OCTOBER, 2023

# APPLIED PERFORMANCE ENGINEER

# DEFINED

## Applied
Put to practical use as opposed to being theoretical

## Performance
The action or process of carrying out or accomplishing an action, task, or function

## Engineer
Design and build (complex systems)
skillfully or artfully arrange (for for an event or situation)
to occur modify (an organism) by manipulating its material

DEFINITIONS FROM OXFORD LANGUAGES

# GREGORY PYSZCZYNSKI

## COACH

"It took me four years to paint like Raphael, but a lifetime to paint like a child"

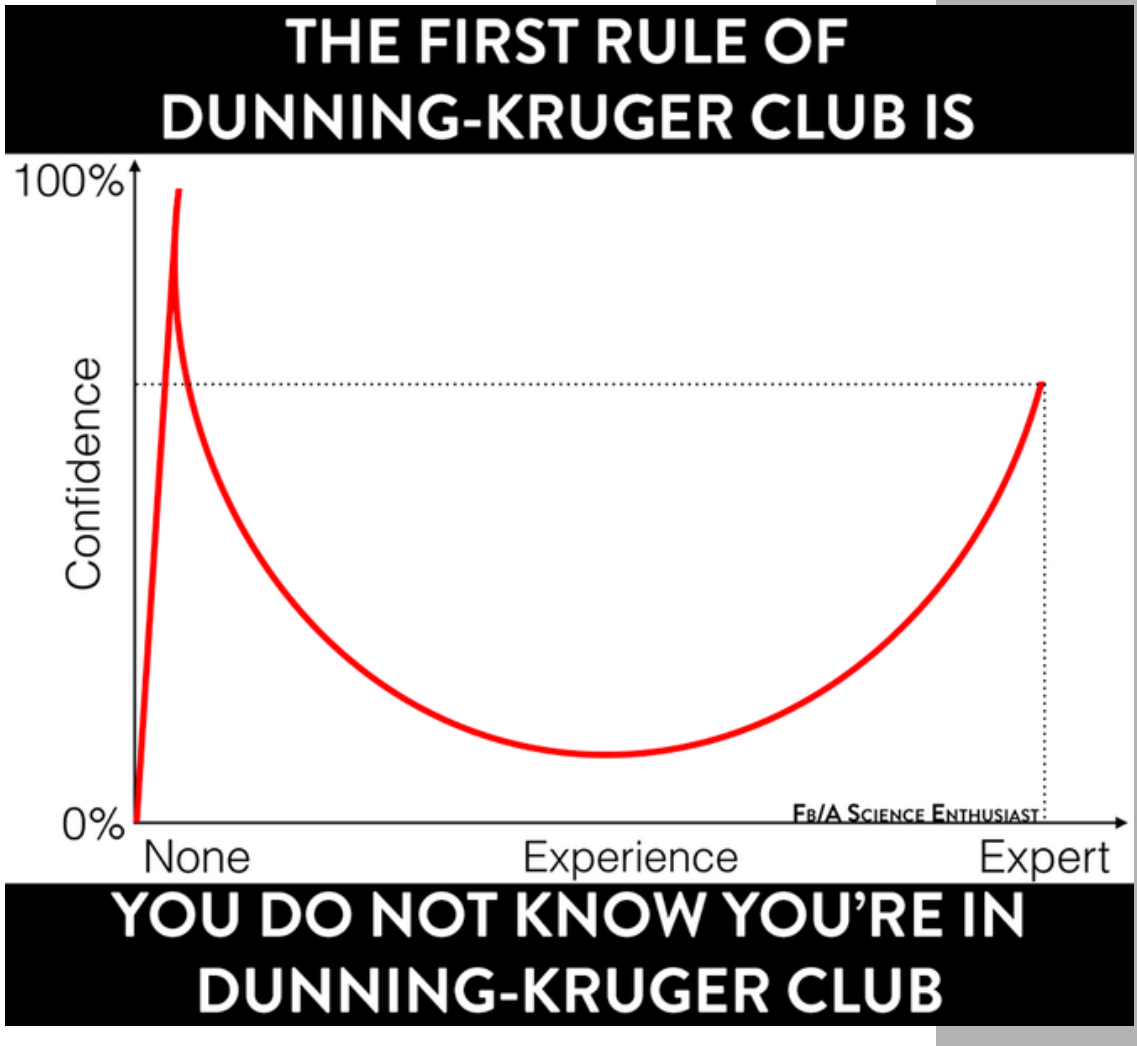
## CAREER HIGHLIGHTS

16 years in collegiate strength & conditioning

# TRANSPARENCY

I have never had an original idea in my life
-Alwyn Cosgrove
--Peter Twist

# DUNNING-KRUGER EFFECT




**Yes!**

**It depends?**

**No?**

**Somewhere in the middle?**

This is a constant In my life...

