

TOP FORM, INC.



PRESENTS:
NYS COACHES
FIRST-AID

TOP FORM, INC.



Delmar Training Center

333 Delaware Ave

Delmar, NY 12054

www.topform.us

Top Form, Inc.'s new Corporate Headquarters is home to Sports Performance Training, Personal Training, Athletic Training, and is our **NEW Education Center!!!**

DAY 1

Prevention

THE 7 P'S

- Prior
- Proper
- Preventative
- Prioritization
- Planning
- Promotes
- Paradigms
- Prior
- Proper
- Planning
- Prevents
- Potential
- Profound
- Problems
- Prior
- Proper
- Planning
- Possibly
- Prevents
- Profound
- Puck-Ups

The List

- You need a list of your team that includes Health History
 - From Nurse?
 - From online like: Family ID/etc
- What Conditions Make the List:
 - Sports Physical
 - Allergies
 - Asthma
 - Diabetes
 - Concussions
 - Seizures
 - Other medical Conditions

Prevention

*As coaches this will require your greatest organizational skills!!!

■ Ensure Appropriate Training & Conditioning

■ Warm-Up

- increases muscle temp
- brings oxygen to muscles
- jump starts nervous system
- increases synovial fluid in joints
- increases metabolism
- mobilizes ATP (energy)
- mobilizes waste system
- increases muscle spindle activity



Prevention Cont.

■ Stretching (10-15 Min)

- Dynamic Stretching (10-15 Min)
 - lengthens muscles
 - loosens ligaments & tendons
 - lifetime benefit

■ Exercise / Conditioning

- proper drills
- developmental progression
 - Types: off-season, pre-season, in-season, post-season

■ Cool-Down (5Min)

- decreases heart rate
- decreases blood lactic acid
- decreases blood carbon dioxide
- balances pH of blood
- takes away waste products

■ STRETCH!!! (10 Min)

- Static Stretching!!! (10 Min)
- Increases muscle length
- Increases ROM
- Realigns damaged muscle tissue fibers
- Each stretch must be held for 20-30 secs

Prevention Cont.

■ Proper Protective Equipment

- fitting properly
- shoes / helmets / pads / etc.

■ Playing Surface

- indoor / outdoor
- coaches responsibility

■ Medical Kits

- properly equipped
- must be taken care of
- no medications
- emergency numbers & cards
- at every practice / game

Prevention Cont.

■ Blood Plan

- how / where to dispose

■ Emergency Plan

- should have for both home & away
- Phone? AED?

■ Team Meeting

- with both parents & athletes
- prior to season
- agenda:
 - emergency procedures
 - drug / alcohol rules
 - general practice rules & conduct
 - emergency cards completed

Prevention Cont.

■ Coaches Preparation

- CPR / AED (1yr.)
- First-Aid (3yrs.)
- seminars / camps
- JUNE CLASS!!!

■ Finger Printing

■ DASA (Bullying)

■ Child Abuse

■ School Violence

■ Phase 1

■ Phase 2

■ Phase 3

■ Blood Borne Pathogens

■ Concussion Management

Acute Soft Tissue Injury

- MOI (Mechanism of Injury)
 - Direct - contusion
 - Indirect - strain or sprain
 - Strain - muscle / tendon injuries
 - Sprain - ligament injuries
- Primary Injury
 - tissue destruction directly related to the injury causing force
 - damage irreversible
- Secondary Injury
 - damage from cell death due to blockage of oxygen to injured area
 - damage limited if treated properly - **main goal

Acute Soft Tissue Injury Cont.

■ Pain / Spasm Cycle

- Pain cause Spasms, Spasms cause Pain: Medical Catch 22, We need to break the cycle
- Injury causes build-up of fluids
 - compresses nerves
 - causes pain
 - lack of oxygen
- Muscle cells begin to die
- Cycle must be broken before healing can occur



Acute Soft Tissue Injury Maintenance

■ R.I.C.E. or PRICE (protection)

- Rest

- Ice

- Compression

- Elevation

Rest

How

- Stay off injured body part
 - crutches
 - slings
 - etc.

