

# Getting the Athlete Ready

...

#GoBigReds

# Who Am I? And Why Am I Here?

- Athletic Trainer for 10+ years
  - Worked with pro, semi-pro, collegiate (DI, DII, DIII) and now high school athletes
- Injury and Illness Prevention
  - My number one goal. If I'm busy, it's a bad day.
- Injury/Illness Evaluation, Treatment, Rehab and Consultation
  - It starts NOW. Not day 1.
  - DON'T let issues linger. Address them head on and move on.
- What's Important?
  - Taking care of your body and your mind...
    - Sleep
    - Nutrition
    - Hydration
    - Conditioning
    - Mental Preparation

**“If you told an athlete you had a treatment that would reduce the chemicals associated with stress, that would naturally increase human growth hormone, that enhances recovery rate, that improves performance, they would all do it...”**

**Would you?**

# Sleep does all of those things!”

- Casey Smith, Head Athletic Trainer, Dallas Mavericks



Human Performance Model - Influencers of wins and losses

# Sleep

- Sleep is when your body recovers! Crucial part of success.
  - Reaction time and motor function, motivation, focus, stress regulation, muscle recovery, sprint performance, muscle glycogen, glucose metabolism, memory and learning, injury risk, illness rates, unwanted weight gain... sleep plays a part in all of these things
- Helps improve reaction time
  - A single all-nighter can reduce reaction times by more than 300% and takes several days to truly recover
- Reduce injury rates, improved overall health
  - Injury rates increase following a night of 6 hours of sleep or less
    - Fatigue affects reaction time. Slower response, increases injury potential
    - Affects the body's immune system leaving you more susceptible to illness
    - Not enough time to regenerate cells and repair from workouts, games and daily activities

# Sleep

- Longer playing careers
  - Research has used the science of sleep to predict sports performance
  - Increase in fatigue = increase in injuries = decrease in overall career
- Better accuracy, faster sprint times
  - Research has shown overall accuracy and speed to increase when consistent, good sleep is achieved
- Fewer mental errors
  - Sleep loss impairs judgement
  - Motivation, focus, memory and learning can be impaired
  - Brain struggles to consolidate memory and absorb new knowledge

“A team that recognizes this trend and takes steps to to slow or reverse (mental fatigue), especially in the middle and late season... can gain a large competitive advantage over their opponent.” - Scott Kutscher, M.D.

# Sleep Strategies

- Be consistent
  - Set an alarm. Same time every day, weekends included
  - Go to bed at the same time
  - Routine is key
- Get 7-10 hours of sleep each night
- **PUT YOUR PHONE DOWN**
  - It's okay. People can wait.
  - An hour before bed is ideal
- Nap when your body needs it
  - BUT not for more than 20 mins
- Glass of water before bed, glass of water when you wake up
- Stretch



# Nutrition

**If you don't eat according to your goals, don't expect to reach them.  
Athletes eat and train, they don't diet and exercise.**