# GUIDES

- MIKE SZERSZEN
- ADAM FEIT
- BLAIR WAGNER
- **MIKE GITTLESON**
- KEN MANNIE
- KIM WOOD
- DR. KEN LEISTNER
- BUDDY MORRIS
- JAMES SMITH
- DAVE TATE
- CHARLIE FRANCIS
- CHRISTIAN THIBAUDEAU
- LOUIE SIMMONS
- CAL DIETZ
- DR. TED LAMBRINIDES
- DAVE ANDREWS
- ARTHUR JONES
- MARK ASANOVICH
- YURI VERKHOSHANSKY
- MEL SIFF
- DB HAMMER
- DREW BAYE
- DR. MIKE ISREATEL
- JUSTIN HARRIS
- ALWYN COSGROVE
- RACHEL COSGROVE
- DR. ELLINGTON DARDEN
- AND MANY MORE

# IN HONOR OF DR. YURI VERKHOSHANSKY" - WRITTEN BY JAMES SMITH

SNAPSHOT:
•where are we in the training calendar, what is the technical-tactical nature of the position, what are we philosophically committed to, what geometric position does his body initiate movement from at the snap, what directions might he initiate movement in and in what way might he change his direction, what muscles are involved, what is the speed of contraction, what amplitudes of movement are involved in the work, where in the amplitude are the greatest forces generated, what percentage of his technical-tactical responsibility necessitates that he overcomes or resists external resistance, what is the magnitude of resistance he must overcome or resist against, what are the geometric positions of his body when he overcomes or resists against external load, over what distance does he cover on average, what role do speed, reactive/elastic ability, power, strength, and joint mobility play in the execution of his competition maneuvers, how many snpas does he average per game, how long is the average play, how much time transpires between most plays, how might i construct drills to be performed under alactic and aerobic conditions, how will i sequence the change and introduction of training stimuli into the training load, how will i utilize the time availability during the off-season, what will the contents of the training blocks consist of, how will regulate the sequence and nature of the bio-energetic training, how will i regulate the sequence and nature of bio-motor training, how will i structure individual training sessions and consecutive days and weeks of training, and the list goes on...

## DISCUSSION FLOW

- Program design
  - Analysis / Assessment
- Principles
- Periodization
  - Systems
- Integration
- Cheat Codes
  - RTE
  - Exercise Selection
- Practical Experience

# CRITICAL TALKING POINTS

**“WHEN YOU SIT DOWN TO CREATE SOMETHING…WHAT YOU CREATE IS A CULMINATION OF EVERYTHING YOU’VE SEEN AND DONE PREVIOUS TO THAT POINT.”**
**– TINKER HATFIELD**

- “paint” like a child
- “Synesthesia”

Go beyond the technical, free your imagination

# PROGRAM DESIGN

Scientific Based

Ask better questions: application....

You can't pick pocket a naked man

+/-, etc...