Why

- Prevent further injury
- Prevent new injury

Ice

How

- Apply for 15-20 mins.
- 20 Min On / 20 Off
- 2-3 days

Why

- Decrease tissue temp
- Decrease metabolism
- Decrease pain
- Decrease spasm
- Decrease chance of cell death

Compression

How

- Apply elastic bandage

Why

- Increase lymphatic drainage
- Prevents more swelling
- Gives feeling of security

Elevation

How

- Elevate body part above the heart
- Most valuable, but least used

Why

- Increase lymphatic drainage
- Prevents more swelling
- Resting

Heat

How

- Moist Heat Packs / Heating Pads / Warm Wet Towels
- No Visible Swelling
- Usually after 72 hours

Why

- Increase tissue temp
- Increase metabolism
- Increase Tissue Elasticity
- Increase Blood Flow
- Increase Flexibility

Inflammation

- Defense mechanism that occurs to protect & heal injured area
- Signs & Symptoms
 - redness
 - swelling
 - heat
 - pain
 - loss of function
- Primary Function
 - rid the area of waste products to prepare for healing

Chronic Injuries

■ MOI

- repetitive trauma
- Sorry but probably your fault...overtraining?

■ Signs & Symptoms

- pain on movement
- loss of ROM
- swelling / inflammation
- known training change

■ Treatment

- removal of repetitive trauma
- REST, REST, REST
- flexibility and then strengthening exercises
- ice before and after exercise
- Treatment
- Evaluation of footwear
- Gait analysis

Chronic Injuries Cont.

■ Types

- Epicondylitis (Tennis, Golfers: Medial, Lateral or Pitchers\ Little League)
 - Patellar Tendinitis (Jumpers Knee)
 - Bursitis (Common Hip, Shoulder, Ankle)
 - Shin Splints ? Compartment Syndrome, Tibialis tendonitis, Weak arches, interosseus membrane)
 - Plantar Fasciitis
 - Achilles Tendinitis
 - Severs
 - Osgood Schlatters
- ****These are all PREVENTABLE!!****

