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Spring 2014
Independent Study 495G
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Strength and Conditioning and Their Philosophies

Strength and Conditioning Philosophies

- **Not all strength philosophies are the same**
 - Divided into 3 parts
 - Physical, Psychological, and Social
- **Some may focus on**
 - Strength
 - Injury prevention
 - Explosiveness
 - Improve all around athleticism

Objectives

- To develop a philosophy
- To learn how to develop a strength program
- How to modify a program depending on experience and sport
- Understand the major differences between HIT and Olympic lifting
- Understand how to range your programs from beginners to athletes

What is Your Philosophy?

- **Create your own philosophy as if you were a head strength and conditioning coach:**
 1. Philosophy toward Strength & Conditioning
 2. Addressing Developmental areas (3)
 3. Addressing your Definition of Success
 4. Addressing Safety

Who is Coach Spayd



- He is in his first season as the head strength and conditioning coach for the Penn State men's
- Has been with the program for 4 years
- Graduated from Juniata College
- Received masters from California University of Pennsylvania
- Certified as a U.S. Weightlifting Level I Sports Performance Coach and a NASM Performance Enhancement Specialist

Who is Coach Mike



- Was added to the Strength and Conditioning crew in 2013.
- His sports responsibilities are women's ice hockey, men's volleyball and track and field.
- Previous to PSU he served at the Southeastern University as the Head Strength and Conditioning Coach for men's basketball.
- He began his professional career at Southern University where he was an Intern and Assistant Strength and Conditioning Coach for basketball, football and track.
- Chatman graduated from Southeastern Louisiana University in 2011.

Coach Spayd Vs. Coach Mike

Q1 = What is your coaching philosophy with development areas (physical, psychological, social) and your definition of Success?

SPAYD

■ Physical

- Takes some what of a hybrid approach, doesn't necessarily believe in any one type of training philosophy
- Likes to mesh and mold different philosophies and make them specific to each sport
- Big believer in ground based exercises, most sports are played with the contact of our feet on the ground

■ Psychological

- helping to transform athletes to have a mindset with mental toughness

MIKE

■ Physical

- Make sure they are strong as possible, healthy, mobile, explosive, using compound movements. use what works.
- Don't try to re-invent the wheel.

■ Psychological

- Build mental toughness, accountability.
- Teach them philosophies that they can use throughout life.
- Try to make sure they are accountable, trustworthy, pretty much high character people.

Coach Spayd Vs. Coach Mike

Q1 = Continued

SPAYD

- **Social**
 - Wants athletes to know they can have a well rounded relationship
 - Strength coach doesn't have to be a drill sergeant, tries to be more understanding with strains and stresses from other factors like school
 - Wants to see leadership take place, freshman to step and become sophomores before they are even sophomores, Seniors to be seniors through the whole season.
- **Success**
 - Not just wins and losses
 - Helping the athlete to grow as a person and become a man or a woman is more of a success to him than wins and losses

MIKE

- **Social**
 - To develop a family type environment.
 - Teams that win are families.
 - You don't want a group of kids talking bad about each other, you want them to get after it.
- **Success**
 - Helping the athlete grow
 - Getting results

Coach Spayd Vs. Coach Mike

Q2= Why did you decide to get into strength & conditioning?

SPAYD

- Very passionate about the weight room
- As a collegiate athlete played football always took to the weight room (his nitch)
- Likes being the behind the scene guy getting things done working hard watching guys grow and develop
- Doug smith, his mentor helped him realize this is a profession where you have to grind and work.
- Got an internship at Penn State so drove back and forth every single day, then everything fell into place

MIKE

- Better strength coach than I am a player.
- Strength and conditioning found me I didn't find it
- Love sports, loves winning, very competitive. Coaches have them 5-6 months out of the year he has them for about 12.
- No glory but huge part of program.
- Intern before psu, Woman he interned for called up Fitz, 6 months later he brought Mike in.

Coach Spayd Vs. Coach Mike

Q3 = What do you believe are the building blocks / foundation of developing a quality strength and conditioning program?

SPAYD

- Work ethic and the intensity with what you do are very important
- Cares more about how things are done
- Get team to believe in what they are doing
- Very comprehensive, balanced, and systematic physical development program laid out

MIKE

- Assessing first
 - See what you have to work with
- Assessing what kind of players you have

Coach Spayd Vs. Coach Mike

Q4= What do you feel every program needs to develop these building blocks / foundation?

SPAYD

- Organization, need to record results, without it how will you track progress
- If you aren't confident, can credibility as a coach

MIKE

- Goals, and a plan. He knows where he wants them to be physically and mentally.
- Progression
- Patience

Coach Spayd Vs. Coach Mike

Q5= What would your highest priorities or role be with your team?