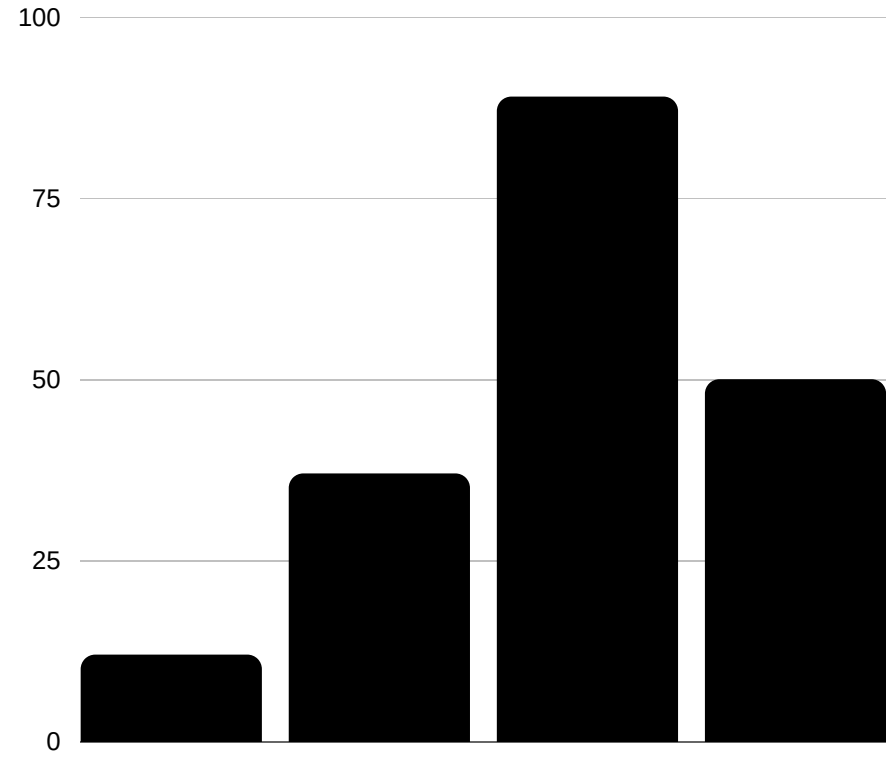
Be able to poke holes in your own argument

Forest 4 trees...

Trees 4 forest...

# WHAT ARE YOU GOING TO VALUE?

# IT'S THIS SIMPLE




## WHAT ARE YOU TRAINING FOR?

- Tactical
- Technical
- Psychological
- Physical

## NOW ASK BETTER QUESTIONS

Whats your meso/macro/micro cycle?

How much time do you have?

What are you preparing them for?

Are they game ready? Should they be...

# I WISH IT WAS THAT SIMPLE

## REALITY

Assume starting the winter prior to any “spring sporting period”

- The plan is wrong unless you are fully integrated with sporting coaches on operations and implementation of practice
  - WHO WANTS THAT SMOKE?
- “The norm” - you are never preparing for pure sporting action, you are preparing for the rigors and demands of practice and those who are not masters of your discipline…

# THIS IS KIND OF HARD

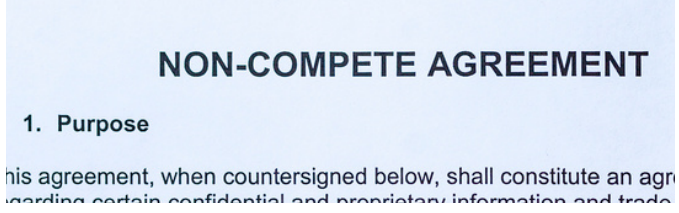
- **Winter**
  - Comps

- **Spring/summer break**
  - Unstructured


- **Pre-season**


- **Spring**
  - Spring ball

- **Summer**
  - Skill development


NON-COMPETE AGREEMENT

1. Purpose

his agreement, when countersigned below, shall constitute an agr

- **In-season**
  - Bye-weeks

- **Post-season**
  - Season ends
  - Bowl prep

# START

# NEEDS ANALYSIS

"IF YOU ARE NOT ASSESSING YOU ARE GUESSING"
-PAUL CHEK

1. Goal? - quality (ies) to increase / develop
2. Fatigue - order of operations
3. Systems - periodization & programming
4. Optimal dose - frequency, intensity, volume
5. Optimal recovery - week / next opportunity

# SPORT ANALYSIS

"IF YOU ARE NOT ASSESSING YOU ARE GUESSING"
-PAUL CHEK

- Movement patterns
- Individual / position demands
- Qualities sport requires
- Common occurence of Injury

# ATHLETE ASSESSMENT

"IF YOU ARE NOT ASSESSING YOU ARE GUESSING"
-PAUL CHEK

- Age
- Current / previous injury history
- Screening:
  - FMS
  - FRC
  - Klatt Test
  - Jump Evaluation
  - NFL Combine

# ATHLETE ASSESSMENT

"IF YOU ARE NOT ASSESSING YOU ARE GUESSING"
-PAUL CHEK

- Tracking
- Pre-Post test / evaluation
- What's your guide

**READINESS**

Static handgrip strength test procedures
LIGUORI, G., FEITO, Y., FOUNTAINE, C., ROY, B., & AMERICAN COLLEGE OF SPORTS MEDICINE. (2022)

# CREATE

# PRINCIPLES

**“Methods are many, but principles are few. Methods always change. Principles never do.”**

# SPECIFICITY

“to get better at something,  you should train that thing or things that potentiate it”. Can you defend It?

