar or banana)*
- During practices and games lasting 60 minutes or longer
- After activity
  — eat a snack *(e.g., protein bar, smoothie, Greek yogurt)* that contains carbohydrates and protein for recovery

* These guidelines pertain to athletes to meet in-season demands.

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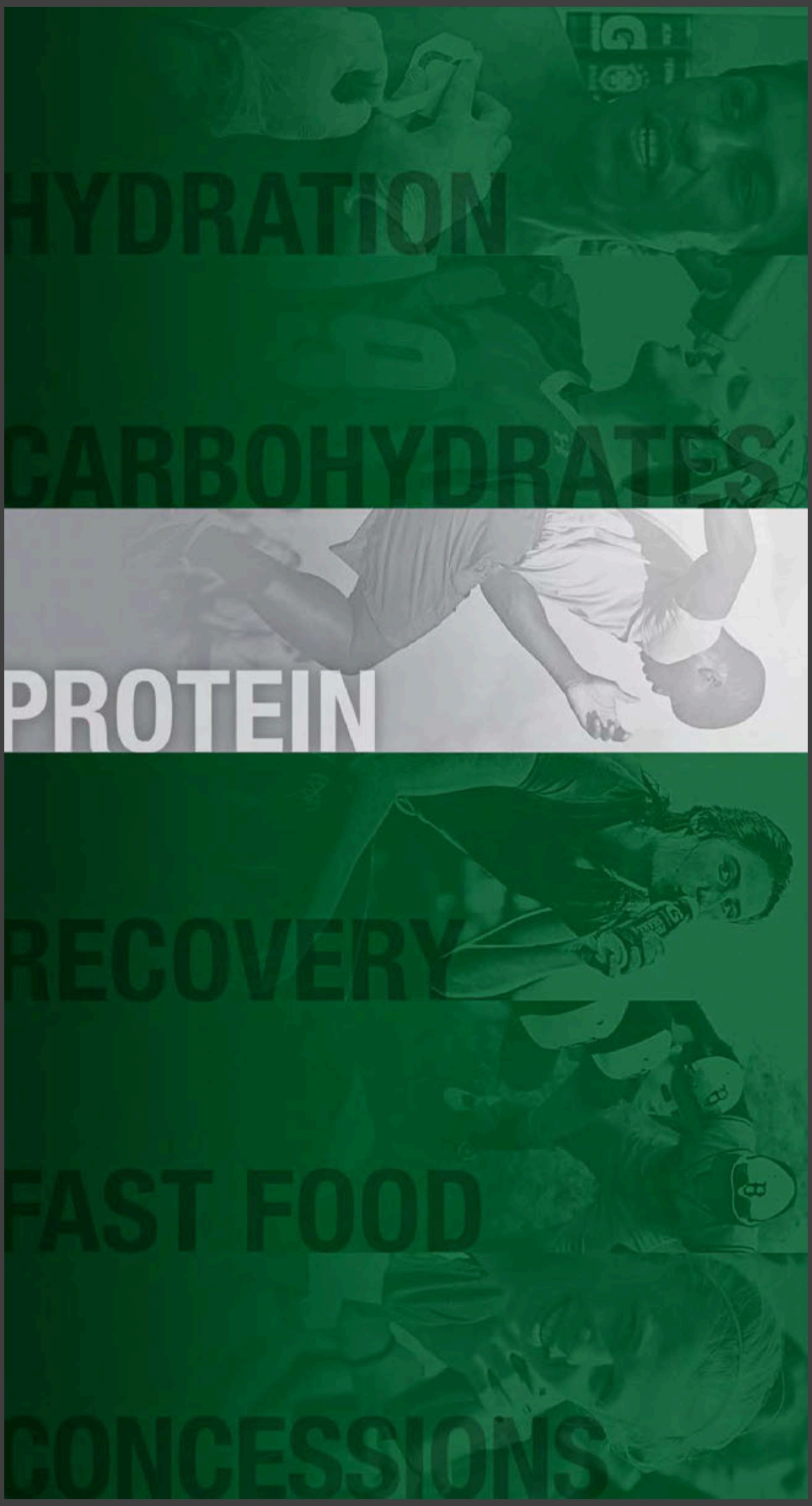
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Helping Their Bodies Recover With Protein

WHY PROTEIN IS IMPORTANT:

- Muscles, hormones and other parts of the body are made of protein
- During training and competition, muscle proteins are broken down and need to be built back up
- Eating protein post-activity provides the building blocks needed to rebuild muscles
- Good recovery helps the athlete bounce back strong — ready to perform

SOURCES:

- Meat
- Fish
- Tofu
- Milk
- Soy
- Eggs
- Cheese
- Greek Yogurt
- Gatorade Recover® Whey Protein Bar

HOW MUCH:

- Athletes should eat small portions of protein throughout the day — about 10-20g in every meal and snack, depending on their weight
- About 1/3 of each meal should be protein

WHEN:

- Around every 3 hours during the day
- As soon as possible after a game or practice*

* Based on an average weight of 180 lbs.
If they're smaller, they may need less; larger and they may need more. To determine exact needs, multiply your weight *(in pounds)* by 0.11g

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Athlete's Breakfast

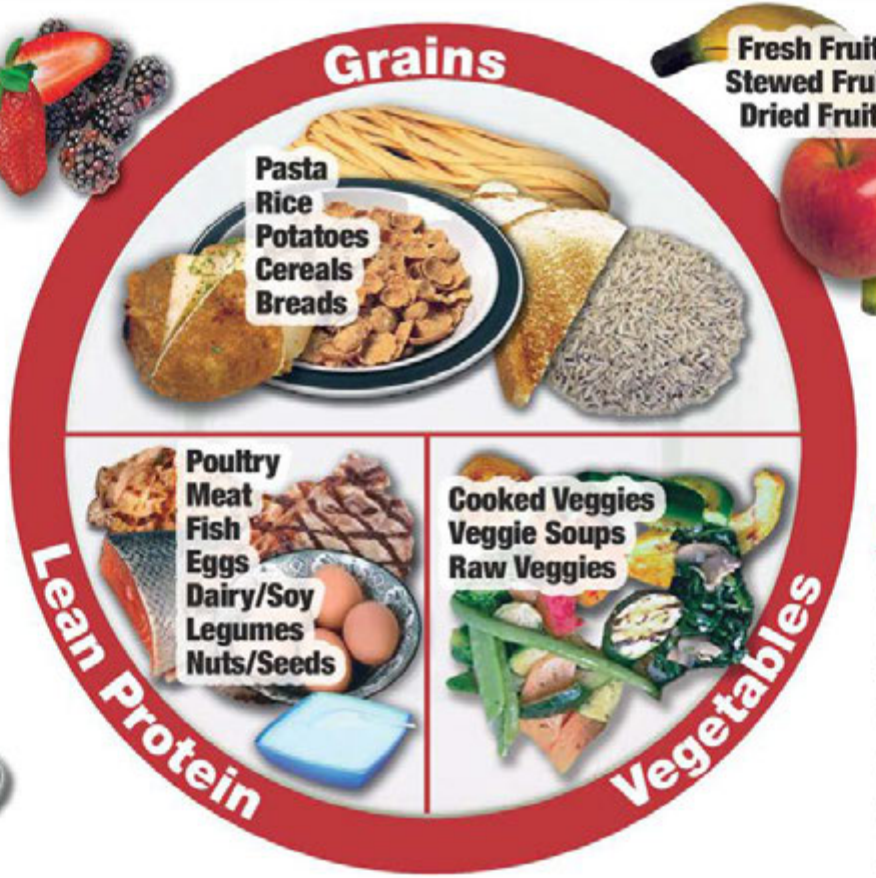
ADD a glass of water to the following to maximize digestion and energy:

- Breakfast Burrito: Whole wheat, plain, or corn tortilla with scrambled eggs, black beans, a little cheese, topped with salsa and avocado or guacamole
- Yogurt parfait: 4 oz plain full fat Greek yogurt, mango or peaches, slivered almonds, and vanilla granola
- Egg and cheese sandwich: Microwave an egg (mix and microwave for 90 seconds) and serve on 100% Whole Wheat English muffin w/ ham, avocado, and side of fruit
- Leftovers from dinner (nothing wrong with chicken, potatoes, and roasted veggies to start your day)
- Homemade smoothie. Ingredients: Banana, 1/3 cup raw oats, 1 c frozen berries, 1⁄2 cup tart cherry juice, 1 cup spinach or kale, 4 oz full fat Greek yogurt, ice and water to taste
- Museli or 1 cup cooked oatmeal with almonds, fresh blueberries, and glass milk
- Egg omelet (whole eggs) with veggies, avocado, and breakfast potatoes
- Scrambled eggs, side steamed kale, and whole wheat toast, tostadas, medialunas, or English muffin
- Salmon lox, pumpernickel bagel, cream cheese, and fruit
- Mangu, scrambled eggs, and fresh fruit
- Overnight oats: yogurt, chia seeds, dark cacao powder, peanut butter, almonds, oats, honey
- Granola bar, string cheese, fruit