SPAYD

- To get results
- Body comps changing
- Strength gains
- Quickness
- Explosiveness

MIKE

- Mental toughness
- Motivational aspect of strength and conditioning

Coach Spayd Vs. Coach Mike

Q6= How do you build mental toughness in athletes (while providing a healthy, positive attitude and lifting environment)?

SPAYD

- Keep adding competition to challenge athlete and build mental toughness
- Wants to see who is going to grind, who will push themselves and other
- He has to teach and coach, not just a drill sergeant, has to teach technique and keep a positive attitude, so the athlete stays positive.

MIKE

- Not a screamer, showing that you care.
- Really wants to know about them. They give back what you give them
- Philosophy – to simply give my athletes everything I have.

Coach Spayd Vs. Coach Mike

Q7= What's your philosophy on nutrition counseling (supplements, parents, what-why)?

SPAYD

- Supplements are ran through Kris Clark and Erin Columbia, they know what the athlete should take
- We just teach them good habits

MIKE

- Personally eat food that are whole and natural.
- Supplements I think are amazing, they are a huge part of recovery unfortunately we cant use them here.
- Supplements can help out

Coach Spayd Vs. Coach Mike

Q8= How do you motivate the athletes (rewards, incentives, recognition-participation)?

SPAYD

- Positive reinforcement
- some times you have to be negative
- Get gear for participating in Iron Lion

MIKE

- Iron Lion Award
- Bragging Rights

Coach Spayd Vs. Coach Mike

Q9= What do you feel makes a strength and conditioning coaching staff most successful?

SPAYD

- Needs to be a type of bond
- Have meetings
- Leadership
- Pick each other brains

MIKE

- Throw ideas out at each other
- Pick each others brain.
- Learn from different philosophies.

Coach Spayd Vs. Coach Mike

Q10= How would you handle and injured athlete (program modification and structure)?

SPAYD

- Work hand in hand with athletic training staff to see where athlete is on getting back to a full recovery
- Either work around injury or attack it
- May work athlete out separately

MIKE

- Alternatives for everything.
- Never injured enough to where you don't do anything

Coach Spayd Vs. Coach Mike

Q11= What are your biggest strengths and weaknesses as a coach?

SPAYD

- **Strength:** Provide a positive infectious attitude
- **Weakness:** Can continue to learn and grow, Innability to trust either an assistant or intern

MIKE

- **Strength:** Know how to talk to people
- **Weakness:** But not confident and loud, don't do well in big crowds

Coach Spayd Vs. Coach Mike

Q12= How important do you feel Olympic lifts are when training athletes?

SPAYD

- Firm believer in Olympic lifts only when they are done right.

MIKE

- Important, but it won't make or break the program

Coach Spayd Vs. Coach Mike

Q13= What do you feel is more beneficial - HIT or Olympic lifts and why?

SPAYD

- Uses both training philosophies, hybrid approach
- Likes to intermix to make a more rounded athlete

MIKE

- Olympic lifting
 - At what point in a sport are you just on a machine or keep going to failure.
 - The body isn't made to stay in a constraint position.

Developing a Novice Program

- **Define key words**

- **Hypertrophy** – Increase size of the skeletal muscle
- **Strength** - the ability of a muscle or muscle group to exert force to overcome the most resistance in one effort.
- **Power** - the amount of work performed per unit of time.
- **Max Strength** - maximum amount of weight one can lift in a single repetition for a given exercise.

Understanding the key words

- **Hypertrophy:**

- 10-15 reps per set 50-75% 1RM
- 1 min rest between sets

- **Strength/Power**

- 6-10 reps per set 60-85% 1 RM
- 2 min rest between sets

- **Max Strength:**

- 4-8 reps per set 80-95% 1 RM
- 3-5 min rest between set

Novice Strength Program

Day 1	Movement	Machine	Bodypart	Day 2	Movement	Machine	Bodypart	Day 3	Movement	Machine	Bodypart
	Chest Press	Cybex/ Eagle	Chest/Tri		Leg Press	Cybex/ Eagle	Legs		Lat Pull- Down	Cybex/ Eagle	Back
	Flys	Cybex	Chest/Tri		Bdy. Wt./DB Lunge	In place/ Dumbbells	Legs		Seated Row	Cybex	Back
	Incline Press	Cybex	Chest/Tri		Bdy. Wt/ Dumbbells Squat	In place	Legs		Upright Row	Free Wt.	Back
	Shoulder Press	Cybex	Shldr/Tri		Leg ext.	Cybex/ Eagle	Thigh		Bent Over Row	Free Wt. Dumbbells	Back
	Shoulder Shrugs	Free wt./ Dumbbells	Shoulder		Leg curl	Eagle	Hamstrings		Bicep Curl	Eagle	Biceps
	Tricep Press	Cybex	Triceps		Calf raise	Cybex/ Standing or Seated	Calves		Bicep Curl	Dumbbells/ Straight Bar	Biceps
	Tricep Ext.	Eagle	Triceps		Abdominals	Eagle/ Nautilus	Abs				
	Push-up	Bdy. Weight	Chest/Tri								
	Abdominals	Eagle/ Nautilus	Abs								