**ISRAETEL, M., HOFFMANN, J., DAVIS, M., & FEATHER, J. (2021) PG 1**

“specificity should not be confused with simulation”

- type of muscle contraction
- movement pattern
- region of movement
- velocity of movement
- force of contraction
- Muscle fiber recruitment
- metabolism
- biochemical adaptation
- flexibiilty
- fatigue

**VERKHOSHANSKY & SIFF (2009) PG 27**

“Training adaptations are highly specific”
-Think transfer of training/dynamic correspondence

**ZATSIORSKY, V., KRAEMER, W. (2006) PG 6**

# OVERLOAD (PROGRESSIVE)

Intensity
-load vs effort
Frequency
Duration/Volume
Density

"To bring about positive changes in an athlete's state, an overload must be applied"
Stress has to be at a level above baseline
**ZATSIORSKY, V., KRAEMER, W. (2006) PG 4**
Stimulate - Retain - Detrain

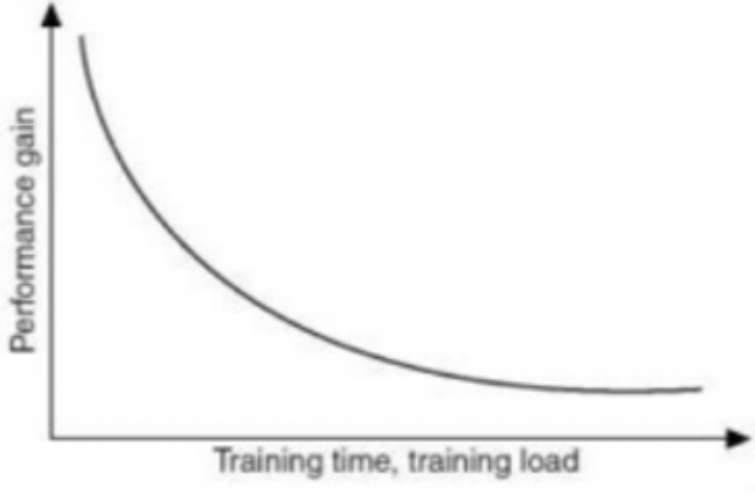
Impacted by specificty principle
"think of overload as the rocket and specificity as the guidance system."
"overload drives the improvements that specificity defines"
**ISRAETEL, M., HOFFMANN, J., DAVIS, M., & FEATHER, J. (2021) PG 17**

Insufficient selective pressure (little overload) influence too weak to drive adaptation, overwhelming selective pressure (excessive overload), influence too strong, increased potential injury/overreaching (system breakdown)
**SMITH, J. (2022) PG 1336**

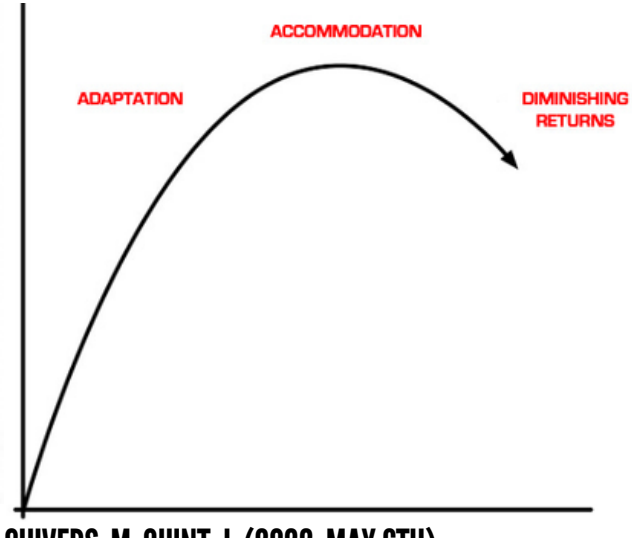
# ACCOMODATION

General law of biology
“the decrease in response of a biological object to a continued stimulus”
ZATSIORSKY, V., KRAEMER, W. (2006) PG 5