HARD TRAINING:

FATS
2-3 Tablespoons

Avocado
Oils
Nuts
Seeds
Cheese
Butter

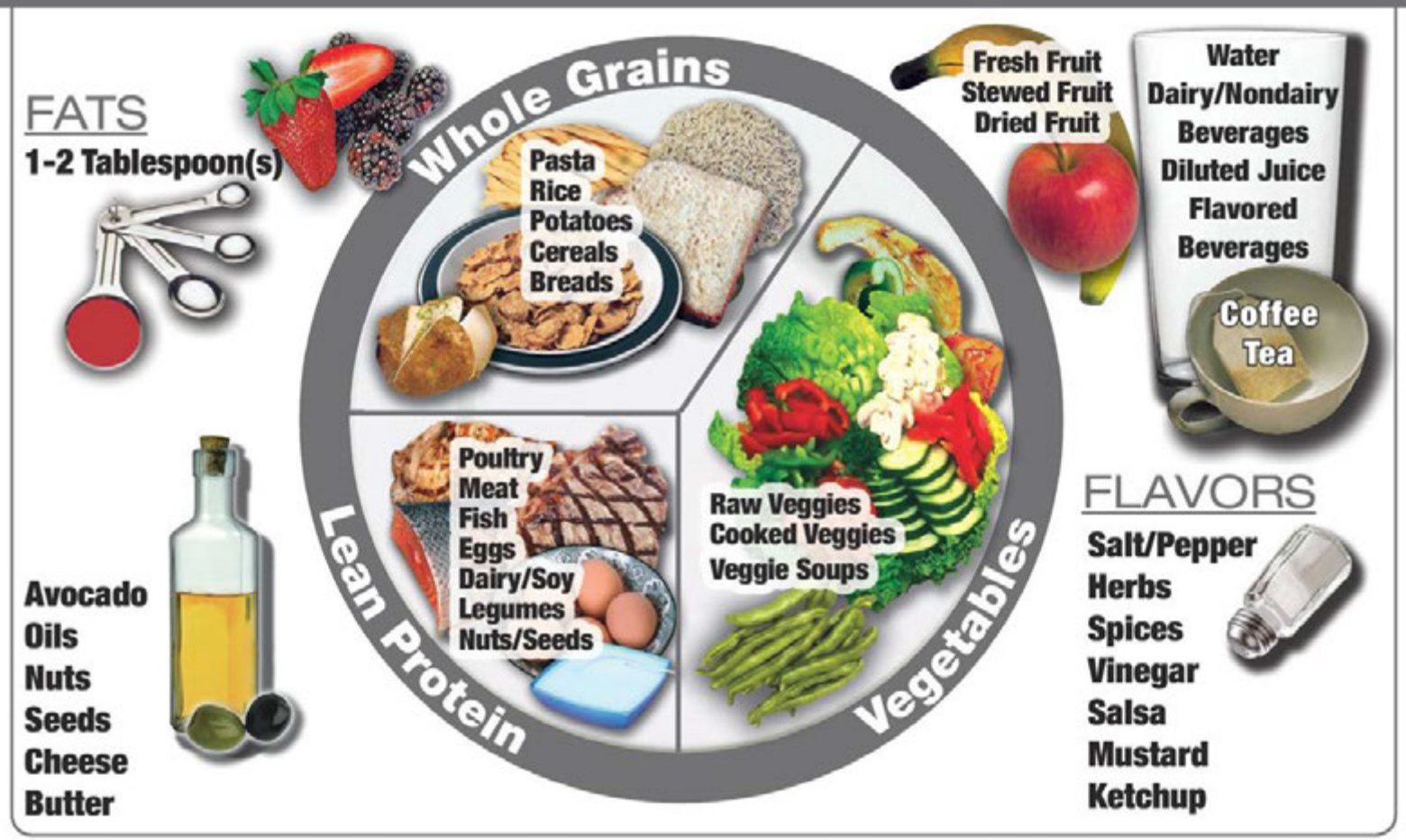


Fresh Fruit
Stewed Fruit
Dried Fruit

Water
Dairy/Nondairy
Beverages
Diluted Juice
Flavored
Beverages
Coffee
Tea

FLAVORS
Salt/Pepper
Herbs
Spices
Vinegar
Salsa
Mustard
Ketchup

MODERATE TRAINING:

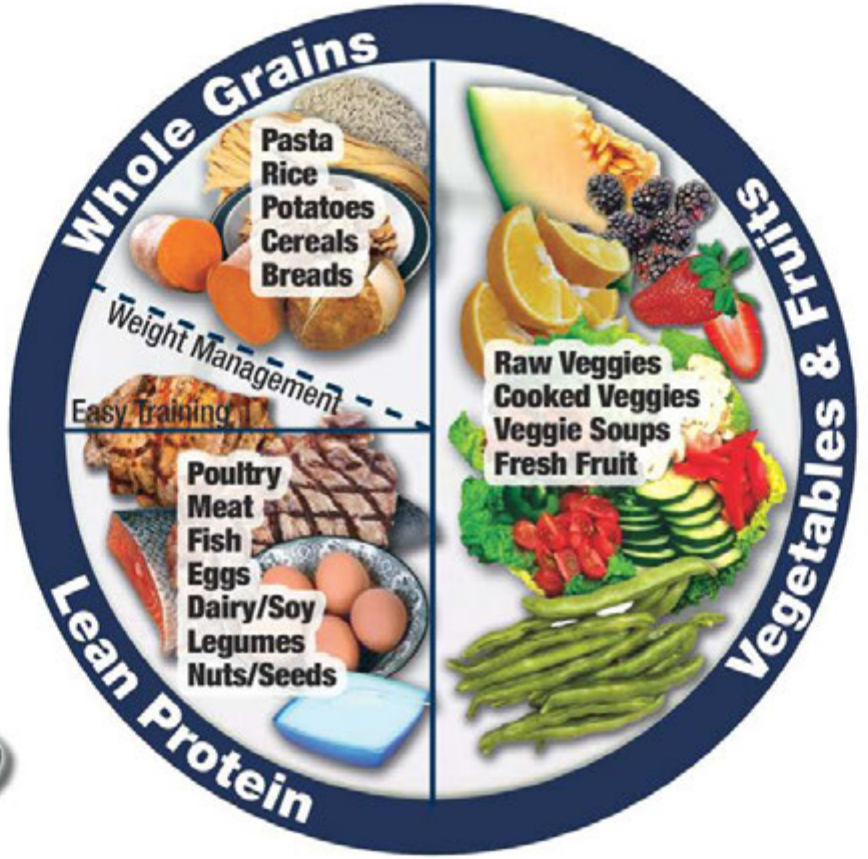


EASY TRAINING / WEIGHT MANAGEMENT:

FATS

1-3 Teaspoon(s)

