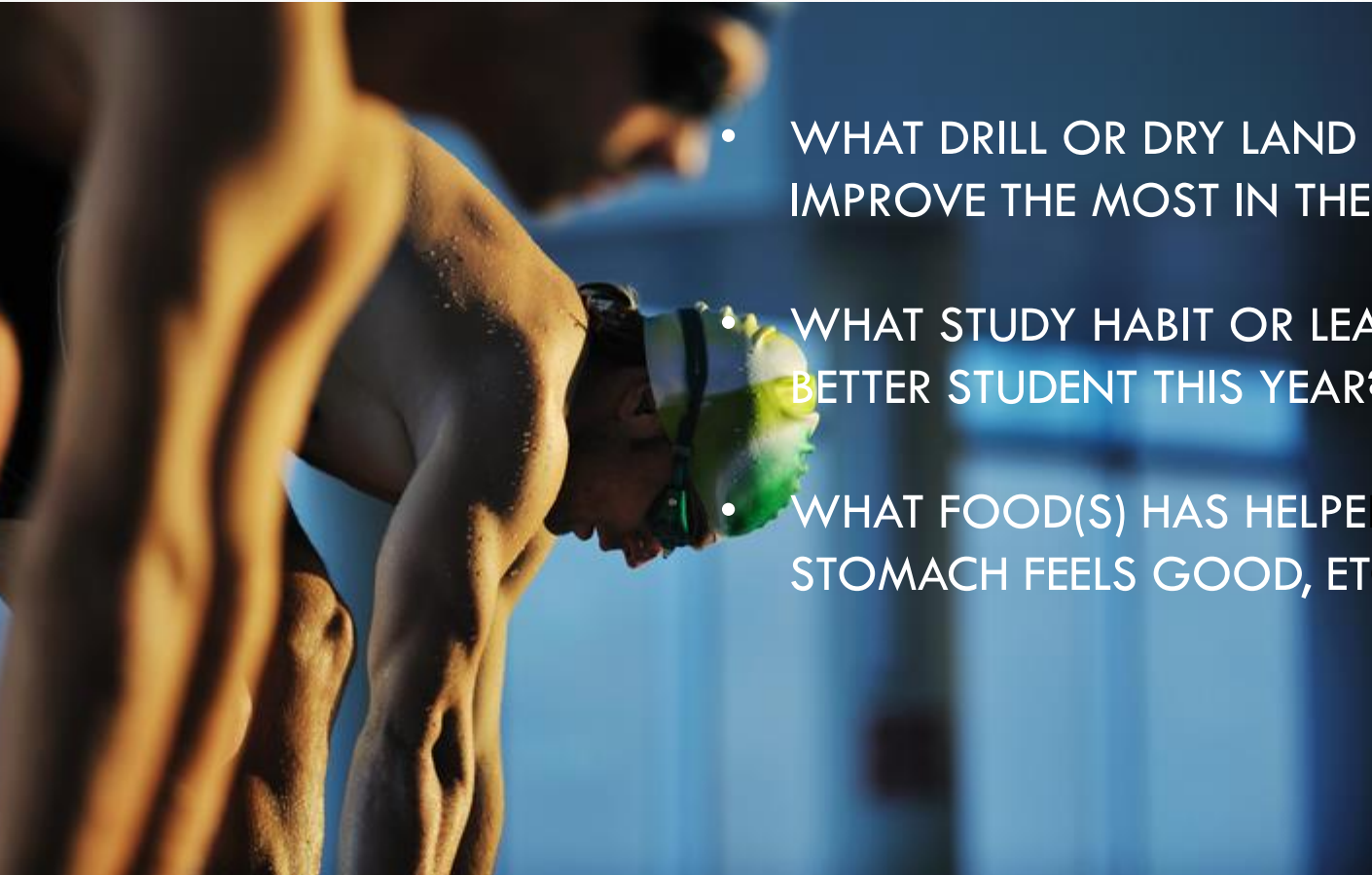


The background features a circular inset showing a swimmer in a pool, with water splashing around them. The swimmer is wearing a red cap and goggles. The overall image is decorated with several realistic water droplets of various sizes scattered across a light gray background.

PERFORMANCE NUTRITION GAINING THE COMPETITIVE EDGE:

JENNA STANGLAND MS, RDN, CSSD, LDN, CLT

WHAT INFLUENCES SWIMMING PERFORMANCE?



