

Sports Nutrition 101 for Diving



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- **What's your sports nutrition knowledge?**
 - Sports Nutrition 101
 - Nutrition for performance, recovery and health!
 - MYTH BUSTING
 - Setting the record straight

Serious training requires serious eating!!!

‘GROW’ FOODS: Rich in protein and minerals to help muscle grow and help build strong bones and teeth

‘GLOW’ FOODS: Rich in vitamins and minerals to protect the body against damage and infection, and help maintain healthy skin, hair, nails, etc

‘GO’ FOODS: Provide carbohydrates to fuel your muscle

PLUS: Fluids for hydration and Healthy fats

- Balance meals with all these types of foods
- Ensure thoughtful meal timing, going no longer than 4 hours without food
- BE CONSISTENT - Optimal nutrition almost everyday

Question 1

Which of these foods DO NOT contain carbohydrates?

- A. Raspberries
- B. Greek yogurt
- C. Brown Rice
- D. Olive oil
- E. Tomato

- Which of these foods DO NOT contain carbohydrates?

ANSWER. **D. Bacon**

WHY?

- Main sources of carbohydrates include:

- Grains/Starches
- Fruit
- Milk and Alternatives
- Vegetables



Fueling your body

Timing: Eat every 2-4 hours throughout the day to keep the fire burning

The type of fuel matters too...
Choose “slow burning foods”

Examples:

ie: whole wheat bread, fresh fruit, vegetables, low fat dairy and lean meats

Rather than “fast burning foods”

Examples:

ie: white bread, sugary cereal, cookies, candy, pop...



MYTH BUSTING



CARBOHYDRATES

TRUE OR FALSE

- You should avoid carbohydrates to lose weight?



- **FALSE**

- Our bodies need carbohydrates for energy and optimal brain function
- Carbohydrate foods contain vitamins and minerals like iron, calcium, vitamin C, folic acid, potassium and magnesium, along with fibre. Strictly avoiding carbohydrates puts you at risk for nutrient deficiencies.
- Leads to poor training sessions and poor recovery
- Lead to glycogen depletion causing fatigue, delayed recovery and possibly reduction in lean mass and immune function

Question 2

- Which is the best way for a diver to get protein in their diet?
 - A. Through meat and alternatives and milk products
 - B. Through protein shakes
 - C. Through protein bars
 - D. Protein is not important for athletes

- Which is the best way for a diver to get protein in their diet?

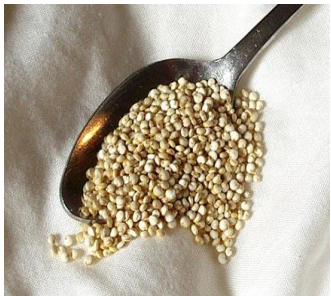
ANSWER = A. Through meat and alternatives and milk and alternatives

Why?

- Meat and Alternatives along with Milk and Alternatives are your best source of protein as not only do they contain protein but also essential nutrients for growth, development and health

High Quality Proteins:

fish, meat, poultry, eggs, legumes, soy products, milk, yogurt, low fat cheese, nuts/nut butters, sport bars, meal replacements, protein powders