“If you are not pushing adaptation, you are pushing accommodation”
CHIVERS, M, QUINT, J. (2022, MAY 6TH)




ZATSIORSKY, V., KRAEMER, W. (2006) PG 5




CHIVERS, M, QUINT, J. (2022, MAY 6TH)

# VARIATION

Altering training (when appropriate)

“to improve at a specific sport or physical endeavour, training must occasionally be varied to maintain effective stimulus and prevent wear and tear injury.”
keep principle of specificity in mind

Directed vs Strategic

ISRAETEL, M., HOFFMANN, J., DAVIS, M., & FEATHER, J. (2021) PG 155

# VARIATION

## WHICH EXERCISES TO USE

**SCALE OF NEUROLOGICAL DEMANDS**

**LEVEL 1** – Complex gymnastic exercises, olympic lift variations

**LEVEL 2** – Olympic pulls, multi-joint movements involving the whole body or having a signficant axial/spinal loading

**LEVEL 3** – Multi-joint exercises with free weights involving half the body and without significant axial

**LEVEL 4** – Multi-joint exercises on pulley

**LEVEL 5** – Multi-joint exercises on machines

**LEVEL 6** – Isolation exercises on free-weights

**LEVEL 7** – Isolation exercises on pulley or machines

THIBAUDEAU,C. (2019)

Exercise & variation = muscle damage potential (athletic performance)

Exercise & variation (new) = tax CNS - performance

“Automatic” - less neural demand - less impact on recovery

Not needed for gains in strength, power, performance

Only if essential (superior) - correct issue

Closer to season - less variation (in-season)

600lb dl vs front squat vs low bar back squat

THIBAUDEAU,C. (2020)

# INDIVIDUALITY

“The same exercises or training methods elicit a greater or smaller effect in various athletes.

**ZATSIORSKY, V., KRAEMER, W. (2006) PG 10**

Lever physics

**SMITH, J. (2022) PG 173**

“Since practice makes permanent, it is crucial that routines done in practice replicate as closely as possible the movements and skills demanded by the sport. you don’t want the “permanent” you achieve to be incorrect! Ask, for example, will an exercise with free weights or an exercise machine that isolates a body part better replicate the conditions of the sporting task? is strength really the primary requirement for a particular task?

**SMITH, J. (2022) PG 176**

# PERIODIZATION

**DEFINITION:**
How you organize training

**TIME SCALES:**
Micro: think week
Meso: think  month
Macro: think 3 months+ (4 year quadrennial plan -> olympic athletes)

**LINEAR**
**UNDULATING**
**BLOCK**
**CONJUGATE**

# SYSTEMS

- Triphasic
- WSBB
- OCTS
- High/Low

# INTEGRATION

## I DID MY JOB

## ROLES

Medical

Strength

ATC

Sport Coaches

## UNIFIED

# INTEGRATION

## UNDERSTANDING, EVALUATING, AND TREATING PAIN

- 40% of asymptomatic people have a “bulging disc” on magnetic resonance imaging (MRI)
- 90% of asymptomatic people undergoing cervical MRI scan have a “bulging disk” (included people in their early 20's)
- Active collegiate basketball players with no knee pain, 35% of the MRI scans show significant abnormalities
- 2 out of 3 hockey players with no hip pain show significant degenerative changes on scans

LOUW, A., PUENTEDURA, E., SCHMIDT, S., & ZIMNEY, K. (2022)

# CHEAT CODES

# RESIDUAL TRAINING EFFECTS

## Training Residuals (Detraining)

| *Adaptive Quality* | *Detraining* | *Description* |
|---|---|---|
| Aerobic System | 30 ± 5 days | ↑ Mitochondrial Density<br>↑ Capillary Density<br>↑ Aerobic Enzymes<br>↑ Glycogen Storage |
| Anaerobic System | 18 ± 5 days | ↑ Anaerobic Enzymes<br>↑ H+ Buffering<br>↑ Glycogen Storage |
| Maximal Strength | 30 ± 5 days | ↑ Neural Mechanisms<br>↑ Myofibrillar Density FT |
| Strength Endurance | 15 ± 5 days | ↑ Myofibrillar Density ST<br>↑ Aerobic/Anaerobic Enzymes<br>↑ Lactic Acid Tolerance |
| Maximal Speed | 5 ± 3 days | ↑ Motor Control<br>↑ Neuromuscular Function<br>↑ Phosphocreatine Storage |

