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The Sports Nutrition to Optimizing Performance

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PERFORMANCE EATING FOR RUGBY - What Every Athlete Needs to Know

PERFORMANCE DETRACTING BEHAVIORS:

- 1) Skip meals
- 2) Not drink enough before, during and after practices/events
- 3) Wait too long to refuel after exercise
- 4) Not always get enough calories
- 5) Not getting enough sleep
- 6) Abusing the body: fad diets, undereating/overeating, alcohol, drugs

1. DRINK ENOUGH

MINIMUM number of ounces per day = 90oz or 11, 8 ounce cups

ALL fluids count (except alcohol!)

Coffee, tea, milk, juice, water, soda, sports drinks all count as fluid as well as fruits, vegetables, soups, gelatin, fruit ices

NEED TO THINK ABOUT DRINKING EARLY AND OFTEN AND ESTABLISH A HYDRATION PLAN:

A loss of 2 % body weight due to dehydration can increase fatigue and impair performance!

Drinking enough can increase stamina up to 33% longer than those who don't drink enough

How do you know if you are dehydrated?

Noticeable thirst

Muscle cramps

Weakness

Impaired performance

Headache

Nausea

Fatigue

Burning in stomach

Dry mouth

Dizziness/lightheadedness

BASELINE NEEDS:

16 ounces of fluid within 1 hour of waking up

20 ounces of fluid with every meal

16-20 ounces with every snack

FOR EXERCISE

Start exercise with some fluid already in your stomach

20 oz 1 hr before exercise- either water or sports drink- and if you haven't eaten before practice/conditioning sports

drink instead of water for the carbohydrate

14-20 OUNCES Fluid per hour of exercise- If you are a light sweater, 14 ounces of fluid per hour

Heavy sweaters will need about 20 ounces of fluid per hour

FLUID HOW TO's DURING EXERCISE:

Larger gulps over sips

Swallow fluids

Drink, don't pour on your head

No reason to overdrink

Drink 3 cups of fluid for every pound lost

Sports drinks over water during exercise

All energy drinks are not created equally!

Red Bull, Amp, Lizard Fuel, Monster, Rockstar are high in carbohydrate which can delay gastric emptying so the fluid is NOT in your muscles, AND the caffeine content of these beverages varies dramatically

HYDRATION STRATEGY

Step on a scale before and after training sessions

If you weigh less increase fluids

If you weigh more- Cut back on fluids

Do a urine check the next morning AFTER exercise

Did your body weight return to baseline?

Does your urine look more like lemonade than apple juice?

Did your thirst subside?

ALCOHOL ISSUES

Alcohol increases urine losses so it IS a diuretic

Can delay recovery from exercise

Can delay recovery from injury by exacerbating soft tissue injuries

Rehydrate and refuel BEFORE Drinking

2. ADD SALT IF NECESSARY

If you are a salt loser, you need to use more!

Salty sweat or Salty residue on skin or uniform/clothes, or tendency to muscle cramp

Eat salty foods such as pickles, pretzels

Use salt, Soy or Worcestershire sauce

Use sports drinks instead of water to provide sodium and help replace what is lost through sweating

3. EMPHASIZE CARBOHYDRATES ON THE PLATE

Carbohydrates are not BAD foods!

2/3 of the plate as rice, pasta, potato, bread, cereal, fruit, vegetables

Fuel for muscles during activity

Fuel for the brain during exercise

4. EAT ENOUGH PROTEIN FOR MUSCLE GROWTH AND A HEALTHY IMMUNE SYSTEM

0.6 x body weight (pounds) is the MINIMUM number of grams of protein a day

1/3 of the plate as chicken, fish, meat, eggs, cheese, soy foods nuts, seeds, beans

Body doesn't really care what type of protein as long as you eat enough!

Protein powders are not necessary

Body needs carbohydrate and protein to build new muscle

Too MUCH protein usually means Too LITTLE carbohydrate!