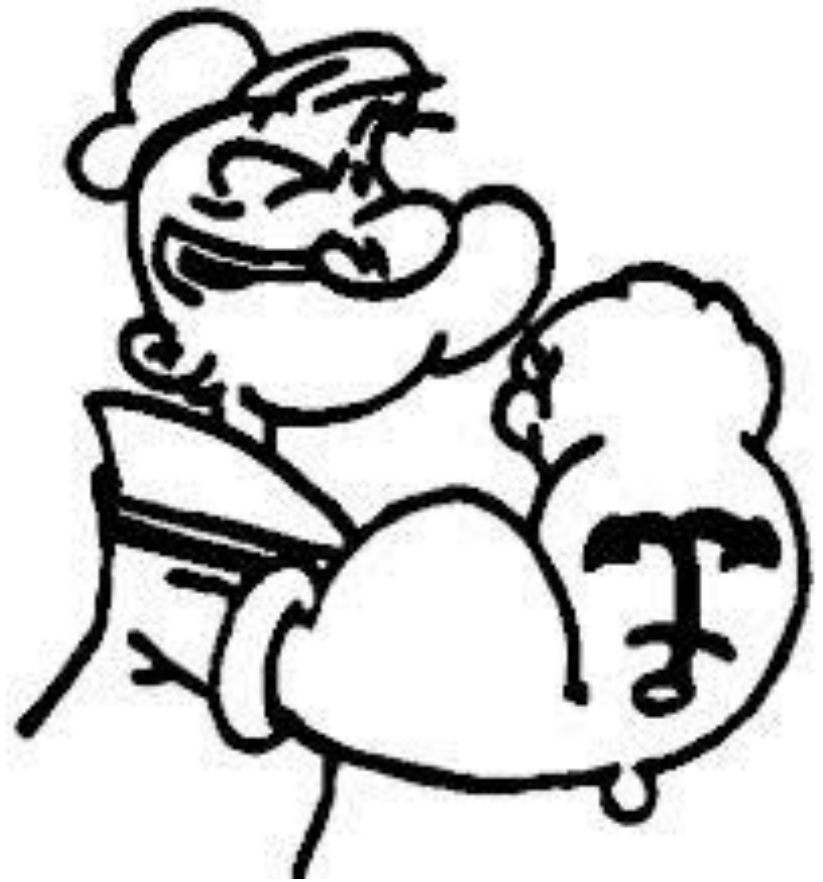
MYTH BUSTING



PROTEIN

TRUE OR FALSE

- If you're trying to put on muscle mass and gain weight you need to eat lots more protein and/or add a protein supplement?



FALSE

- To assist in gaining weight and muscle mass you need to:
 - Increase frequency of eating
 - Increase overall energy intake
 - Follow a well structured resistance training program
- You can get enough daily protein for REAL food rather than adding a protein supplement

DAILY PROTEIN

MEAL	FOOD	TOTAL PROTEIN
Breakfast	2 eggs	12g
	1.5 cups milk	13g
Snack	1.5 Tbsp nut butter	7g
Lunch	3 ounces tuna	22g
	1.5 cups milk	13g
Snack	$\frac{3}{4}$ cup Greek yogurt	15g
Dinner	4 ounces chicken	22g
	1.5 cup milk	13g
Snack	1/4 cup soybeans dry roasted + $\frac{1}{4}$ cup almonds	19g
	$\frac{1}{2}$ cup 1-2% yogurt	8g
TOTAL	GOAL IS 1.2-1.6g/kg body weight	144g

QUESTION 3

How much fat do you need in your diet?

- A. 40% of total energy
- B. 5-20% of total energy
- C. 20-35% of total energy
- D. You should avoid fat

- How much fat do you need in your diet?

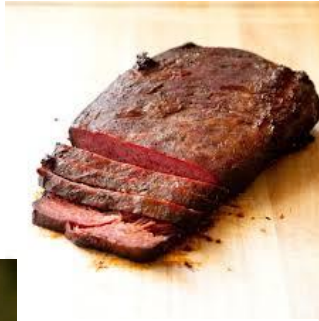
ANSWER = **C. 20-35%**

WHY?

- Play critical roles in the overall functioning of the body, such as in digestion and energy metabolism.
- Human fat stores are a major source of energy for skeletal muscle during aerobic exercise.
- Fats and lipids also have important structural roles in maintaining nerve impulse transmission, memory storage, and tissue structure.
- It also helps to maintain body temperature and protect body organs from trauma
- Fat soluble vitamins A, D, E, and K and carotenoids depend on fat for appropriate delivery and absorption.

Best to Worst Fat

BEST



WORST



MYTH BUSTING



FATS

TRUE OR FALSE

- Processed foods have no place in a healthy diet



FALSE

- Some processed foods, such as whole grain pasta, canned light tuna and plain frozen vegetables, or nut butters are healthy choices.
- Others provide few nutrients and/or are high in calories, fat, sugar or sodium and should be limited.
 - Some examples: are deep fried foods, salty snacks, packaged baked goods, breakfast cereals, granola bars, nutella
- **KEY MESSAGE:**
 - Make wise food choices. Enjoy more whole foods, like vegetables and fruit. Read labels and choose foods higher in nutrients you want more of, like fibre, iron, calcium and B vitamins, and lower in nutrients you want less of, like sugar, fat and sodium. Enjoy your favourite treats in moderation

SUGAR SHOCKERS



A. $21\text{g} = 5 \text{ tsp}$

B. $2\text{g} = 3 \text{ tsp}$

C. $8\text{g} = 2 \text{ tsp}$

D. $48\text{g} = 12 \text{ tsp}$

E. $57\text{g} = 14 \text{ tsp}$

F. $45\text{g} = 11 \text{ tsp}$

G. $14\text{g} = 3.5 \text{ tsp}$



(1 tsp = 1 cube of sugar or 1 sugar packet)

SUGAR SHOCKERS



- A. Nutella (21g)
- B. Quacker Oat Chocolate Chip Dip granola bar (12g)



- C. Ketchup (8g)
- D. Starbucks Grande Mocha Frappuccino (48g)



- E. Medium Wendy's Frosty (57g)



- F. Tropical Skittles (45g)
- G. Oreos x 3 (14g)

How to build a winning snack...