inferior patella

TENDINITIS

OSGOOD-SCHLATTER DISEASE



ICE



TENDER LUMP

NSAIDS

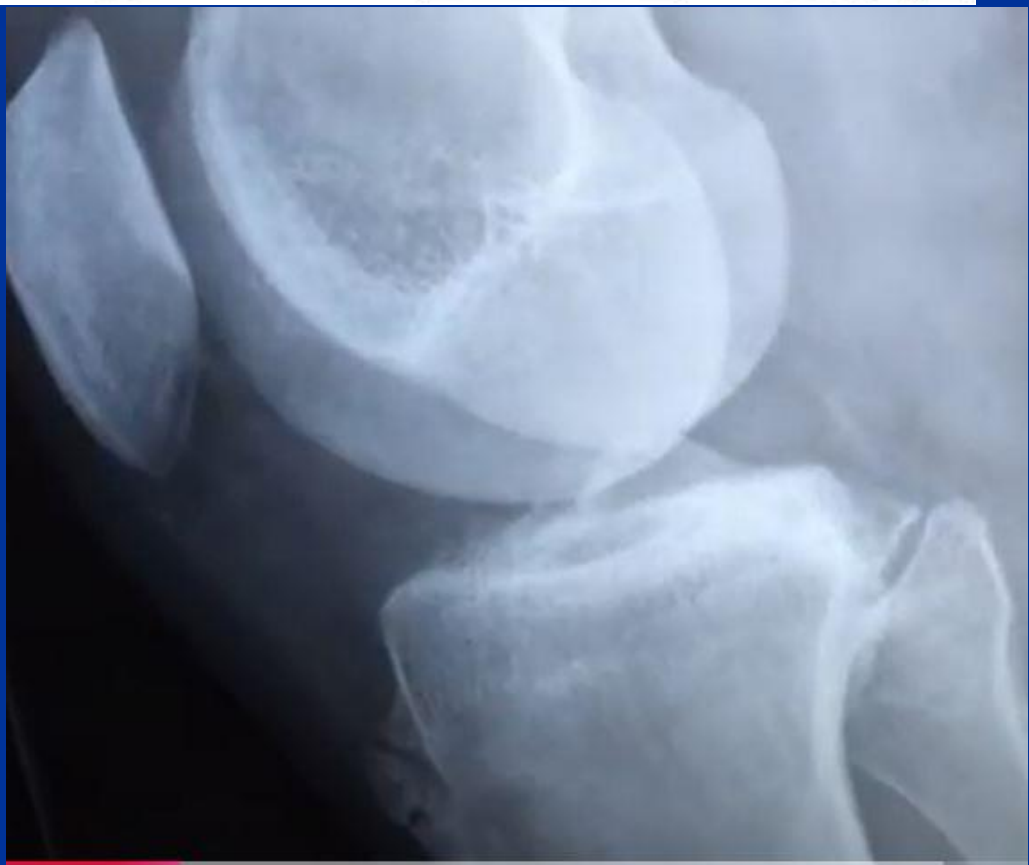


AVULSION FRACTURE



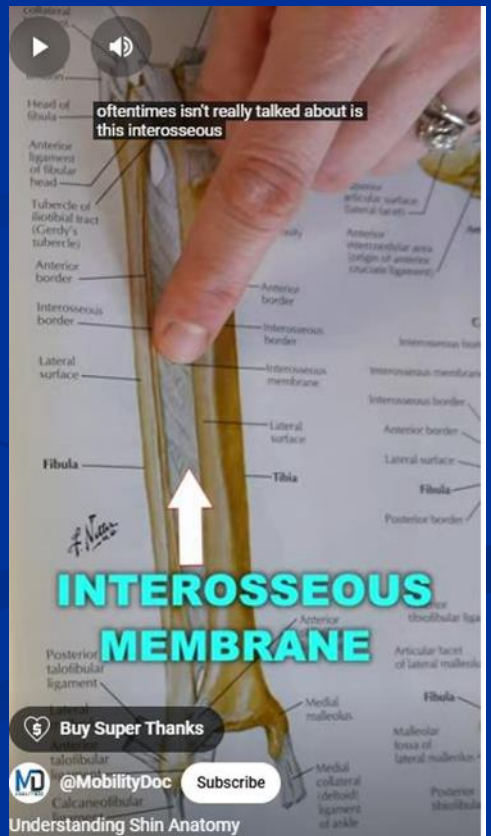
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?



@nabilebraheim

Subscribe





Other Stuff!

knee clicking and locking in the knee
and

AND EVEN

less common 5% at best who classically
gets it the stories say that



Elbow Dislocation in Adults



Taping and Wrapping Lab

- Ankle Tape
 - Anchors
 - Stirrups
 - Horseshoes
 - Heel Locks
 - Figure 8
- Ankle Wrap
- Wrist

Environmental Concerns

- Heat Injuries (Play DVD)
 - Heat cramps
 - Heat exhaustion
 - Heat stroke
- Cold Injuries
 - Frost nip
 - Frost bite
- Very rare in high school athletics & usually result of **NEGLIGENCE!!!**

Heat Cramps

■ Cause

- fluid imbalance
- too much exercise too soon
- electrolyte imbalance

■ Signs & Symptoms

- muscle spasms, twitching
- pain

■ Treatment

- drink water
- stretch
- ice massage

Heat Exhaustion

■ Cause

- fatigue / weakness, sweating
- partial failure of thermoregulatory system

■ Signs & Symptoms

- weak / rapid pulse
- moist skin
- profuse sweating
- headache
- weak / dizzy

■ Treatment

- stop activity
- rest in shade
- drink fluids
- can be emergency

Heat Stroke

■ Cause

- complete failure of thermoregulatory system
- untreated heat exhaustion

■ Signs & Symptoms

- strong / rapid pulse
- hot & dry skin
- mental confusion
- increased body temp
- may be unconscious

■ Treatment

- EMERGENCY!!
- Cool ASAP
- get to hospital



Frost Nip

■ Cause

- damp freezing environment
- involves ears, nose, cheeks, fingers & toes
- increases wind & severe cold

■ Signs & Symptoms

- firm skin with cold, painless areas

■ Treatment

- DON'T RUB
- blow hot air on affected area

Frost Bite

■ Cause

- exposure to dry temps well below freezing

■ Signs & Symptoms

- red, waxy

skin <http://www.nytimes.com/2004/04/14/sports/olympics-unprepared-for-fame-yet-unable-to-resist-it.html>

- tingling and pain

■ Treatment

- DON'T RUB
- try to re-warm with blankets, etc.
- get to hospital ASAP

QUESTIONS?????