- WHAT DRILL OR DRY LAND TRAINING EXERCISE HAS HELPED YOU IMPROVE THE MOST IN THE POOL?
- WHAT STUDY HABIT OR LEARNING RESOURCE HAS HELPED YOU BE A BETTER STUDENT THIS YEAR?
- WHAT FOOD(S) HAS HELPED YOU PERFORM BETTER? (MORE ENERGY, STOMACH FEELS GOOD, ETC)

WHAT WE KNOW ABOUT NUTRITION?



FOOD FUELS PERFORMANCE

WHAT GOES INTO YOUR BODY HAS THE POTENTIAL TO

- INCREASE ENERGY LEVELS
- IMPROVE RECOVERY TIME
- PREVENT INJURY, LESS MISSED MEETS
- INCREASE MUSCLE MASS
- IMPROVE MENTAL STAMINA
- REDUCE PERFORMANCE ANXIETY
- DECREASE INFLAMMATION AND SORENESS



A close-up, top-down view of a dark-colored bowl filled with oatmeal. The oatmeal is topped with several fresh blueberries, a few almonds, and two slices of banana. The banana slices are dusted with a light brown powder, likely cinnamon. The bowl is placed on a blue and white patterned fabric surface.

ENERGY

HOW DO YOU FUEL UP FOR TRAINING?

UNDERSTANDING THE DEMANDS

- CALORIES BURNED IN A 2 HOUR PRACTICE = 500 – 1,200
- CALORIES NEEDED IN A DAY = 2,600 – 3,200
- PROTEIN NEEDS = 20-30% OF TOTAL CALORIES
- CARB NEEDS = 55-60% OF TOTAL CALORIES
- WATER = $\frac{1}{2}$ YOUR BODY WEIGHT + 20 OZ/HR OF TRAINING



ENERGIZERS

SIMPLE

60 MIN OR LESS

- LAST 30-60 MINUTES
- QUICK DIGESTING
- LOW FIBER
- IDEAL BETWEEN EVENTS
- PRE PRACTICE
- DURING ANXIETY AND NERVOUSNESS
- 1 G/KG BODY WEIGHT



COMPLEX

2-4 HOURS BEFORE

- LAST 2 HOURS
- SLOWER DIGESTING
- HIGH FIBER
- PRE WARM UP ON MEET DAY
- MEAL TIMES
- SUPPORT HEALTHY DIGESTION
- BALANCE MOOD

HOW MUCH ENERGY DO YOU NEED? 4 HOURS BEFOREHAND

CARBOHYDRATE

0.9 - 1.3 g/lb

(150 lbs = 135 - 195 grams)

PROTEIN

0.1 - 0.2 g/lb

(150 lbs = 15 - 30 grams)



HOW MUCH ENERGY DO YOU NEED? 2 HOURS BEFOREHAND

CARBOHYDRATE

0.75 – 0.85 g/lb

(150 lbs = 105 - 127 grams)

PROTEIN

0.1 - 0.2 g/lb

(150 lbs = 15 - 30 grams)

FACTS

- Fueling 60 min pre training = 7-20% increase in performance
- Fueling pre training improved next day performance in every athlete