Human Performance Model - Influencers of wins and losses

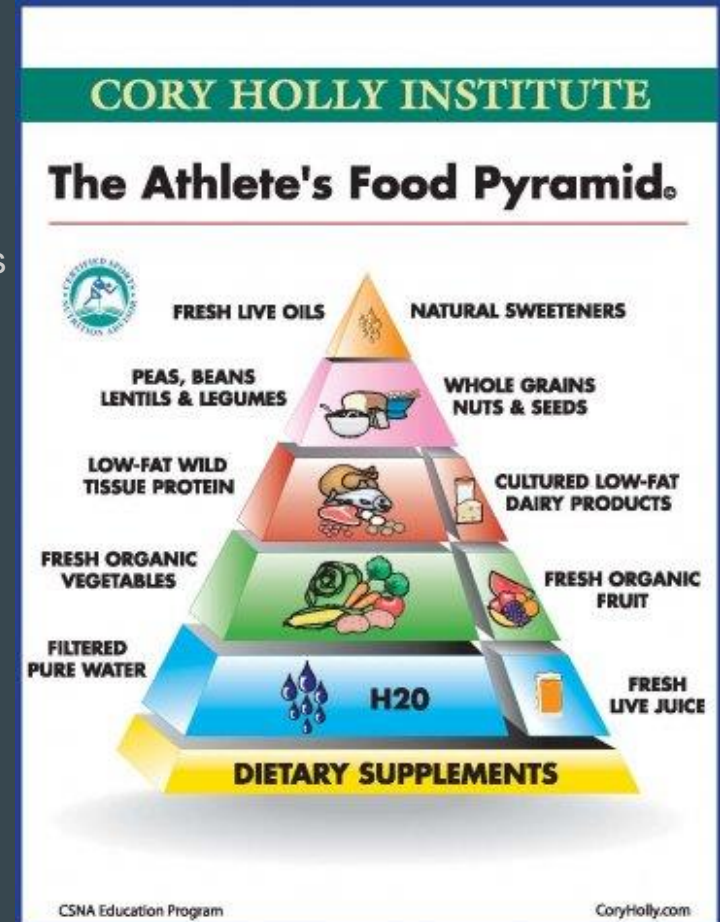


# Why is nutrition important?

- Food is fuel
  - Better nutrition leads to better performance
- When you feed your body the RIGHT fuel, your body rewards you with higher energy levels, more muscle and faster recovery
- Reduces risk of chronic disease
- Decreases inflammation after injury
- Improve skin and bone health
- Helps with hydration
- Helps with weight control
- Without nutrients the body malfunctions

# Components of Nutrition

- Carbohydrates
  - Number one source of energy for all bodily functions
- Proteins
  - Primarily for the growth and repair of body tissues
- Fats
  - Cushions and protects the organs
- Minerals
  - Building materials for bones, teeth, tissue, muscles, blood and nerve cells
- Vitamins
  - Help regulate metabolic reactions



# Carbohydrates

## Simple Carbs

- Sugars
- Fructose
- Artificial Sugars

Found in:  
Table Sugar  
Fruits  
Candy Bars  
Pop  
Fruit Juice  
Sports Drinks



## Complex Carbs

- Glycogen
  - Breaks down into glucose for energy
- Vitamin B, Minerals, Fiber and Protein

Found in:  
Breads  
Cereals  
Grains  
Pasta  
Fruits (bananas, apples, pears)  
Vegetables (potatoes, beans)



# Protein

Good sources of protein:

Dairy (milk, cheese, yogurt, eggs)

Fish

Chicken/Poultry

Beef

Legumes (soybeans, peas, peanuts, beans)

Grains (rice, wheat, corn, oats)

Nuts/Seeds (almonds, pecans, sunflower seeds)

Hummus



# Fats

## Good Natural Fats:

- Dairy
- Nuts
- Fish
- Meat
- Oils (olive, flaxseed)



## Bad Fats:

- Any oils that are solid at room temperature
- Hydrogenated oils

# Vitamins

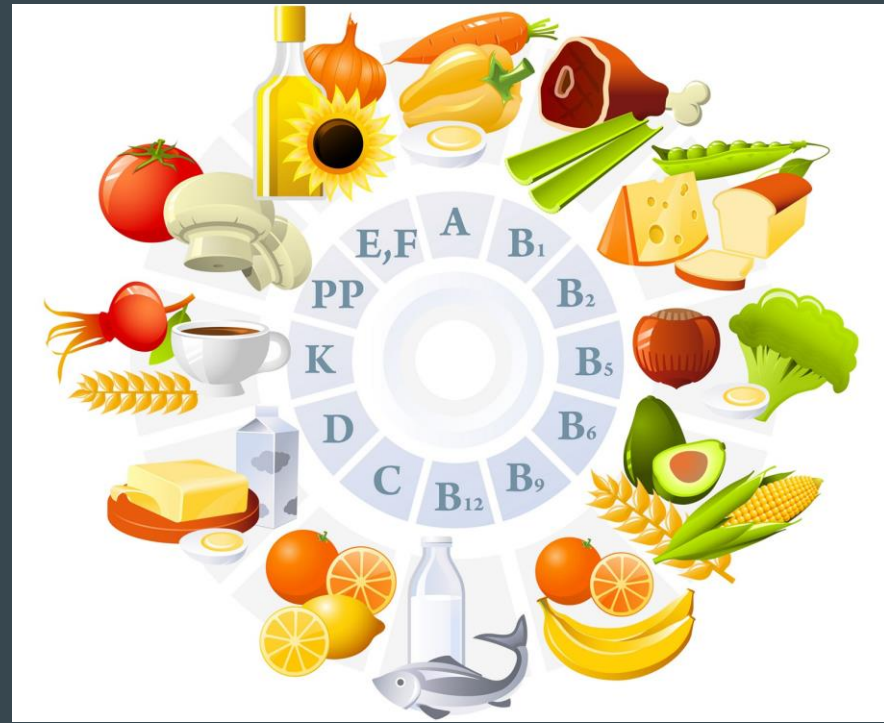
## Obtained through diet or supplementation