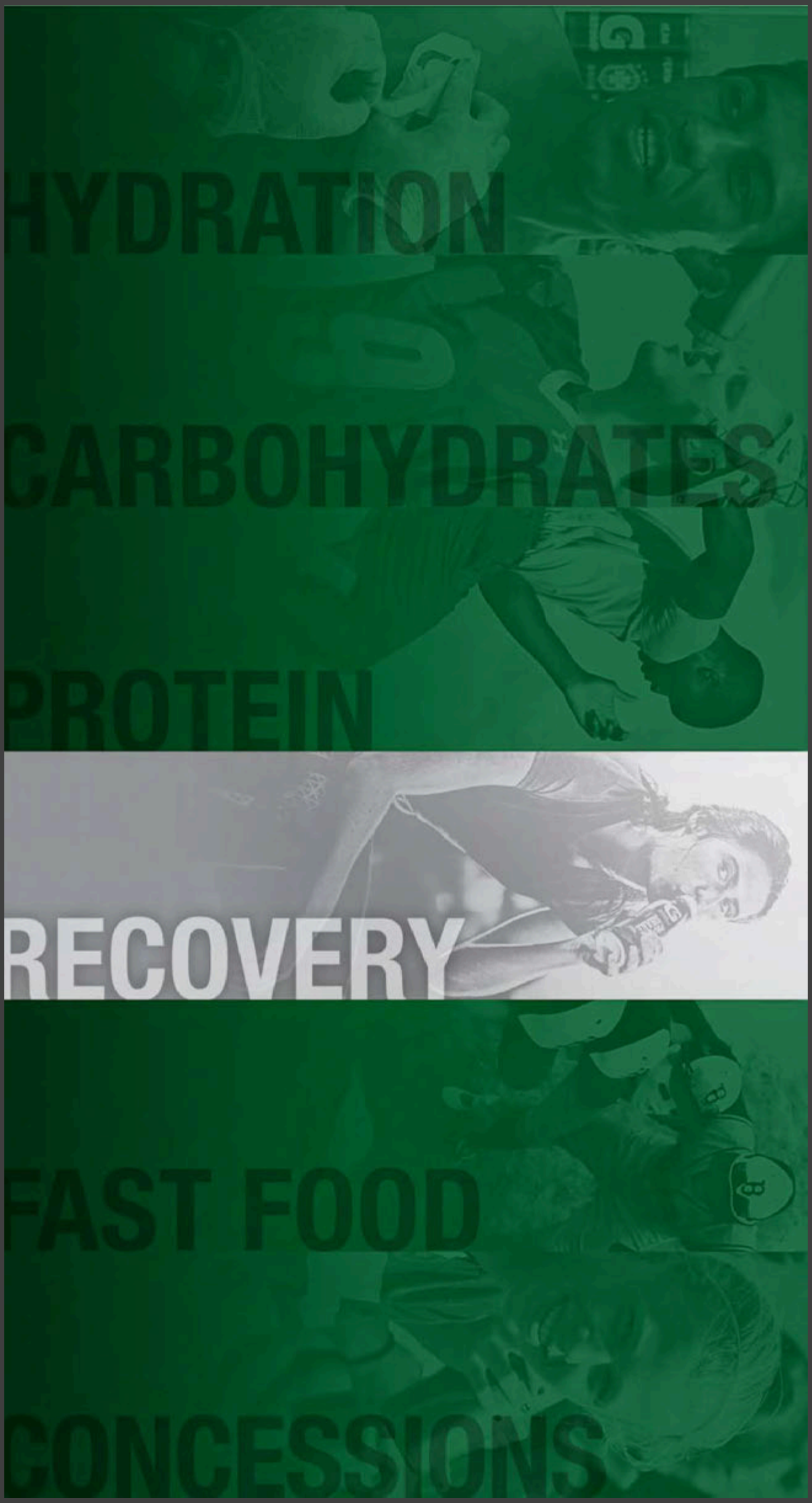
Avocado
Oils
Nuts
Seeds
Cheese
Butter



Water
Dairy/Nondairy
Beverages
Diluted Juice
Flavored
Beverages

FLAVORS

Salt/Pepper
Herbs
Spices
Vinegar
Salsa
Mustard
Ketchup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Treating Them After The Game

KEEP THEIR BODIES RECOVERING PROPERLY WITH THESE POST-GAME SNACKS

- Cheese sticks and crackers
- Chocolate or strawberry milk
- Greek yogurt
- Fruit and Greek yogurt smoothies
- Protein muffins or cookies
- Egg & cheese sandwich
- Gatorade Recover® Protein Shake