PRE MEET ENERGY OPTIONS



**SWEET POTATO
EGG CUPS**



**BANANA PEANUT
BUTTER PANCAKES**

**BERRY
HONEY
GRANOLA**



OVERNIGHT OATS

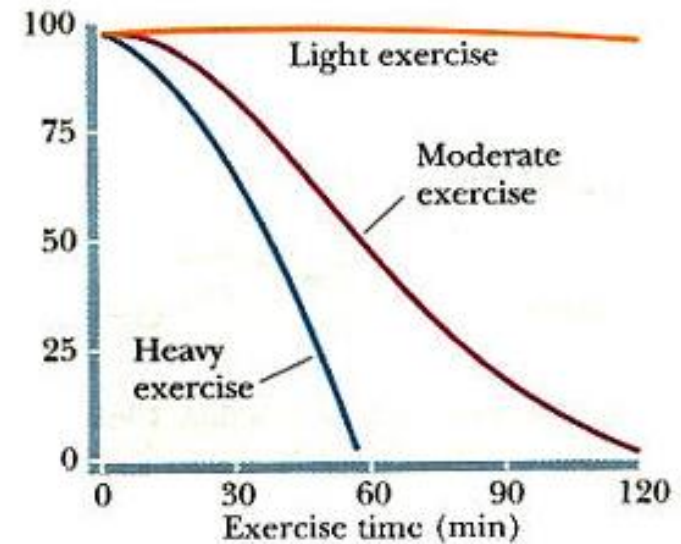
ENERGY DURING TRAINING

Glycogen Depletion =

lack of power
dizziness
nausea

delay decision making
reduced performance

Glycogen Utilization in Working Muscle



FUEL UP IDEAS DURING COMPETITION



PRETZELS + FRUIT

**HONEY
STINGERS**



**STUFFED MINI
BAGELS**

DATE BALLS



The image features a dark grey background with three overlapping circles in shades of blue. A horizontal light blue band spans the width of the image, containing the text 'BUILD YOUR PERFORMANCE PLATE' in a dark blue, sans-serif font. The circles are positioned behind the band, with their top and bottom halves visible above and below it respectively.

BUILD YOUR PERFORMANCE PLATE

BUILD A PERFORMANCE-ENHANCING PLATE

Properly fueling can provide an edge over other athletes who don't focus on their nutrition.

- ▶ Calorie and nutrient needs vary depending upon intensity and phase of training.
- ▶ This plate represents a hard training day. On light training days, substitute 1/4 plate of whole grains with 1/4 plate of fruits and vegetables.



HEALTHY FATS

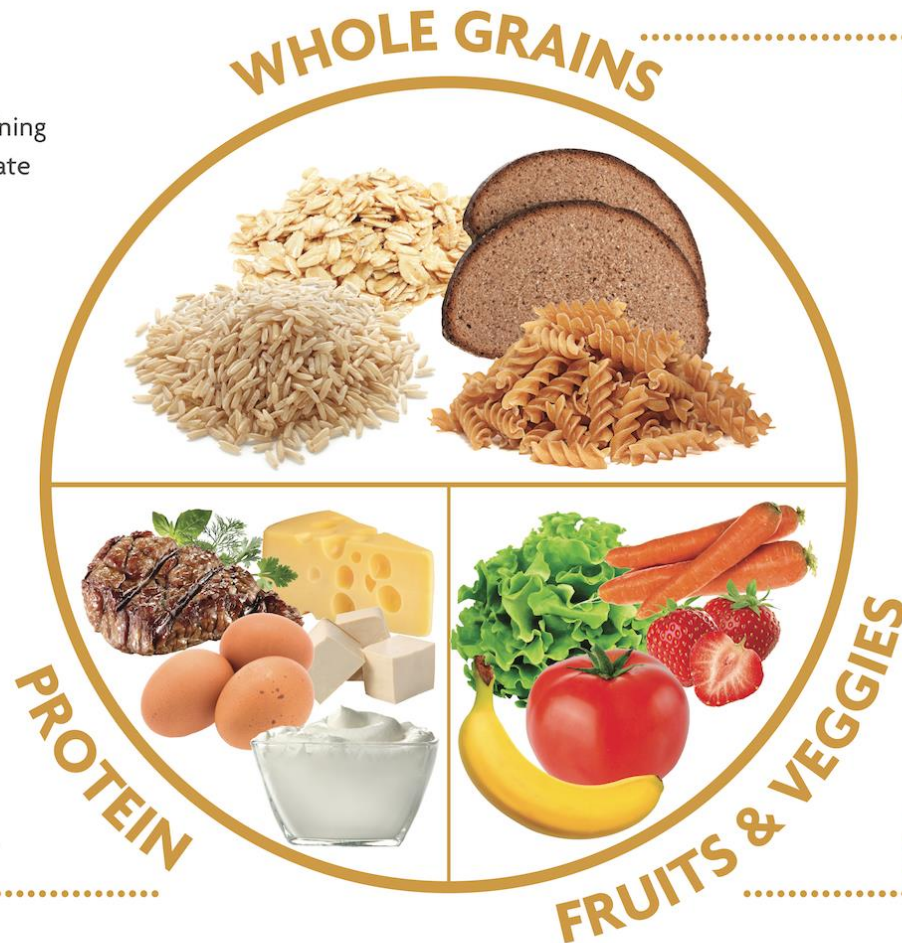
Moderate amounts of healthy fats provide a concentrated **energy** source and **essential fatty acids**.