***Training Residuals affect the periodization profile used and should be based on the identified limiting factors in addition to the structure of the competition phase***

**Residual Training Effects**

| Motor Ability | Retention | Physiological |
|---|---|---|
| Oxidative Energy System | 30±5 | Increased number of aerobic enzymes, mitochondria, capillary density, hemoglobin capacity, glycogen storage, higher rate of fat metabolism |
| Strength | 30±5 | Improvement of neural mechanism, muscle hypertrophy |
| Glycolytic Energy System | 18±4 | Increased anaerobic enzymes, buffering capacity and glycogen storage, higher possibility of lactate accumulation |
| Repeat-Power | 15±5 | Improved aerobic/ anaerobic enzymes, improved local blood circulation and lactate tolerance, repeat sprint ability |
| ATP/CR-P | 5±3 | Enhanced resynthesis of CR-P |
| Speed | 5±3 | Improved neuromuscular interactions and motor control, increases anaerobic power |

Adapted from: Issurin, V. (2008). "Block Periodization: Breakthrough in Sports Training." New York, NY: Ultimate Athlete Concepts.

# RESIDUAL TRAINING EFFECTS

| Training Compatibility | |
|---|---|
| **Dominant Training Modality** | **Compatible Training Modalities** |
| Aerobic Endurance | Alactic sprint abilities, Strength endurance (Aerobic), Maximum strength, Hypertrophy |
| Glycolytic Endurance | Strength Endurance (anaerobic), Aerobic restoration, Aerobic-anaerobic (mixed) endurance |
| Alactic Sprints | Aerobic Endurance, Explosive strength, Maximum Strength, Hypertrophy, Aerobic restoration |
| Maximum Strength/ Hypertrophy | Maximum strength, flexibility, aerobic restoration |
| Learning new technical elements | Any kind of training modalities after the primary/dominant task |

Adapted from: Issurin, V. (2008). "Block Periodization: Breakthrough in Sports Training." New York, NY: Ultimate Athlete Concepts.

# EXERCISE SELECTION

SQUAT (Parallel)

ASST. SQT TO BOX
ASST. BOX SQT
BWT SQT TO BOX
BWT BOX SQT
BWT SQT
WALL SQT
DB WALL SQT
LANDMINE SQT
GOBLET SQT TO BOX
GOBLET BOX SQT
GOBLET SQT
DB SQT TO BOX
DB BOX SQT
DB SQT
2 KB GOBLET SQT TO BOX
2 KB GOBLET BOX SQT
2 KB GOBLET SQT
NO HANDS FR SQT TO BOX
NO HANDS FR SQT BOX SQT
NO HANDS FR SQT
KB SA FR SQT TO BOX
KB SA FR SQT BOX SQT
KB SA FR SQT
FR SQT TO BOX
FR SQT BOX SQT
FR SQT
ZERCHER SQT TO BOX
ZERCHER BOX SQT
ZERCHER SQT
BACK SQT TO BOX
BACK SQT BOX SQT
BACK SQT

HINGE (PARALLEL)

CONVENTIONAL STANCE

PULL THROUGH
KB DL
DB RDL @ SIDE
DB RDL @ FRONT
TRAP BAR RDL
RDL/GM
PIN PULL ABOVE
PIN PULL KNEE
HIGH HANDLE TRAP BAR DL
PIN PULL SHIN
DL
DEFECIT DL

SUMO STANCE

PULL THROUGH
KB DL
2KB DL
RDL/GM
PIN PULL ABOVE
PIN PULL KNEE
PIN PULL SHIN
DL
DEFECIT DL

# EXERCISE SELECTION

PROPORTIONS – The quickest tool to select the right exercises

LEG/HEIGHT RATIO
Measure from the foot to anterior sacroiliac spine (or posterior) and compare to the height
Short legs = 40-43% of height
Average legs = 44-47% of height
Long legs = 47-51%+ of height