# Water soluble vitamins

- Need to be replaced on a daily basis
- Vitamin B complex
  - thiamin, riboflavin, niacin, folic acid, biotin
- Vitamin C

# Fat soluble vitamins

- Are stored in the liver and fat cells - needed, but not daily
- Vitamin A
- Vitamin D
- Vitamin E
- Vitamin K





# Minerals

Major minerals are required by the body in quantities of 100 mg/day or more

- Calcium (Ca)
- Iron (Fe)
- Magnesium (Mg)
- Phosphorus (P)
- Potassium (K)
- Sodium (Na)
- Zinc (Zn)



What does it look like on the  
plate?



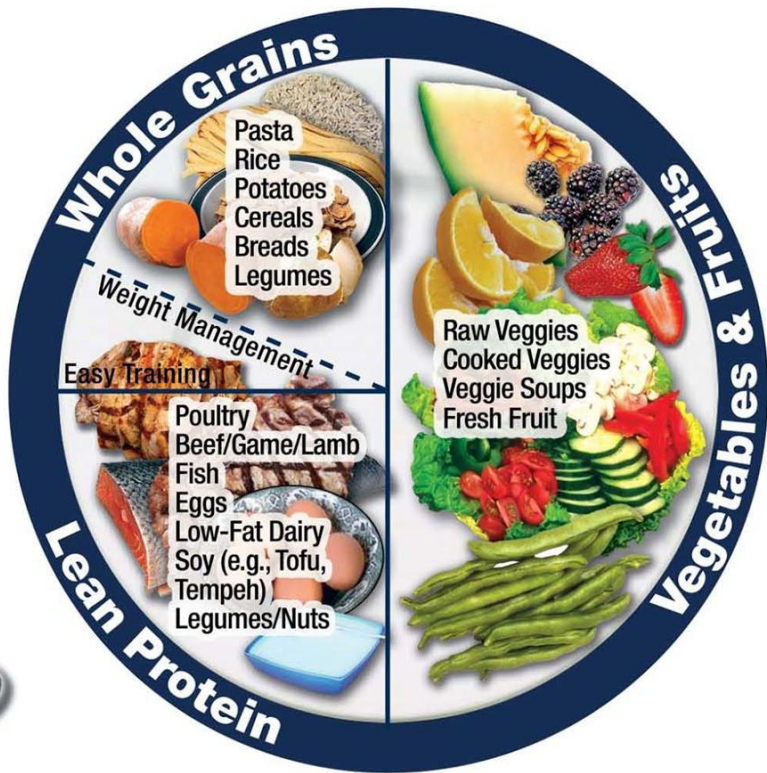
# EASY TRAINING / WEIGHT MANAGEMENT:

## FATS

1 Teaspoon



Avocado  
Oils  
Nuts  
Seeds  
Cheese  
Butter



Water  
Dairy/Nondairy  
Beverages  
Diluted Juice  
Flavored  
Beverages

Coffee  
Tea

## FLAVORS

Salt/Pepper  
Herbs  
Spices  
Vinegar  
Salsa  
Mustard  
Ketchup



# MODERATE TRAINING:

## FATS

1 Tablespoon



Avocado  
Oils  
Nuts  
Seeds  
Cheese  
Butter



## Grains

Pasta  
Rice  
Potatoes  
Cereals  
Breads  
Legumes

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

## Lean Protein

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



# HARD TRAINING / RACE DAY:

## FATS

2 Tablespoons



Avocado  
Oils  
Nuts  
Seeds  
Cheese  
Butter



## Grains

Pasta  
Rice  
Potatoes  
Cereals  
Breads



Fresh Fruit  
Stewed Fruit  
Dried Fruit

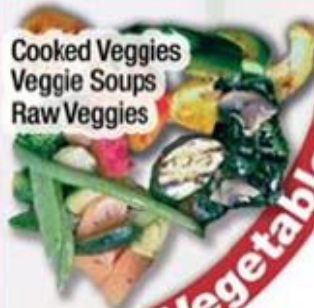


Water  
Dairy/Nondairy  
Beverages  
Diluted Juice  
Flavored  
Beverages



Coffee  
Tea

Cooked Veggies  
Veggie Soups  
Raw Veggies



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



Lean Protein

Vegetables

## FLAVORS

Salt/Pepper  
Herbs  
Spices  
Vinegar  
Salsa  
Mustard  
Ketchup





# What do I eat when?

## 1 hour or less BEFORE

- Choose fruit and vegetable juices, fresh fruit

## 2-3 hours BEFORE

- Choose fruit and vegetable juices, fresh fruit and/or breads, bagels or muffins
- Limit amounts of butter or cheese