[nuts, seeds, oil and fatty fish]

Protein foods are essential for **building/repairing muscle** and helping to support **immune** function.



For advice on customizing a nutrition plan, consult a sports dietitian.



Carbohydrates fuel muscles and are the quickest source of **energy** for athletes.

FLUIDS

Stay **hydrated** by drinking fluids at mealtime and throughout the day.

[milk, water, 100% fruit juice]

Many fruits and vegetables provide **nutrients** that have been linked to **reduced oxidative damage** from hard training.

PLATE BREAKDOWN

ENERGIZERS	SUPERFOODS	MUSCLE BUILDERS
oats	bell peppers	soy*
whole grain breads	pineapple^	nuts* / nut butters*
potatoes	turmeric	seeds*
pasta	spinach	legumes*
rice	broccoli	eggs
quinoa	blueberries^	chicken
legumes (lentils, peas, beans)	beets	tuna / salmon / seafoods
pretzels	squash	beef / lamb / duck
whole grain tortillas	onions	dairy

^ indicates energizing superfood

* Indicates plant based protein

CREATE YOUR OWN PERFORMANCE PLATES

DRAW 3 PLATES –

- TRAINING DAY BREAKFAST
- PRE MEET MEAL (4 HOURS BEFORE)
- POST MEET DINNER

**MAKE SURE YOU ARE PUTTING FOODS YOU ACTUALLY EAT

GRAINS + CARBS 50%

- Pasta
- Rice
- Potatoes
- Cereals
- Breads

LEAN PROTEIN 25%

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

FRUITS + VEGETABLES 25%

- Fresh Fruit
- Canned Fruit
- Dried Fruit
- Raw Vegetables
- Cooked Vegetables

FATS

• Avocado	• Seeds
• Oils	• Cheese
• Nuts	• Butter

HYDRATION

- Water
- Dairy/Non-Dairy Beverages
- Diluted Juice
- Flavored Beverages (Low/Zero Calorie)
- Coffee/Tea

FLAVORS

• Salt/Pepper	• Salsa
• Herbs	• Mustard
• Spices	• Ketchup
• Vinegar	

A background image showing several swimmers in a pool, some in starting blocks and others in the water. The text 'SAMPLE DAY LUNCHES' is overlaid in the center.

SAMPLE DAY LUNCHES

	Option 1	Option 2	Option 3
Muscle builder	Turkey + Cheese	Seitan + Black Beans	Grilled Chicken + Caesar
Energizer	Ezekial bread	Rice	Whole wheat tortilla (Flatout)
Cell supporters	Tomato, spinach, onion	Bell peppers + zucchini	Romaine + Spinach
Resiliency	Clementines	Strawberries	Applesauce
Mental stamina	Trail mix	Hummus	Parmesan on wrap





RECOVERY

HOW ARE YOU CHOOSING TO REFUEL?

REFUEL OPTIMALLY

3:1 RATIO OF CARBS: PROTEIN

REPLENISH CARBS : 0.5 – 0.7 G/LB WITHIN 30 MIN

REPAIR WITH PROTEIN : 15 – 25 GRAMS

REHYDRATE YOUR LOSSES : 16 – 24 OZ/LB LOST



Foods Providing 50 g CHO	Foods Providing 50 g CHO + 20 g PRO
18 - 24 oz sports drink	1 1/2 - 2 c cereal w/ 1 c milk + 1/3 c nuts
2 bananas	8 oz flavored Greek yogurt w/ 1 c cereal
12 oz orange juice	1 turkey cheese sandwich
2 sports gel	3/4 cup rice w/ 1/3 c beans
2 slices bread with preserves	Smoothie w/ 2 c fruit + 1 scoop protein powder
2 cups cereal	1 cup cottage cheese w/ 2 c pineapple

SEE WHAT YOU CAN DIVE INTO WITH YOUR OWN PERFORMANCE NUTRITION THIS SEASON!

REACH OUT TO PERSONALIZE YOUR APPROACH –

JENNA STANGLAND MS RD CSSD LD CLT

STANGLAND.JENNA@GMAIL.COM

WWW.A4.HEALTH