- Tomorrow 9-12-?

DAY 2

When an Athlete get Injured

There are a Million Questions/Scenarios

- Is it Serious
- Do I need an Ambulance
- Can they get up
- Can they walk
- Do they need to be carried off
- Do I tape
- Do I treat
- Do I involve/call parents
- Will they play (99.9% YES)
- The following is an exam for the 99.5%

5 Step General Injury Evaluation

■ History

- key to understanding injury is MOI(show MOIs)
- ask athlete what happened to find out MOI
- ask if it is a new or old injury
- ask if athlete heard anything (snap, pop, etc.)
- Questions like: what type of pain (burning, sharp, dull), How much pain, Scale 1-10 NOT useful?
- ****Important to be calm & reassuring!!!****

5 Step General Injury Evaluation Cont.

■ Observation

■ Look For:

- swelling
- deformity
- discoloration

■ Watch For:

- how athlete moves

■ Palpation

■ Feel For:

- **PAIN
- swelling
- deformity
- warmth



5 Step General Injury Evaluation Cont.

■ Movement

- look for normal ROM
- important to have athlete move uninjured side first
- sport specific testing
- be careful moving an athlete if involves head, neck or dislocation

■ Parental & Medical Follow-Up

- if athlete seeks any medical attention you should call parents
- important to have good communication

Common Injuries and Treatment

- Fracture
- Bleeding
 - Direct Pressure
- Nose Bleeds
 - Pinch Nose just Below Bone
 - Lean Head FORWARD!!!
- Jammed Finger
 - Ice Bath
 - Buddy Tape
 - MD? For Fracture

Common Injuries and Treatment

- Diabetes
 - Type I – Insulin Dependent
 - Individuals under the age of 35
 - Most of the time they need glucose (i.e.. Sugar, juice, soda, frosting, ETC)
 - Over production of insulin – Does NOT Need
 - Type II – Non-Insulin Dependent
 - Individuals over the age of 35
 - Do not produce enough insulin or resists the insulin produced
 - Insulin Shock
 - Glucagon Training
 - 911
 - Diabetic Coma
 - Not enough Insulin
 - 911
- Anaphylactic Shock (Stings, Bites, Food, Etc.)
 - Epi Pen
 - 911
- Asthma
 - <http://www.winningwithasthma.org/>
 - Inhaler
- Shock
- Seizures (Epilepsy)

Common Injuries and Treatment

- Teeth
- For Female Sport Coaches
 - Amenorrhea
 - Primary
 - Secondary
 - Dysmenorrhea
- Female Athlete Triad
 - Disordered Eating
 - Amenorrhea
 - Osteoporosis

Common Injuries and Treatment

- The ACL (About Ligaments)
- <https://www.youtube.com/watch?v=1JQKko6C42s>
- https://www.youtube.com/watch?v=DAzUp_YLVIM
- http://sports.yahoo.com/nba/blog/ball_dont_lie/post/Video-Bucks-mascot-tears-ACL-in-knee-from-groin?urn=nba,142557
 - Epidemic?
 - Male vs Female
 - Turf vs Grass

ACL

■ Female

- Q-Angle
- Notch
- Menstruation-Estrogen
- The Core
- Training
- NEW...Food Sources

The Knee

- <http://www.mayoclinic.com/health/arthroscopic-knee-surgery/mm00006>
- Prevention?
 - The Core



The Head & Neck



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The Head & Neck

- True fractures...thankfully rare!

<http://www.nfl.com/videos/green-bay-packers/09000d5d82257183/Collins-suffers-neck-injury>



Heads up video.wmv

Neck Prevention

- <http://www.youtube.com/watch?v=NuUM70kmUSg&feature=related>

Head Prevention

- Proper Equipment
- Proper Technique
- Rules of Play

Head Injury Evaluation

■ Secondary Survey

■ Primary Survey

- Check for responsiveness
- Airway
- Breathing
- Circulation

■ History

- ask for MOI
- level of consciousness
 - Where are you?
 - Who are you playing?
 - What's the score?
 - What's your phone #?
- What have you eaten today?
- headache
- double vision, nausea, ringing in ears
- pain

Head Injury Evaluation Cont.