TIBIA/FEMUR RATIO
Tibia = from the malleolus to the patella
Femur = from the patella to anterior sacroiliac spine
Short Tibia = -75-78% of femur
Average Tibia = 79-84% of femur
Long Tibia = 85%+ of femur

THIBAUDEAU,C. (2020)

# EXERCISE SELECTION

| LENGHT OF THE LEGS AND EXERCISE SELECTION | | |
|---|---|---|
| **SHORT LEGS**<br>40-43% | **AVERAGE LEGS**<br>44-47% | **LONG LEGS**<br>47-51%+ |
| Advantage on anterior chain exercises<br>A disadvantage of posterior chain exercises<br>Needs more assistance for the deadlift<br>Needs less assistance for the squat<br>Order for easiest muscles to develop<br>1.Quads<br>2.Calves<br>3.Hamstrings<br>4.Glutes | * Look at tibia/femur ratio<br>•<br>Short or average tibia =long legs strategies<br>Long tibia = short legs strategies | Advantage on posterior chain exercises<br>Disadvantage on anterior chain exercises<br>Needs more assistance for the squat<br>Needs less assistance for the deadlift<br>Benefits from more unilateral work<br>Order for the easiest muscles to develop:<br>1.Glutes<br>2.Hamstrings<br>3.Quads<br>4.Calves |

THIBAUDEAU,C. (2020)

# EXERCISE SELECTION

PROPORTIONS – The quickest tool to select the right exercises

ARM SPAN/HEIGHT RATIO
ARM SPAN = arms extended, from fingertip to fingertip
Short arms = less than the height
Average arms = equal to or up to+ 1.5” (4 cm) longer than the height
Long arms = over 1.5” (4cm) longer than the height

ULNA/HUMERUS RATIO
Short ulna = 75-78% of humerus
Average ulna = 79-84% of humerus
Long ulna = 85%+ of humerus

THIBAUDEAU,C. (2020)

# EXERCISE SELECTION

| LENGTH OF ARMS AND EXERCISE SELECTION | | |
|---|---|---|
| **SHORT ARMS**<br>LESS THAN HEIGHT | **AVERAGE ARMS**<br>EQUAL TO OR UP TO 1.5"<br>LONGER THAN HEIGHT | **LONG ARMS**<br>OVER 1.5" LONGER THAN HEIGHT |
| A mechanical advantage in pushing movements<br>A disadvantage in pulling movements<br>Needs less DB and unilateral movements<br>Muscles that pull (in order)<br>1.Biceps<br>2.Traps<br>3.Rhomboids/posterior deltoids<br>4.Lats<br>Muscle that pushes<br>1.Triceps<br>2.Deltoids<br>3.Pectorals | *Look at the ulna/humerus ratio<br>Short or average ulna = strategies for long arms<br>Long ulna = strategies for short arms | A mechanical advantage in pulling movements<br>A disadvantage of pushing movements<br>Needs more DB and unilateral movements<br>Muscles that pull (in order)<br>1.Lats<br>2.Rhomboids/posterior deltoids<br>3.Biceps<br>4.Traps<br>Muscles that push<br>1.Pectorals<br>2.Deltoids<br>3.Triceps |

THIBAUDEAU,C. (2020)

# PRACTICAL EXPERIENCE

December 8th & December 10th Practice:

- Use FSA & Indy to get “green” exposure - offensive routes on air - defensive pursuit drill
  - Discuss with S&C on how to keep it minimal effective dose for “optimal” effect with travel squad
- Use majority of practice to get jump off to tempo exposures of top plays we will utilize In game on the 19th to the point that it is automatic -> build huge base of exposures so they can be completely automatic In game exposure
  - This will allow more exposures to the “scheme” plays the non bread and butter things that opposition we will face / things that are more “tricky” that we would like more exposure to In practice to be given during the week of December 12th practices...

Week of December 12 leading up to December 19th

- Spread out the “green” load to minimal doses across the week instead of trying to have 1 day and slamming it all in
- Rotate SPECS utilization like we did on short week vs. Texas to keep fresh and extend regen to captitalize on outputs for the 19th

December 12 Practice:

- Green exposure in short yardage / short grass exposures
- SPECS - KOR & Punt Return

December 14 Practice:

- Green exposure in long grass / good on good periods -> most game specific day / reps
- SPECS - KOC & Punt

December 16 Practice:

- SPECS period: Nothing greater than jump off to tempo
  - Minimize SPECS kicks for starters to again keep the goal for Saturday utilization
- Remainder of practice follow typical “thursday” intent like K-State & Texas weeks...