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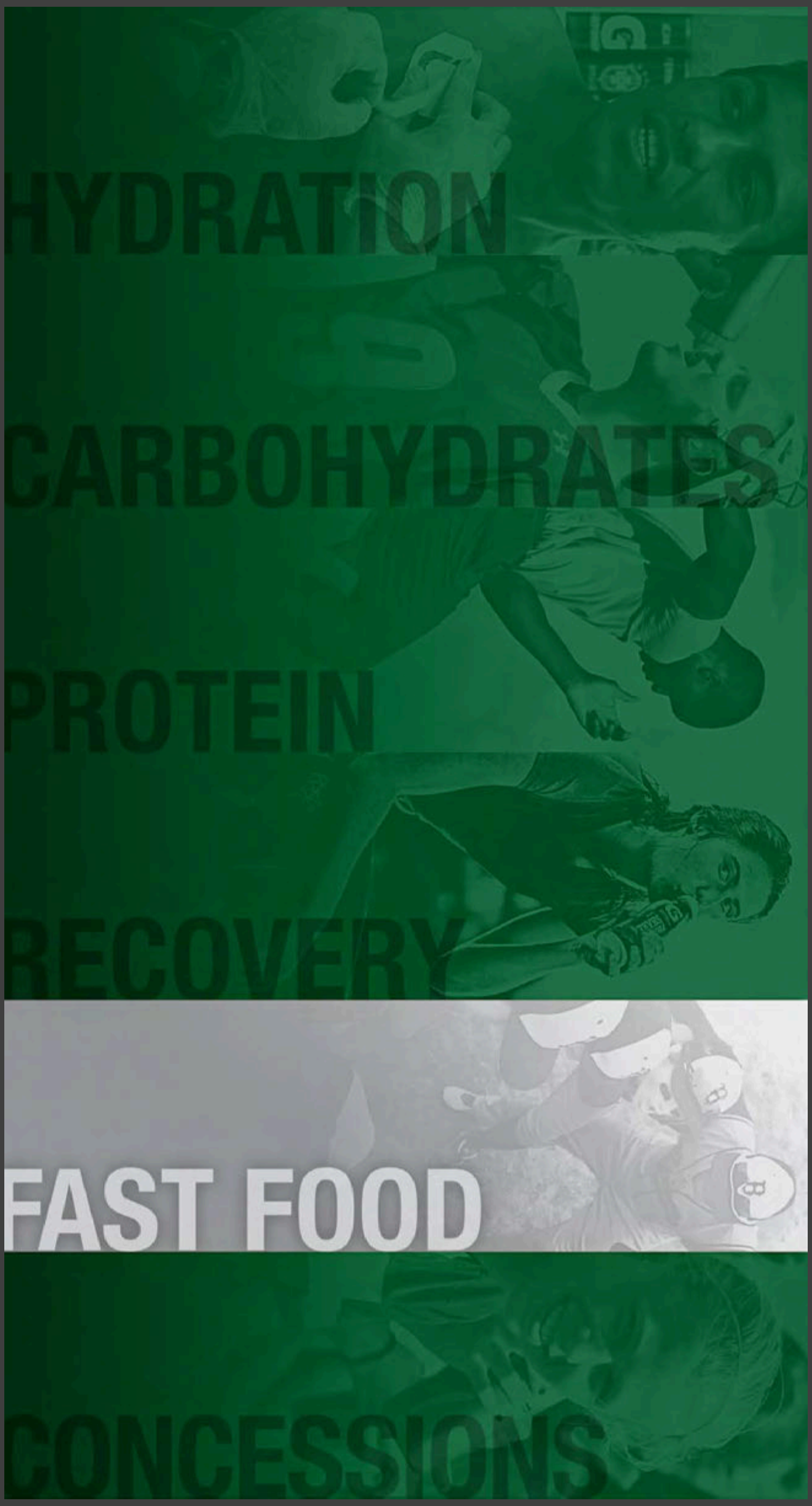
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Nutrition Choices For Fast Food Restaurants

BEST FAST FOOD CHOICES FOR WHEN ATHLETES ARE ON THE ROAD:

- Focus on carbs pre-activity — minimize protein, fiber and fat
- Water or tea are good beverage options
- Sandwich restaurants are a good option, but avoid higher fat, fried meat and heavy condiments — grilled chicken, turkey and ham are ideal. As a side, choose apple slices or baked chips rather than fries
- At burrito restaurants, choose chicken or pork with rice, beans, salsa and light cheese — limit sour cream and guacamole
- At pasta restaurants, choose lower-fat options — such as marinara rather than white sauces, which tend to be high in saturated fat
- If eating dessert, look for lower-fat options, but avoid sugar-free

FOODS TO AVOID:

- Avoid fried foods, supersizes and condiment-heavy burgers — plain burgers are fine
- While pizza has carbs, it is also high in fat. Avoid eating it before a practice or game and limit the toppings if ordering it post-activity