■ Observation

- deformities
- pupils (size & reaction)
- respiration (rate, pattern, quality)
- signs of trauma

■ Palpation

- heart (rate, pattern, quality)
- head / neck / muscles

■ Movement

- active movement in extremities
- coordination
- sport specific skills

Head Injury Follow-Up

- Signs do not always appear directly after trauma
- May take a few hours
- Signs & Symptoms:
 - severe headache (specific location)
 - mental confusion
 - nausea or vomiting
 - poor balance
 - dizziness
 - loss of appetite
 - ringing in ears
 - slurring of speech
 - non-responsive pupils
 - sensitivity to light
- Appearance of any of the above S & S requires **MEDICAL ATTENTION**

HEAD INJURY FOLLOW-UP

This is a medical follow-up sheet for your health and safety. Quite often signs of a head injury do not appear directly after trauma, but may appear hours after the injury itself. The purpose of this fact sheet is to alert you to the symptoms of significant head injuries, symptoms that may occur several hours after you leave the care of the athletic trainer.

If you experience one or more of the following symptoms after sustaining a head injury, medical help should be sought:

- Difficulty remembering recent events or meaningful facts
- Severe headache, particularly at a specific location
- Mental confusion or strangeness
- Nausea or vomiting
- Poor balance or unsteadiness
- Severe Dizziness
- Abnormal drowsiness or sleepiness
- Loss of appetite
- Persistent ringing in ears
- Slurring of speech
- Severe sensitivity to light
- Non-responsive pupils

****The appearance of any of the above symptoms tells you that you have had a significant head injury that **requires medical attention!!****

The Head

- <http://abcnews.go.com/Video/playerIndex?id=7187431>
- <http://abcnews.go.com/Video/playerIndex?id=7187090>
- [CTE](#)



The Head

- CTE



The Head

- TBI

- Sub-Dural Hematoma



Nutrition

■ Weight Control

- $\text{Cal (in)} = \text{Cal (out)} \Rightarrow$ weight control
- $\text{Cal (in)} < \text{Cal (out)} \Rightarrow$ weight loss
 - don't restrict Cal / increase activity
- $\text{Cal (in)} > \text{Cal (out)} \Rightarrow$ weight gain
 - increase Cal / decrease activity

■ Basal Metabolic Rate (BMR)

- Calories needed for sustaining life (metabolism)
- BMR will change if you change / manipulate calories too much

Nutrition Cont.

- Ideal Balance:
 - 65% carbohydrates
 - 15% protein
 - 20% fats
 - Difficult & usually not probable with teens
- Keep the big picture in mind => healthy foods for life / get rid of junk food

Nutrition Cont.

- WATER is most important nutrient!!
- Very important to get some form of carbs in body 20 mins. prior to competition
 - replenishes glycogen (especially if multi contest / tourneys)
- Supplements - JUST SAY NO!!!!

Steroids

- Top Form PP

Supplements

- Top Form PP

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LIVE IT!

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Health Thoughts

Rule #1

Dieting



Power of the Pyramid!

■ Rule #2



Less stored calories

NO..eating after 9,8...7pm!!!!

Power of the Pyramid!

■ Rule #3

- Eat Breakfast!!!

Use The Calories for Brain
Power (Glucose)!!



Wake Up Hungry! And go
downhill from there!



Nutrition ie: Steroids/Supplements/Diet

Starvation/Low Cal

Cardio, cardio, cardio

Work, work, work

Eat Well!

FUN!