Do include some protein as part of every meal and snack:

Eggs	Jerky	Nuts	Peanut butter	Baked beans	Bean dip
Chicken	Turkey	Beef	Pork	Fish/shellfish	Tofu

5. FAT IS AN ESSENTIAL FUEL FOR EXERCISE

Add some as part of every meal as a spread, peanut butter, salad dressing, or in a food such as cheese, meat, fatty fish

There is no need to cut fat out of the diet

Try to limit the amount of fatty foods you have BEFORE exercise as they can upset your gut!

6. TIMING IS EVERYTHING

Try to eat every 3-4 hours to give your body maximal energy over the day

Eat something within 15 minutes of exercise such as sports drink, cereal bar, trail mix to help your body recover

Try for 12-15 grams of protein with 35 grams of carbohydrate before resistance training for enhanced muscle hypertrophy

Protein sources (g)

2 TBSP peanut butter- 14

8 oz yogurt- 10

12 oz low-fat chocolate milk- 12

¼ cup nuts- 10 grams

2 hard cooked eggs- 14 grams

Carbohydrate sources (g)

½ of a bagel- 25 grams

8 oz yogurt- 40 grams carbohydrate

12 oz low-fat chocolate milk- 30 grams

1 cup cereal- 30 grams

2 slices of toast- 30 grams

7. KNOW HOW MUCH YOU EAT

If you are overly hungry, chances are you aren't eating enough

If you are never hungry, you may be eating too much

When you finish eating you should feel like you could eat a little bit more

If you want to feel satisfied, see, smell and taste what you eat

8. BODY CHANGES DO NOT HAPPEN OVERNIGHT

Bodies lose about ½ pound of body fat a week

Bodies can gain at most 1 pound of muscle a week

Make changes to eating gradually by:

- a. Knowing what you eat
- b. Eating regularly
- c. Including foods you like
- d. Being consistent by eating this way 7 days a week!

NUTRITION TIPS - And Eating Survival Guidelines For Rugby

SPECIFIC NUTRIENT REQUIREMENTS:

FLUID

UP YOUR FLUID INTAKE

Resting needs are 11, 8 oz cups of fluid /day
 Average of 4-6 cups of fluid lost during sleep
 Average of 1-3 l of fluid lost during 90 minutes of practice
 Many rugby players are dehydrated at the start of practice/games
 See your pee- light in color and lots in volume

How should you drink? Gulps are better than sips or water bottles

SPECIFIC FLUID GUIDELINES: BEFORE, DURING AND AFTER EXERCISE:

TIME	VOLUME	TIME FRAME
BEFORE	20 ounces	1 hour before exercise
DURING	14-20 ounces/hour Ideally sports drink!	
AFTER	24 ounces fluid for Every pound lost	Over the course of the day

KNOW YOUR SWEAT RATE AND DRINK ACCORDINGLY:

Pre-exercise weight (pounds) – Post exercise weight (pounds)= x ounces
 16 ounces to a pound

+
 Fluid consumed during exercise (ounces)
 ÷
 Number of hours of activity
 = Hourly sweat rate

EXAMPLE:

Pre exercise weight (130 lbs) – Post exercise weight (128 lbs) =2 pounds or 32 ounces (2 x 16)

+
 10 ounces of fluid consumed during practice
 ÷
 2 hours of practice

42 ÷ 2= 21 ounces of fluid per hour

MEAL FREQUENCY

Small, more frequent meals will give you consistent energy and digest more quickly to provide available fuel for your body
5 or more eating episodes per day EVERY 3-4 hours

CALORIES: MINIMUM: Weight (pounds) x 15-23 = number of calories per day

CARBOHYDRATE NEEDS

The optimal fuel for EXERCISE

Intense training depletes carbohydrate stores resulting in poor performance and increase fatigue

Need to consume carbohydrate with every meal

Needs increase with increased training:

SOURCES:

Bread	Bagels	English muffins	Pita	Popcorn	Sports drinks
Tortillas	Rice	Pasta	Cereals	Crackers*	
Pretzels	Potatoes	Fruit/Vegetables	Fruit Juices	Cereal bars	

DURING exercise: 30-60 grams of carbohydrate per hour to optimize sprint performance

Sports drink, gels, honey

CARBOHYDRATES should be consumed within 15 minutes after workouts or events

GOOD CHOICES:

Cereal bar	Crackers	Pretzels	Dry cereal
Bagels	Graham crackers	Trail mix	Crackers
Chex mix	High carb sports bar		

PROTEIN: Weight (pounds) x 0.6-0.7 = grams of protein per day

PROTEIN NEEDS

Body can't use more than 1 gram of protein per pound body weight!