1. Start with a source of carbohydrates...
 - Vegetables and Fruits
 - Grain Products
2. Choose carbs low in sugar and high in fibre
Less than 8 grams of sugar (1 tsp of sugar = 4 grams)
 - 2 thumbs up
 - More than 4 grams of fibre
 - 4 fingers
3. Add a source of protein
 - Milk and Alternatives
 - Meat and Alternatives



High Performance Snacks

Carbohydrates

(Grains/Fruit/Vegetables)

Protein

(Milk Prod/Meat & Alt.)

Fresh fruit or whole grain/rice crackers and cheese

Apple and Nut butter

Veggies and hummus

½ sandwich with low fat toppings

Small wrap with meat

Berries and yogurt

Fruit and Cottage cheese

Dried fruit and nuts (Trail mix)

Crackers and tuna pack

Power shake: Fruit and yogurt blended

Cereal and Milk

HOMEMADE CEREAL RECIPES

Power Muesli

INGREDIENTS

- 4 cups old fashioned oats
- 2 cups Kashi Go Lean Crunch
- 1/2 cup Ground flax
- Dried fruit
- 1 cup chopped nuts
- Cinnamon to taste
- 1 cup unsweetened coconut

DIRECTIONS

1. Add all the ingredients to a bowl and mix thoroughly
2. Can be zip locked for 5 days in the fridge

Honey Nut Granola

INGREDIENTS

- 3 cups rolled oats
- 1 cup chopped almonds
- 2 teaspoons cinnamon
- 1 cup powdered milk
- 1/3 cup honey
- 1/3 cup canola oil
- 1 cup dried fruit bits (raisins, cranberries, chopped dates etc.)

OPTIONAL INGREDIENTS

- 1 tsp salt
- 1/2 cup sesame seeds
- 1/2 cup sunflower seeds (unsalted)
- 1/2 cup wheat germ
- 1/2 cup ground flaxseed

DIRECTIONS

1. In a large bowl, combine the oats, almonds, cinnamon, and powdered milk (and salt, sesame seeds, and sunflower seeds, as desired).
2. In a saucepan or microwavable bowl, combine the honey and oil. Heat until almost boiling. Pour the honey mixture over the oat mixture and stir well.
3. Spread the mixture onto two large baking sheets.
4. Bake at 300°F for 20-25 minutes, stirring every 5 minutes.
5. After the granola has cooled, add the dried fruit (and wheat germ and flaxseed, as desired). Store in an airtight container.

Question 4

What are the key nutrients needed for young athletes?

- A. Vitamin C
- B. Iron
- C. Beta-Carotene
- D. Calcium/Vitamin D
- E. Both B and D

- What are key nutrients needed for young athletes?

ANSWER: E. Both B and D

WHY?

- Iron
- Calcium and Vitamin D
- Food sources?

MYTH BUSTING



SUPPLEMENTS

TRUE OR FALSE

- Energy drinks such as Rockstar and Red Bull are safe and good ways to increase energy for all day events.



TRUE OR FALSE



- Young and Elite divers must take supplements for good nutrition and well-being

Question 5

- Which nutrient provides *quick energy* for your muscles when training or competing?
 - A. Fat
 - B. Protein
 - C. Carbohydrate
 - D. Caffeine

- Which nutrient provides *quick energy* for your muscles when training or competing?

ANSWER : C. Carbohydrate

Why?

- Carbohydrates are your main source of energy during exercise, especially with higher intensity exercise

Question 6

- If you do not eat enough to fuel your body for a practice or training, which of the following is true?
 - A. Will not be able to perform at your best
 - B. You will be more likely to get injured
 - C. You will be more likely to get sick
 - D. All of the above

- If you do not eat enough to fuel your body for a practice or training, which of the following is true?

ANSWER: **D. all of the above**

WHY?

- Reduced energy over training session
- Only can perform at 60-75% of physical and mental capacity
- Increased risk for mistakes and therefore injury

Question 7

Michael has a 7 am practice. He woke at 6:15 am, but feels sick to his stomach and doesn't feel like eating. What should he do?

- A. Nothing. It's better to practice on an empty stomach than to feel sick. He can grab a sandwich or an energy bar after practice
- B. Raisin Bran cereal with milk; water
- C. Fruit smoothie and water
- D. A hard-boiled egg, a slice of cheese, and water



ANSWER = **C** a fruit smoothie and water

EXPLANATION

- **Carbs** (grains, cereal, starchy vegetables, crackers, fruit, etc.) are your **best bet** before practice/competition
- But too much **fibre** (Raisin Bran) can cause **stomach upset**
- No eating for 12 hours = **starvation** for your body, increases body fat, poor performance