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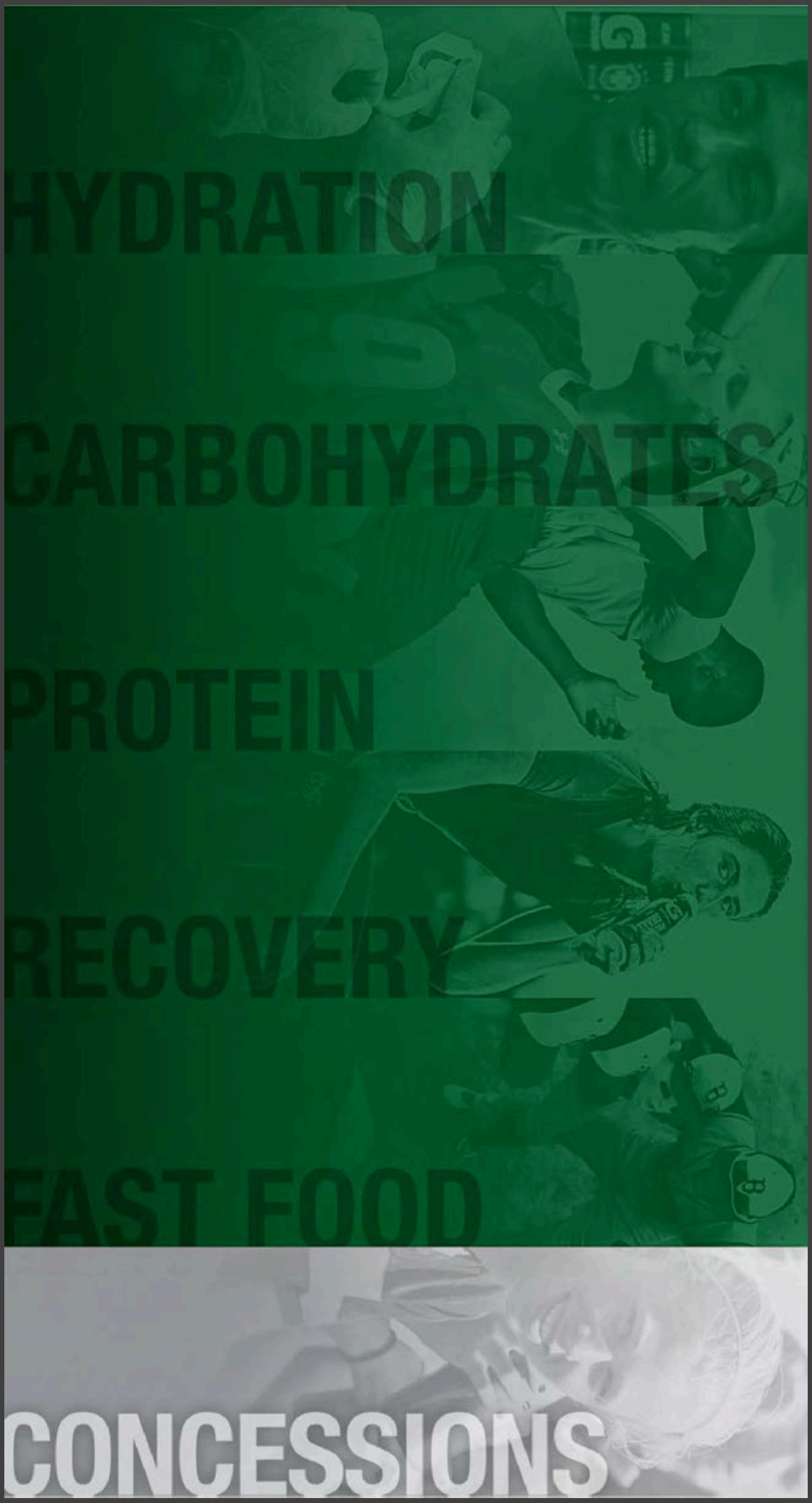
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Nutrition Choices For The Concession Stand

BEST CHOICES FOR ATHLETES

- Soft pretzels are a good choice since they are high in carbs and low in fat and provide sodium
- Candy provides carbs, but limit the amount and choose low-fat options
- Ask for popcorn without butter if possible
- Choose fruit if they have it
- Avoid anything fried or greasy

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SNACKS


POST-WORKOUT


THE 7 BEST PRE-WORKOUT FOODS
We all want to get the most out of a workout – to train harder, spin faster, run quicker, jump higher. So, are you ready to munch your way to success?
1 BANANAS
2 OATS
3 GRILLED CHICKEN, BROCCOLI & SWEET POTATO
4 DRIED FRUIT
5 WHOLE GRAIN BREAD
6 FRUIT AND GREEK YOGURT
7 TRAIL MIX


6
POST WORKOUT SNACK IDEAS TO
REFUEL
FRUIT SMOOTHIE
HARD BOILED EGG
NUTS AND APPLE
CHOCOLATE MILK
SANDWICH
HUMMUS, CRACKERS AND CHEESE