Not immediately available as an energy source for exercise

Important for recovery AND to boost the immune system

SOURCES

Chicken	Fish	Beef*	Pork*	Veal
Turkey	Eggs	Cheese*	Milk*	Shellfish
Soy burgers	Dried beans	Nuts and nut butters*		

***Higher fat protein sources**

WHAT ABOUT PROTEIN FOR BUILDING MUSCLE?

Works best PRIOR to lifting along with carbohydrate

Post lifting- best option is carbohydrate right away, with a very little bit of protein- 10 grams at the most

Pre lift: Chocolate milk, smoothies, yogurt, peanut butter sandwich, turkey sandwich

FAT:

May not be consuming enough

Too much can cause cramps

Not enough can cause you to fatigue more quickly

TRY to limit high fat foods before and during exercise

FOODS TO LIMIT BEFORE EXERCISE:

Chips	French Fries	Pizza	Burgers	Ice cream	Doughnuts	Chocolate
Fried meats	Bologna, salami, pepperoni					

SODIUM REQUIREMENTS

Salt (sodium chloride) losses in training and games can range from 1000-10000 milligrams

1 teaspoon of salt contains 2300 milligram of sodium

Failure to maintain salt and water balance will lead to impaired performance AND muscle cramps in cramp-prone athletes

PRE-GAME EATING: GOAL IS TO SUPERSATURATE MUSCLES WITH GLYCOGEN AND SUPER HYDRATE

2-3 days before games eat up to 4-5 grams carbohydrate per pound body weight

130 pound player- 500-650 grams of carbohydrate per day

Choose carb-dense foods:

Large bagels Pasta Juice Dried fruit Sweetened yogurt
Frozen yogurt Sherbet Cereals (especially granola type)

2/3 of the plate for pre game meals should be carbs

Liquid options:

Shake or smoothie

Milk, *Carnation Instant Breakfast*, nonfat dry milk powder, juice

8 oz 1 packet ¼ cup 8 oz

Milk, dry pudding mix, non fat dry milk powder, juice or fruit

8 oz ½ packet ¼ cup 8 oz or 1 piece

Milk, Yogurt, Non fat dry milk powder, juice, fruit

8 oz 8 oz ¼ cup 4 oz 1 piece

IMMEDIATELY BEFORE GAMES:

8- 10 ounces of sports drink

DURING GAMES:

At half time:

Goal is to ingest carbs to provide fuel for the second half of play:

A small handful of *Gummi* bears, jelly beans, sweetened cereal with sports drink, water OR

16 ounces of sports drink or lemonade

OR a sports gel (Gu, Powergel), or 1 TBSP Honey with 8-12 ounces of water

POST GAME:

Carbs ASAP: Ideally **40-60 grams within the first 30 minutes**, preferably sucrose sources

32 oz sports drink

2 granola OR cereal bars

1-1/2 cups sweetened cereal

16 oz lemonade

1/3 cup jelly beans or *gummi* type candy

WEIGHT MANAGEMENT GUIDELINES

WEIGHT LOSS GOALS

The goal with weight loss is to lose fat, NOT muscle or water

The Body loses fat at a rate of ½-1 pound per week: 250-500 fewer calories per day!

WHAT ARE YOUR GOALS?

WEIGHT LOSS (BODY FAT LOSS)

Keep a record for a week to see what your typical eating and drinking pattern looks like

Think about the number of meals you consume every day

Smaller more frequent meals are best for fat loss

CALORIE GOALS FOR WEIGHT LOSS- 1 pound of body fat per week

Body weight x 20 = number of calories per day – 250-500 calories for weight loss!

Remember, almost everything has calories, and don't forget about liquids as calorie sources!

Keep some lower calorie foods around:

Fruits	Raw vegetables and salsa	Light popcorn	Frozen fruit bars
Popsicles	Pudding pops	Pretzels	Cereal
Jello/Yogurt			

Super size meals can be your biggest enemy!