Fueling Before Exercise

LOW FIBRE, LOW FAT, HIGH CARB, AVOID SUGAR + FLUID

■ Recommended: Snack 3 to 4 hours before

Carb Source (~60 g carbs)	Protein Source
1 cup quinoa (60g)	½ cup meat sauce
1 cup sweet potatoes (60 g)	3-4 oz. chicken
1 sandwich (35g) + 1 banana (20-30 g)	2 Tbsp. PB
1 large whole wheat wrap (30g) + apple (15g)	2 eggs

■ Recommended: Snack 30-60 minutes before

Carb Source (10-20 g carbs)	Protein Source
½ - 1 slice bread (10- 20g)	Easy to digest proteins only: peanut butter, yogurt, milk etc.
1 banana (20-30 g)	
4-6 saltine crackers (15-20g)	
1 granola bar (20 - 30 g)	

Question 8

- Which of the following is the most important component that your body needs during a practice or training?
 - A. Protein
 - B. Fat
 - C. Carbohydrate
 - D. Fluid
 - E. C and D



- Which of the following is the most important component that your body needs during a practice or training?

ANSWER = **E: Carbohydrate and Fluid**

WHY?

- Ensure optimal energy is provided and to prevent dehydration

Question 9

- A good colour for your urine to be to ensure you're hydrated is







- A. Dark yellow
- B. Black
- C. Clear
- D. Pale yellow



ANSWER. D. Pale Yellow

AM I HYDRATED?

Urine Color Chart

1		
2		If your urine matches the colors 1, 2, or 3, you are properly hydrated.
3		Continue to consume fluids at the recommended amounts.
4		If your urine color is below the RED line, you are
5		DEHYDRATED and at risk for cramping and/or a heat illness!!
6		YOU NEED TO DRINK MORE WATER!
7		
8		

DEHYDRATION

Leads to:

- Reduced concentration
- Reduced skill ability
- Early fatigue
- Higher perceived exertion in training
- Delayed recovery
- Muscle cramps

HYDRATION TIPS

- Drink 8-10 cups of fluid a day outside of training
- Drink ½-1.5 cups of fluid 1-2 hours before training
- Bring a water bottle with water, sports drink or diluted sports drink on deck and aim for 3-4 gulps every 3-4 dives (~20min)
- After training, drink 1-2 cups of fluid and ensure urine is a pale yellow

TOP ON DECK FOODS

- Water + Diluted sports drink
- Banana
- 1/2 cup dried fruit
- Applesauce
- 1 package of sport gels, bites or blocks
- Yogurt tube or homemade smoothie (if have a cooler)



Question 10

- How soon should you start to 'refuel and recover' after a practice?



- A. 60 minutes
- B. 40 minutes
- C. 90 minutes
- D. 30 minutes
- E. Depends on when your next training session is

- How soon should you refuel and recovery after a practice?

ANSWER = **E: Depends on when your next training session is.**

WHY?

- It is most important to recover immediately if you have another training session in less than 8hours
- What would be some good recovery food choices?

Nutrition Plan for Competition Day

Time	Event	What to Eat
7-7:30am	Breakfast (ideally 2-4 hours before)	<ul style="list-style-type: none"> - Easy to digest food; low in fat; combination of carbs and protein for sustained energy; fluids - 1-2 packets of oatmeal + Greek yogurt NOTE: monitor hydration
7:30-9am		Frequent sips of water and monitor hydration
9am-12pm	Warm up & diving preliminaries	<ul style="list-style-type: none"> - On deck food options (ex/ fruit, diluted sport drink) - Aim for a few bites every hour - Frequent sips of water &/or diluted sport drink
12-1:30pm	Lunch (ideally 2-4 hours before next session)	<ul style="list-style-type: none"> - Easy to digest food; low in fat; combination of carbs and protein - Chicken salad + Fruit - Vegetable soup + ½-1 turkey sandwich/wrap
1:30-4pm		Frequent sips of water and monitor hydration
4-6pm	Pre diving snack (1-2 hrs before)	<ul style="list-style-type: none"> - Easy to digest, low fat, combination of carbs + protein (if tolerated) - Banana + 1 Tbsp peanut butter - Frequent sips of water and monitor hydration
6-9pm	Warm up & finals	<ul style="list-style-type: none"> - On deck food options (ex/ fruit, diluted sport drink) - Aim for a few bites every hour - Frequent sips of water &/or diluted sport drink
9pm	Dinner	<ul style="list-style-type: none"> - Follow competition day with a healthy meal that includes vegetables, slow digesting carbohydrates and lean protein - To rehydrate, sip on water

KEY MESSAGES

- Ensure you are eating GROW, GLOW and GO foods daily at meals and snacks along with healthy fats
- Watch the sugar and fibre content in processed and packaged foods
- Choose foods rich in iron, calcium and Vitamin D
- Ensure you are well hydrated throughout the day
- Fuel and hydrate properly for training/competition

THANK YOU! QUESTIONS?