BEST
PRE-WORKOUT
Snacks
CELERY STICKS + SUNFLOWER BUTTER
HANDFUL OF NUTS + DRIED FRUIT
BANANA + ALMOND BUTTER
BEEF JERKY + DRIED FRUIT
AVOCADO
GRILLED CHICKEN
HARDBOILED EGGS
SWEET POTATO + COCONUT BUTTER
CARROT STICKS
FRIED PLANTAINS
STRAWBERRIES + BLUEBERRIES + COCONUT MILK + ALMOND BUTTER
COCONUT WATER

A + B Snacks

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A (carb) Snacks

- ❑ Fruit
- ❑ Veggies (carrots, bell peppers, snap peas, etc.
- ❑ 100% fruit snacks
- ❑ Triscuits, rice crackers, etc.
- ❑ Dark chocolate
- ❑ Dried tart cherries
- ❑ Applesauce
- ❑ Granola
- ❑ Shredded Wheat cereal
- ❑ Oatmeal
- ❑ Popcorn
- ❑ Frozen grapes or bananas
- ❑ Corn tortilla chips
- ❑ Biscotti, scone, donut, cookie
- ❑ Dried fruit
- ❑ Bagel
- ❑ Trader Joes brown rice cakes
- ❑ Banana bread

B (protein) Snacks

- ❑ Peanut or almond butter
- ❑ Hummus
- ❑ Nuts—almonds, cashews, peanuts, walnuts, pecans
- ❑ String cheese
- ❑ Beef or turkey jerky
- ❑ Edamame
- ❑ Sunflower seeds
- ❑ Pumpkin seeds
- ❑ Guacamole / avocado
- ❑ Cottage cheese
- ❑ Milk
- ❑ Tuna / Sashimi / Salmon lox
- ❑ Hard-boiled eggs
- ❑ Cream cheese
- ❑ Olives (for fat)
- ❑ Butter (for fat)

A + B Snacks

- ❑ Greek yogurt
- ❑ Milk
- ❑ Fruited whole milk yogurt
- ❑ Trail mix
- ❑ Bars (Kind, Zing, Luna, Clif, Pro Bar, Rx, etc.
- ❑ Chocolate milk (post-exercise)
- ❑ Fruit smoothie
- ❑ Homemade granola with nuts
- ❑ Baked oatmeal with pecans
- ❑ Rice and beans
- ❑ Quesadilla
- ❑ Homemade avocado brownie
- ❑ Chai whole milk latte
- ❑ Overnight oats
- ❑ Sushi

Sleep for Recovery

- Decreased sleep quality and quantity can impair performance in soccer players.
- Athletes may take longer to fall asleep and have lower sleep efficiency than non-athletes.
- Social demands, technology and caffeine can interfere with total sleep time.
- Recent evidence suggests that enhancing sleep may also enhance performance in soccer players.
- Adolescents require greater than 9 hours per night of sleep, yet many adolescents sleep significantly less than 9 hours of night.
- To create optimum sleep quality and quantity, maintain a regular sleep routine to ensure an appropriate sleep environment.
- To assess sleep, begin with a detailed sleep diary.

SLEEP SOLUTIONS

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- Naps can help pick you up and make you work more efficiently, if you plan them right. Naps that are too long or too close to bedtime can interfere with your regular sleep.
- Make your room a sleep haven. Keep it cool, quiet and dark. If you need to, get eyeshades or blackout curtains. Let in bright light in the morning to signal your body to wake up.
- No pills, vitamins or drinks can replace good sleep. Consuming caffeine close to bedtime can hurt your sleep, so avoid coffee, tea, soda and chocolate late in the day so you can get to sleep at night.
- Establish a bed- and wake-time and stick to it, coming as close as you can on the weekends. A consistent sleep schedule will help you feel less tired since it allows your body to get in sync with its natural patterns. You will find that it's easier to fall asleep at bedtime with this type of routine.
- Don't eat, drink or exercise within a few hours of your bedtime. Try to avoid the TV, computer and telephone in the hour before you go to bed. Stick to quiet, calm activities, and you'll fall asleep much more easily.
- If you do the same things every night before you go to sleep, you teach your body the signals that it's time for bed. Try taking a bath or shower (this will leave you more time in the morning),or reading a book.
- Try keep a diary or to-do lists. If you jot notes down before you go to sleep, you'll be less likely to stay awake worrying or stressing.
- Most teens experience changes in their sleep schedules. Your internal body clocks can cause you to fall asleep and wake up later. You can't change this, but you can make sure your activities at night are calming to counteract your already heightened alertness.


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Being prepared to play is *your* responsibility.


This is
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