Watch the fat intake:

Choose more

Skinless chicken
Baked ham, roast beef
Mustard
Mozzarella cheese
Skim or 1% milk
Pretzels/Light popcorn
Frozen yogurt, Light ice cream
Turkey bacon or sausage
Baked or mashed potato
Regular burger

Choose less:

Fried chicken/wings
Salami, bologna
Mayonnaise
American cheese
Whole milk
Chips
Regular ice cream
Regular bacon or sausage
Biggie fries
Cheese burger

Remember, 2-3 fewer bites per meal can add up to a few hundred calories per day

WHAT WORKS

Regular meals- NO MEAL SKIPPING: Eating every 3-4 hours, not just one meal a day

Pay attention to portions (never eat anything bigger than your head!)

Using a smaller glass for beverages, or put a little less food on the plate!

The chew factor- you will feel more satisfied if you chew than drink your meal

Eating a few bites less at every meal

Cutting down on the extra calories:

Juice	Soda	Alcohol	Sweetened iced tea	Sports drinks	Mayonnaise
Margarine/butter	Salad dressings		Peanut butter		

Knowing what one eats. Not eating in front of the TV, computer, or while playing a video game

When snacking, put some chips in the bowl instead of sitting down with the bag!

ADDING MASS

Goals for weight and strength gain should be one-half to 1 pound per week

Be organized about eating- Keep a record to assess what current eating patterns are like

Increase the NUMBER of meals, not just the SIZE of meals

Add fillings and toppings to food- jelly, syrup, mayonnaise, peanut butter

If you do shakes, like Instant Breakfast, consider doubling up- 2 packages to the same amount of milk or juice

Eat more every time you eat

Everything has to count-no freebies with food or beverages!

Choose more often

Granola type cereal

Chocolate chip or peanut butter cookies

2% milk

Cheeseburger

Nuts

Juice, lemonade, milk, sports drinks

Choose less often

Flake cereal

Vanilla wafers

Non fat milk

Plain burger

Pretzels

Water

WEIGHT GAIN STRATEGIES

To gain 1 pound of muscle a week would require an additional 10-14 grams of protein a day. This would be the equivalent of a chicken drumstick, 2 slices of deli meat, a very small burger, or a 12 ounce glass of milk

Eat before and after you lift!

Weight gain does not require *Weight Gainer* or other pricey supplements.

Protein shake recipe:

8 ounces of 2% milk mixed with a packet of *Carnation Instant Breakfast*, one-half package of dry pudding mix and a banana. (For extra calories, use 2 packets of Instant Breakfast to 8 ounces of milk) with spoonful of chocolate syrup or peanut butter.

Be honest about eating habits. To gain weight eating must be a priority. NO MEAL SKIPPING! Three meals plus 2-3 snacks EVERY DAY! It is easier to eat more often than it is to eat huge amounts at one meal.

Keep food around during the day:

Trail mix: cereal, nuts, raisins, chocolate chips or *M&M's*

Granola bars, Peanut butter crackers, Sports bars

Increase portions at each meal and snack. Try for a few more bites at each meal by adding one of the following:

Another piece of meat

An extra scoop of potatoes, rice or pasta

Another slice of bread

Some extra cereal

2 glasses of milk instead of one

2 sandwiches instead of one

The goal is to add at least 500-1000 extra calories every day!

EATING OUT GUIDELINES - Healthy and Tasty!

APPLEBEES

Weight Watchers meals
Teriyaki steak and chicken and shrimp
Tilapia
Chicken Quesadilla
Baja Chicken Roll Up
Sizzling Chicken
Low-fat veggie Quesadilla

AU BON PAIN

Southwest vegetable soup
Mediterranean pepper soup
Charbroiled salmon filet salad
Fields and feta wrap
Smoked turkey wrap
Thai Chicken salad
Tuna Garden salad with light vinaigrette
Thai chicken sandwich
Arizona chicken salad

WATCH:

Soup bread bowl
Cheese on sandwiches

BURGER KING

Hamburger
Grilled Chicken sandwich
Side salad (**Watch dressings**)
WATCH: Whopper

CHEESECAKE FACTORY

Weight management salads
Cajun Jambalaya over rice
Jamaican Black Peppercorn shrimp
Miso Salmon

WATCH:

Cheesecake (SHARE!!!)