Advanced Strength Program

Name: _____	Date: ____/____/____						Weight: _____ lbs./kg																	
	WEEK 1						WEEK 2			WEEK 3						WEEK 4			WEEK 5					
	Workout #1			Workout #3			Workout #5			Workout #7			Workout #9			Workout #11			ACTIVE REST					
	Date: _____			Date: _____			Date: _____			Date: _____			Date: _____			Date: _____			Date: _____					
Exercise	sets	reps	wt x rep	sets	reps	wt x rep	sets	reps	wt x rep	sets	reps	wt x rep	sets	reps	wt x rep	sets	reps	wt x rep						
Body weight/assisted lat pull-ups	set #1	12		set #1	12		set #1	12		set #1	12		set #1	12		set #1	12							
	set #2	12		set #2	12		set #2	12		set #2	12		set #2	12		set #2	12							
	set #3	12		set #3	12		set #3	12		set #3	12		set #3	12		set #3	12							
							set #4	12																
*Dumbbell standing deltoid lateral raises	set #1	12		set #1	12		set #1	12		set #1	12		set #1	12		set #1	12							
	set #2	12		set #2	12		set #2	12		set #2	12		set #2	12		set #2	12							
	set #3	12		set #3	12		set #3	12		set #3	12		set #3	12		set #3	12							
*Dumbbell bent-over deltoid lateral raises	set #1	12		set #1	12		set #1	12		set #1	12		set #1	12		set #1	12							
	set #2	12		set #2	12		set #2	12		set #2	12		set #2	12		set #2	12							
	set #3	12		set #3	12		set #3	12		set #3	12		set #3	12		set #3	12							
*Dumbbell standing deltoid front raises	set #1	12		set #1	12		set #1	12		set #1	12		set #1	12		set #1	12							
	set #2	12		set #2	12		set #2	12		set #2	12		set #2	12		set #2	12							
	set #3	12		set #3	12		set #3	12		set #3	12		set #3	12		set #3	12							
Dumbbell kneeling single-arm lat row	set #1	12		set #1	12		set #1	12		set #1	12		set #1	12		set #1	12							
	set #2	12		set #2	12		set #2	12		set #2	12		set #2	12		set #2	12							
	set #3	12		set #3	12		set #3	12		set #3	12		set #3	12		set #3	12							
							set #4	12																
**Stability ball kneeling triceps extensions	set #1	12		set #1	12		set #1	12		set #1	12		set #1	12		set #1	12							
	set #2	12		set #2	12		set #2	12		set #2	12		set #2	12		set #2	12							
	set #3	12		set #3	12		set #3	12		set #3	12		set #3	12		set #3	12							
							set #4	12																
**Dumbbell standing biceps curls	set #1	12		set #1	12		set #1	12		set #1	12		set #1	12		set #1	12							
	set #2	12		set #2	12		set #2	12		set #2	12		set #2	12		set #2	12							
	set #3	12		set #3	12		set #3	12		set #3	12		set #3	12		set #3	12							
							set #4	12																
Body weight single-leg calf flexions	set #1	24		set #1	24		set #1	24		set #1	24		set #1	24		set #1	24							
	set #2	24		set #2	24		set #2	24		set #2	24		set #2	24		set #2	24							
Dumbbell standing biceps hammer curls	set #1	12		set #1	12		set #1	12		set #1	12		set #1	12		set #1	12							
	set #2	12		set #2	12		set #2	12		set #2	12		set #2	12		set #2	12							
	set #3	12		set #3	12		set #3	12		set #3	12		set #3	12		set #3	12							
Stability ball torso curls	set #1	25		set #1	25		set #1	35		set #1	35		set #1	35		set #1	35							
	set #2	25		set #2	25		set #2	35		set #2	35		set #2	35		set #2	35							

Modifying a Program

■ Novice

- Keep it simple
- Stick to the basics
 - Do not include compound movements
- Don't use confusing words, and if so define them
- Teach them variations of different exercises (Flys can be performed on an angle)

■ Advance

- Include Super Sets
- Include Compound movements
- Include variation

■ Injured

- Most likely never too injured to work out
- Helps recover faster
- Keeps the athlete in shape
 - Ex: Ankle sprain
 - Bike Fan
 - (one legged)
 - Hamstring strain
 - Seated Exercises

Two Main Training Methods

■ HIT or HIIT

- High Intensity Training or High Intensity Interval Training
- is a form of strength training popularized in the 1970s by Arthur Jones, the founder of Nautilus.
- The training focuses on performing quality weight training repetitions to the point of momentary muscular failure.