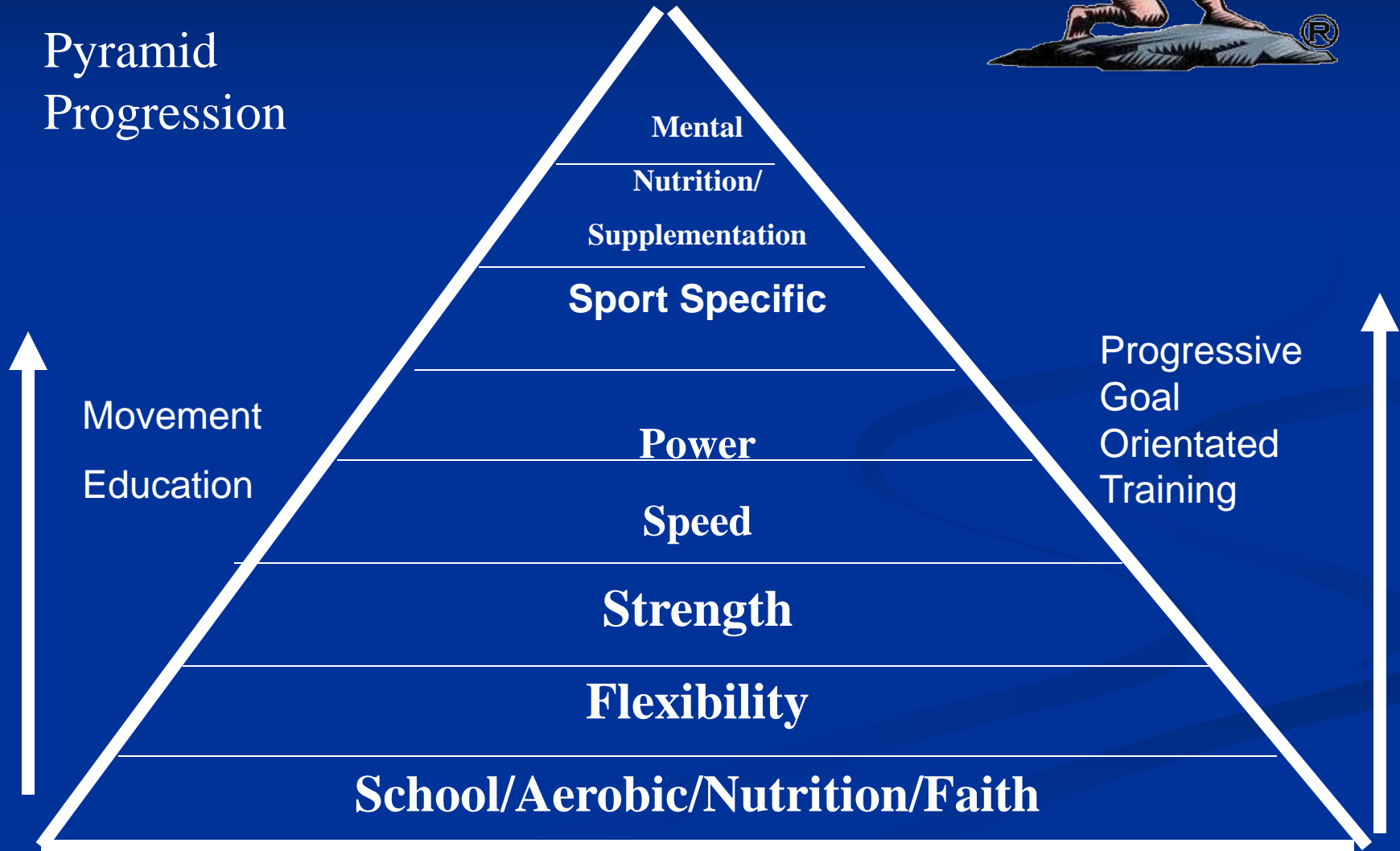
WRONG!!!