CHICK-Fil-A

Chargrilled sandwiches
Wraps
Carrot and raisin salad
Fruit
Chicken soup
Side salads
Small Ice Cream

WATCH:

Fried Chicken
Chicken strips

CHIPOTLE

Black beans
Chicken or steak fajitas

WATCH:

Guacamole
Sour Cream
Cheese
Chips

FRIDAY'S

Pot stickers
Beef brisket
Flat Iron steak
Jack Daniel's chicken
Sirloin steak
Steak Fajitas
Mahi
Shrimp Key West
Garlic Chicken Primavera
Dragonfire chicken
Sizzling Chicken and Shrimp
Chicken Fajitas
Portobello pasta
Bruschetta chicken pasta
Strawberry Fields salad
Bistro sirloin salad
Asian glazed chicken on field greens
Cedar seared salmon on field greens
Cobb salad
Turkey burger
Pulled pork sandwich

WATCH:

Fried items- like mac and cheese, mozzarella, potato skins

Quesadillas

Nachos

Bacon

KFC

Original recipe wing and leg
Honey BBQ Chicken sandwich
Baked beans
Corn
Mashed potatoes without gravy
Green beans

WATCH:

Extra crispy chicken breast

Biscuits

Gravy

McDONALD'S

Egg Mc Muffin
Scrambled egg burrito
Grilled chicken salad- light dressing
Grilled chicken sandwich: with mustard/honey mustard
Grilled chicken wrap- lots of vegetables, light on the sauces
Medium fries
Small order of nuggets with BBQ sauce instead of Ranch
California Cobb Salad with low-fat balsamic vinaigrette

WATCH:

Big Mac

Quarter Pounder

Large fries

OUTBACK

Grilled shrimp on the BBQ
Filet
Sauteed mushrooms
Rib Eye steak
Outback Special Steak

WATCH:

Bloomin Onion

Prime Rib

Porterhouse steak

PANERA

Smoked turkey breast sandwich
Smoked ham and Swiss sandwich
Turkey Fresco
Mediterranean Veggie
Sierra Turkey
Chicken salad on 9 Grain bread
Asian Sesame chicken salad
Grilled chicken Caesar salad
Moroccan Tomato Lentil soup
Gumbo
Santa Fe Roasted Corn soup
Mesa Bean and vegetable soup
Chicken Noodle Soup
Savory vegetable bean soup
Garden Vegetable Soup
Vegetarian baked bean soup

QUIZNOS

Small Turkey Lite
Small Honey Bourbon Chicken

PIZZA HUT

Thin N' crispy: cheese, veggies. Mushroom, onion, pineapple, ham
Personal Pan: cheese, pepperoni and mushroom, ham and pineapple, veggies lover
Fit N' Delicious

WATCH:

Meat lover's

Sausage

XL

Stuffed Crust

RED ROBIN

Chicken burgers
Or shared burgers- ask for cheese, sauces on the side
Chili
Whiskey River BBQ Chicken Wrap
Chicken Tortilla Soup
Oriental Chicken Salad
Apple Harvest Chicken Salad
Cobb Salad
Fajita Fiesta Pollo Salad
Ensenada Chicken Platter
Carnitas Fajitas
Red's Rice Bowl

WATCH:

**Monster, Bottomless
Fish- all are fried!**

SHEETZ

Grilled Fajita
Hard boiled eggs
SHMuffins
6" subz- Ham and cheese, Turkey, Roast beef
Hot Subz: Southwest chicken or steak, Smokehouse chicken or steak
Wrapz: grilled chicken, roasted turkey and cheese
Deli sandwichez: Ham and cheese, turkey, roast beef and cheese
Saladz: garden, grilled chicken or steak
Jr burger
Southwest or Smokehouse chicken breast

WATCH:

Sides

Tuna salad

Chicken salad

Croissant

Biscuit

Baked goods

SUBWAY

Any of the under 6 grams of fat subs
Baked chips
Turkey sub with lettuce, tomato, pickles, light on the cheese and mayonnaise
Ham sub
Chicken teriyaki or barbecued chicken sandwich
Order: wheat, honey oat, deli style roll or carb conscious wraps
Soups: Minestrone, Roasted chicken noodle, Spanish style chicken with Rice, Tomato Garden vegetable with Rotini,
Vegetable Beef

WATCH:

Tuna salad

Cheese

Potato chips

Salad dressings

TACO BELL

Soft chicken taco
Soft beef taco
Fresco Style Ranchero Chicken Soft Tacos
Fresco Style Grilled Steak Soft Tacos
Fresco Style Bean Burrito
Fresco Style Chicken Burrito Supreme
Fiesta Chicken Burrito
Steak Fiesta Burrito

WATCH:

Chalupas

Chimichangas

Double Stuff anything!

WENDY'S

Grilled burger- no cheese with side salad
Ultimate Chicken Grill sandwich
Chili and one-half of a potato
Crispy chicken sandwich without mayonnaise
Potato with chili, broccoli, low-fat sour cream, chives
Roasted turkey and basil pesto frescata
Low- fat chocolate milk instead of a frosty
Chicken Oriental, Mandarin chicken salad- use half of the dressing

CHINESE

Choose More

Lemon Chicken
Hunan dishes
Szechuan dishes
Moo Shu dishes
Steamed dumplings
Egg drop soup
Hot and Sour Soup
Fortune cookies

Choose Less

General Tsao's
Sweet and Sour
Ribs
Egg rolls or spring rolls
Fried Rice
Lo Mein

ITALIAN

Choose More

Chicken Cacciatore
Pasta with marinara or meat sauce
Lasagna
Bread (try to limit)

Choose Less

Alfredo
Sausage/pepperoni
Stuffed shells
Garlic or cheese bread

JAPANESE

Choose More

Edamame
Miso soup
Maki sushi
Sashimi
Teriyaki
Sukiyaki

Choose Less

Tempura
Rolls with mayonnaise

PIZZA (try to limit to 2 slices so have a salad or soup with the pizza)

Hand tossed cheese- ½ the cheese
Pizza Hut- Thin N' Crispy Cheese
Hand Tossed with vegetables
Papa John's Original Crust Garden Special
Thin N' Crispy or Hand Tossed Chicken Supreme
Thin Crust or Hand tossed with Ham

CHOOSE LESS

Pepperoni
Sausage
Extra cheese
Stuffed!
Deep Dish
Wings
Garlic Bread
Cheese bread
Cheese sticks
Bread sticks
BARS

WATCH

Wings- each wing is 100-150 calories and no one eats just one
And the Blue cheese or Ranch dressing adds more calories
Cheese poppers
Fried cheese sticks
Fried shrimp
Chips
Fries

If this is where you go, then try to limit the amount you eat

ALCOHOL

It will make you hungrier
12 oz beer ranges from 90-150 calories
4-5 ounce glass of wine is 100 calories
Mixed drinks:
Gin and Tonic- 200 calories
Hurricane- 400 calories
Martini- 300 calories
Margarita- 330 calories
Pina Colada- 300 calories
Rum and Coke- 360 calories

ATHLETES SHOPPING LIST - What's In Your Room?

NON PERISHABLE ITEMS

CARBOHYDRATES

Applesauce
Canned light fruit
Soups- such as vegetable, tomato
Cereal
Box of Instant oatmeal
Crackers
Rice
Pasta
Microwave popcorn
Pickles
Pretzels
Granola or cereal bars

PROTEIN

Cans of baked beans, garbanzo beans
Peanut butter
Nuts
Cans/packets of tuna, chicken, turkey breast
Jerky
Soy nuts

PERISHABLE-REFRIGERATOR ITEMS

PROTEIN

Eggs
Cheese
Yogurt
Milk
Hummus
Lunchmeats
Veggie burgers (freezer)

CARBOHYDRATE

Baby carrots
Fresh fruit
Freezer waffles
Tortillas
Pita