■ Compound Exercises/ Olympic/ Powerlifting

- To mirror the physical movements of athletes and actions that are experienced during competition
- Increase explosiveness, and full range of motion within each sport
- Increase force the athlete can apply to the ground, therefore increasing power and speed

Video Examples

- Squat
 - <https://www.youtube.com/watch?v=A6SJf1TcMks>
- Deadlift
 - <https://www.youtube.com/watch?v=XQlO8w6JNcA>
- Power Clean
 - <https://www.youtube.com/watch?v=oQCUdVKyhE8>

Penn State Strength and Conditioning

Penn State Strength and Conditioning is a multifaceted program, that focuses on ground based, multi-joint, explosive and multi-planer movements. Penn State Strength and Conditioning's objectives are to mirror the physical movements and actions that are experienced by athletes during competition. The program wants to increase explosiveness and mass full range of motion in the athlete's in their specific sport. There are many exercises that the athletes perform during training. Penn State focuses on the three genres of lifting: Olympic lifting, Powerlifting, and Plyometrics

What I learned:

As an intern there are many aspects to sports training that I learned throughout the semester. Before Craig Fitzgerald took over, John Thomas was the head of strength and conditioning here at Penn State. Coach Thomas liked to implement the High Intensity Training method better known as (HIT). The HIT method focuses more on high endurance and muscle exhaustion. It wasn't until the hire of Craig Fitzgerald that the program changed to ground based, multi-joint, explosive and multi-planer movements. Ground based movements increase the force an athlete can apply to the ground. With correct technique the athlete can generate greater power and speed in athletic movements. Ground based movements also increase proprioception and engage stabilizer muscles that help reduce the athletes risk to injury. Multi-joint movements are important due to their efficiency and similarity to the sport. Some example exercises are Snatch, Clean, Jerk, Squat, and Deadlift. To begin the new era of strength and conditioning here at Penn State, Coach Fitzgerald replace regular machines with squat racks, Bench presses, and free weights'.



Eugene M. Bodden Jr.
Senior, Kinesiology Fitness Studies

Facility Locations

- BJC
- East Area Locker Room
- REC Hall
- Holuba Hall



Intern Responsibilities

- Prepare athlete's snack for nutritional support
- Restock fridge with Gatorade, water, and protein shakes
- Clean bench pads, machine pads, med balls, and racks
- Restack plates on pegs or put them where they belong
- Assist athletes throughout work out regiments
- Motivate and encourage them
- Stay vocal
- Record stats during testing
- Help set up workouts prior to team arriving
- Practice Olympic lifts, Powerlifting, and Plyometrics

Sports worked with: Men's and Women's Basketball, Field Hockey, Men's and Women's Volleyball, Baseball, Men's and Women's Lacrosse, Women's Soccer, Men's and Women's Tennis, Football, and Women's Ice Hockey.

M. & W. Basketball

Due to being in season I noticed their lifting workouts weren't too strenuous. They focused on active prehab to help decrease the risk of injury. The majority of prehab programs should emphasis on coordination and stabilization of the hips, stomach, and back, also known as the "core." At this point in the season it is best to keep the athletes healthy

W. Volleyball

Since they are out of season Penn State strength and conditioning has been focusing on Olympic and Powerlifting techniques, push and pull exercises, and most importantly explosive vertical actions. With the Olympic lifts it is key to be very explosive and have fast movements while completing the exercises. It is also best to include ankle exercises to increase stability because of the repetitive landings after jumping.

Field Hockey

Three times a week the girls lift but also include speed and agility training before practice. Field Hockey is out of season so they too have been focusing on Olympic and Powerlifting. During speed and agility training the program focuses on running mechanics and also explosive sprints on different planes to help mirror the constant directional changes during games and practice

WORKSHOP - exercises

- **Questions for you – the HC** (*answer each – write down*)
 1. Would you have a strength and conditioning component within your sport-program?
 2. If **YES** (why – how - when) – If **NO** (why + how would you supplement their development (3 areas)?
 3. What kind of approach will you take (*Program Phil and Foundation*) and what exercises would you include (*building blocks of your program*)?
 4. Any changes to your philosophy after seeing the philosophies of Coach Spayd and Coach Mike (*If YES or NO = WHAT – WHY – HOW specifically*)?

HOW to APPLY to Portfolio - *Phil / Style / Team Management / Reward-Discipline / Teaching / Eval methods / Physical Training / Risk Management / Self Management*

****OK THAT WOULD BE EVERY SECTION***