## 3-4 hours BEFORE

- Fresh fruit, and
- Breads, bagels, muffins, and
- A light spread of peanut butter or
- Slice of cheese, or
- Light spread of cream cheese or
- Light spread of butter and/or
- Bowl of cereal with low fat milk (limited)

# What do I eat when?

4 hours or more BEFORE

- Sandwich with 2 slices of bread and
  - Two ounces lean meat
  - Peanut butter
  - Can have cheese
- Fresh fruit, and
- Fresh vegetables, and
- Low fat milk



\*Low Fat Chocolate Milk - great source of carbs, protein, and fat along with vitamins and minerals

# Recovery Nutrition

## Reference Handout

- Within 30 mins of a hard workout

Typically combine a carbohydrate and a protein

- Yogurt and fresh fruit
- Peanut butter and banana
- Protein bar and banana
- Peanut butter/jelly and milk
- Fresh fruit and cheese

Limit fats post workout

Eat to recover your body

And ALWAYS, ALWAYS, ALWAYS....

## 1 REFUEL



**Carbohydrate-rich foods will help replace your glycogen stores for your next training session.** This is particularly important if you are doing back to back workouts.

## 2 REHYDRATE



**Replace sweat losses** to ensure that you start your next training session fully hydrated. Water and snacks are fine. Juice (mostly carbs) or chocolate milk (carbs + protein), allow you to get carbs while you rehydrate.

## 3 REBUILD



**Repairing muscle tissue is an important part of recovery.** Although not as crucial to your next training session as carbs or fluids, protein will help long-term adaptations. Include some protein in your post-training recovery snack. Some recommend **20g of protein within 30 minutes of exercise** (about 500 ml of milk).

# HYDRATE

By the time you're thirsty, you're **ALREADY** dehydrated!



Human Performance Model - Influencers of wins and losses

# Why is hydration SO important?

Your body depends on water to survive

Every cell, tissue and organ in your body needs water to work properly

- Temperature, remove waste, lubricate joints

You must have water to burn calories

Dehydration causes fatigue, disorientation, slowed reaction time/speed, headaches

- More likely to become injured
- Affects performance on and off the field

You lose water everyday when you use the bathroom, sweat and simply by breathing

- Even faster in the heat or humidity, when you are physically active or you are ill/have a fever



# How to tell if you are dehydrated...

Are you thirsty?

Is your skin dry?

Do you frequently get headaches?

Do you use the bathroom regularly?

Is your pee clear?



# What should I drink?

## Electrolyte Beverage

- Gatorade or Powerade, Propel Water

- Easiest, simplest drink of choice

## Fruit Juice

- Natural is better, dilute with water

## Low fat milk

- Chocolate or 2% milk

Energy drinks will NOT hydrate you.

They are loaded with sugar and caffeine and often cause you to be overly thirsty

## BENEFITS OF STAYING HYDRATED



# Tips to stay hydrated

6-8, 8 ounces glasses of water a day is reasonable

- Also get water in other beverages and foods (tomato, lettuce, watermelon, broth)

Keep a bottle of water with you during the day

- Or sports drink and refill as you go

Put fruit in your water if you don't like plain water

Drink before, during and after a workout

If you are hungry, drink water

Drink a glass before each meal

\*\*\* Hydration is THREE days in the making! PREP!\*\*\*

## How much do you drink after a workout?

- **16-20 ounces for every pound lost**



**KEEP  
CALM  
AND  
STAY  
HYDRATED**

# What about supplements and protein powders?

## Performance enhancers

- Often not regulated by the FDA
- Unsure of what you are actually getting

Warning - “Not intended for individuals under the age of 18”

- No studies on this age group

Many are banned by NCAA and pro sports (contain items)

Anabolic steroids - Absolute no at any stage

## Protein powders

- Some are regulated and approved

CHECK YOUR LABEL



**It takes as much energy to wish yourself fit and ready to work as it does to plan time to train and condition yourself**



Human Performance Model - Influencers of wins and losses

# Conditioning and Training Tips

## Warm Up and Cool Down

- Warm up your body (bike, elliptical, jog) prior to stretching or working out
- Cool down the same way then stretch. Don't just finish and leave. You are MOST flexible at the END of practice

## Roll Out

- Myofascial release
- Increase flexibility

## Not always about the weights

- Bands work muscles in both directions

## SLOW DOWN

- It's not about speed, but about slow, controlled movement
- Lower weight can yield better results, less injury

## Compound movements are best

- Use the whole body



# Conditioning and Training Tips

## Proper Form

- Decrease injury and allows for better control
- If you don't know, ask!
- If it doesn't feel right, ask!