Sports/Life Performance



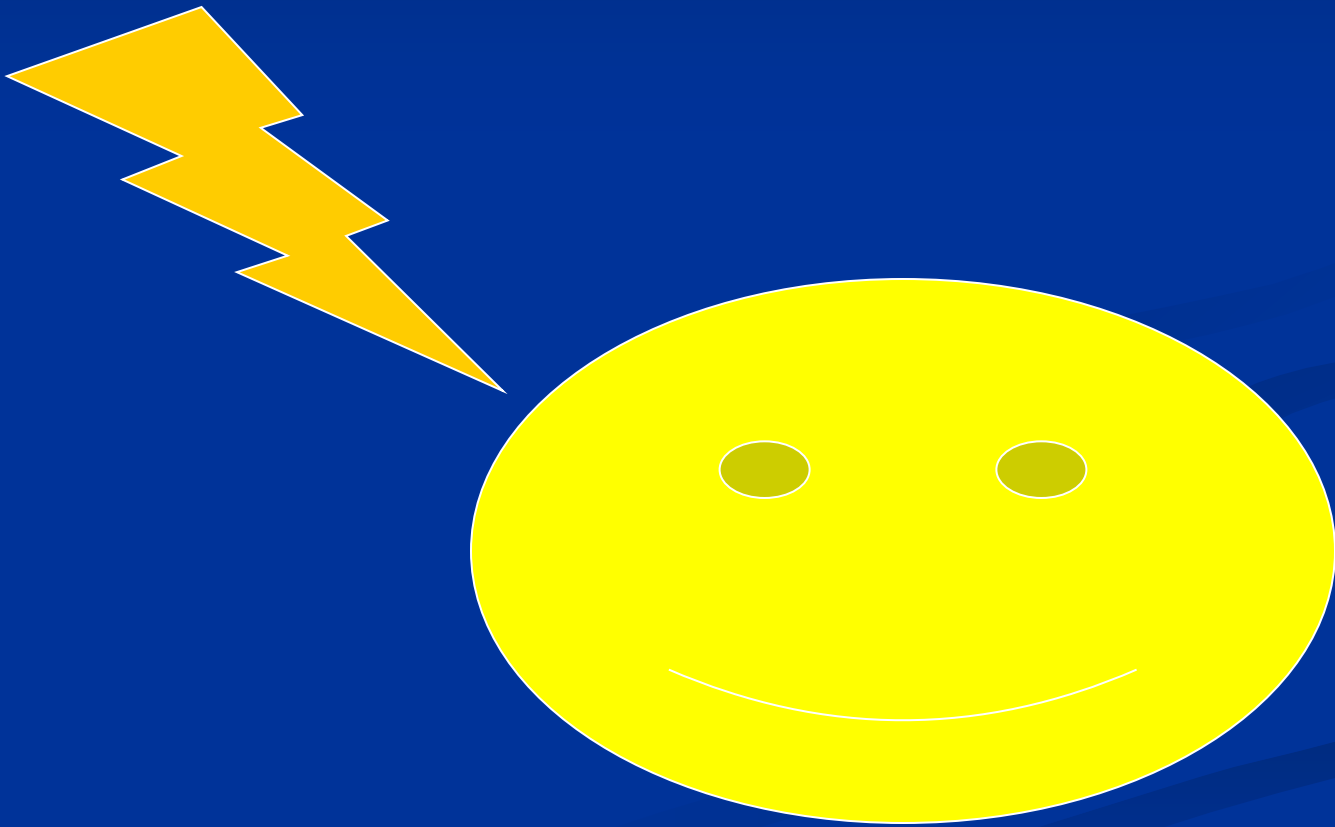
LIVE IT!

Pyramid
Progression



Magic Bullet?

- If it were only so easy!



Optimum Performance

- Eat Breakfast!
- Lower Calorie Intake at Night
- Calorie In = Calorie Out (Exercise) = Weight Control
- Rule #4 Fiber!
- No White Bread...Whole Grain Products
- Rule #5 Cut Out Junk!
- Power Snackin



#4 Lets Talk About, “Junk”

- Soda
- Chips
- Fried Food
- Sugar
- Fake Sugar
- More?

#5 Exercise

- Why Aerobic
- How Aerobic
- Details:
 - 5x/week
 - 30min
 - Intensity?

#6 Strength

- Why?
- How?
- Details
 - 2-3x/week
 - 30-40min
 - Multiple Sets
 - Intensity
 - Machine vs Free
 - Core

7 SLEEP!

- Restoration
- Resent
- Heal: mental and physical
- 8hrs
- Physical activity

#8 OK Supplements

- Omega 3
- Gucosomine
- Gucogennen
- Creatine
- Others?
- Stimulants?? (See Supplements PP)