## Good Base

- Starts from the shoes up!
- Can you fold it in half?

## Flexibility is critical

- Allows for better movement
- Decrease injury potential
- Yoga ;) Yes, yoga

## Posture!

- Sit up
- Helps breathing and musculature



# Conditioning and Training Tips

## Buddy Up

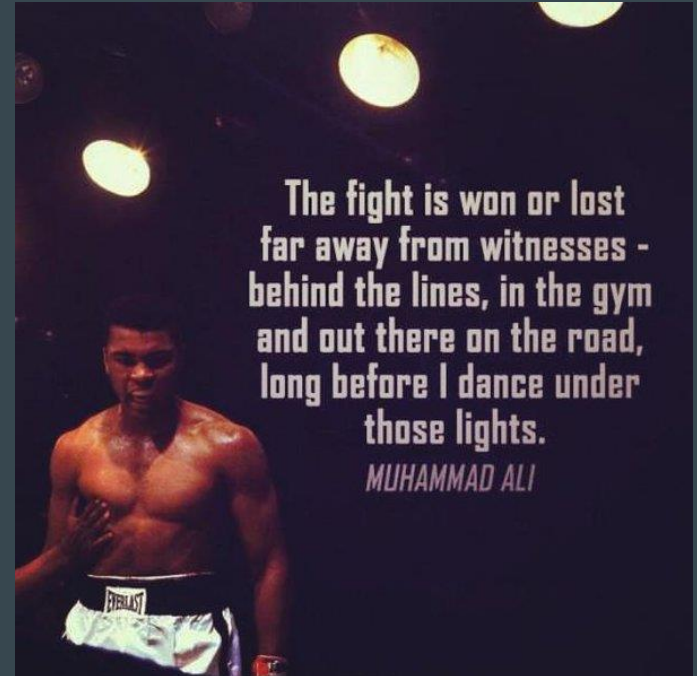
- Allows for breaks
- Helps motivation
- Accountability

## Active Recovery is KEY!

- Increase flexibility
- Slow heart rate down
- Decreases soreness
- Increases blood flow

## Sore vs. Hurt vs. Injured

- Take care of soreness
- Hurt will heal
- TALK TO ME IF YOU ARE INJURED





**“To be successful you need to face your hardest  
opponent...  
Yourself.”**



Human Performance Model - Influencers of wins and losses

# Drugs, Alcohol, Smoking and Vaping

**Do any of these make you a better athlete? A better person?**

Illegal for your age group

Hold consequences on and off the field

- Detention, suspension, fine, jail time, and affect performance

Increase bleeding and swelling - longer healing process

Slower reaction times

Reduce endurance

Increase levels of dehydration

Decrease energy levels

Increase blood pressure

Increase airway resistance



# Drugs, Alcohol, Smoking and Vaping

## Prescription Drugs

- Not yours, don't take it
- Only per instructions

## Over the counter drugs

- Painkillers
  - Rip your stomach lining, decrease bone density with extended use
  - Wears off over time, body immune
- Diuretics
  - Unsafe, unhealthy
  - Causes dehydration

## Inhalers

- Serve a purpose for a specific person
- 2 doses MAX



# Mental Preparation

You are a student-athlete, not an athletic student  
Come to class/practice ready learn and get better

- If you are injured, you can still do something
  - Not sure what, ask!

Train your mind and your body

- Consistency is key
- Muscle memory will take over

Do your homework in a timely manner

- Less stress; Ability to focus
- Can go home after a game/practice to refuel and re energize

Be a leader

- Your teammates and fans are watching
  - Think like a leader, speak like a leader, act like a leader

START NOW. Don't wait till August!



**TRAIN LIKE AN ATHLETE,  
EAT LIKE A NUTRITIONIST,  
SLEEP LIKE A BABY,  
WIN LIKE A CHAMPION.**

#NU74 #AM16 #DB34

# Questions?