# END OF SUMMER

| 120 ISH MINS | TUESDAY |
|---|---|
| 25 MINS | **FSA** - EXTENDED MAX. FINISH WITH ACCEL WATERFALL LINES **/ FLY TBD** |
| 40 MINS | **OTA** |
| 20 MINS | **TRANSITION TO WT. ROOM** |
| 35 MINS | **CIRCUIT** - X4 ROUNDS<br>**1. SPOT MANUAL NECK** - XTIME<br>**2. MANUAL NECK** - FRONT/BACK/FRONT/BACK - XTIME<br>**3. BAND TENSION PULLDOWN** - XTIME<br>**4. CABLE TENSION TRICEP** - XTIME<br>**5. BB SHRUG** - X20 **PAIR AMASOV ELBOWS**<br>**6. TRX ROW** - RIP/STICK/SLOW - XTIME<br>**7. SL BOX SQT** - X2-2 **PAIR TJ SPINE** - ROLLS/BENDS/ROT./BENDS<br>**8. MCGILL CRUNCH** - X15-15 **PAIR SS ROTATION** |
| 8 MINS | **WALL LEGS UP** - X6 MINS |

# CAMP

| 40-50 MINS | WEDNESDAY | |
|---|---|---|
| | **BIG - DA/GC (MOD CA)** | **SKILL/RUNNERS - FW/GP/ TR** |
| 40 MINS | **BOX SQT** - 5-3-2 PREP 3X1 WORK<br>**PAIR INV. CURL** - X3 @BW PREP ONLY | **1A. PC** - OPTIONS:<br>1. BENT KNEE BAND AFSM - 2X:5-:7S<br>X4 SILVER 2-2<br>2. BW KDL - 2X3-3<br>**1B. CLDL** - 4X1<br>**FINISH - BAAR 8 SPOT** - 1 ROUND X:30S<br>**DETAILS BELOW**<br><br>**BAAR 8 SPOT** - 1 ROUND X:30S<br>**HAMMY HANG** (X:30S)<br>**BOTTOM PULL UP HANG** (X:15S)<br>**SPRING ANKLE (TIME TBD )**<br>**FILL TBD (SS NECK- SPINE - HIPS)** |
| | **FLOOR PRESS** - 5-3-2 PREP 3X1 WORK<br>**PAIR DB ROW** - X 2-3 REPS - ALL SETS | **BENCH PRESS** - 5-3-2 PREP 3X1 WORK<br>**PAIR DB ROW** - X 2-3 REPS ALL SETS |
| DA GUIDE | **TENSION TRICEP**<br>**BOTTOM PULL UP HANG**<br>**TJ SPINE**<br>**SPRING ANKLE IN-**<br>**OUT EDGE** | **WT OUT** |

# CAMP

| 75 MINS | SUNDAY | |
|---|---|---|
| 22 MINS | **FIELD PREP - SEE ATTACHED** | |
| 2 MINS | **TRANSITION TO DB AREA** | |
| 6 MINS | **DB CIRCUIT** - 1 ROUND - PICK YOUR WT.<br>1. TENSION TRICEP - X:60S<br>2. TEMPO (:3/:2/:1) GOBLET SQT - X6<br>3. TEMPO (:3/:2/:1) INCLINE - X6<br>4. SA SHRUG - X12-12 | |
| 35 MINS | **FAR SIDE (BIGS)** | **NEAR SIDE (RUNNERS)** |
| | **BOX SQT** - 5-3-2 PREP 2X2 WORK<br>**PAIR**<br>**INV. CURL** - X3 BW - ALL SETS | **BOX SQT** - 5-3-2 PREP 2X:5S STANDS<br>**PAIR**<br>**INV. CURL** - X3 BW - ALL SETS |
| | **FLOOR PRESS** - 5-3-2 PREP 2X2 WORK<br>**PAIR ALL SETS**<br>**TRX ROW TEMPO** - (:1S/:2S/:3S) - X6 | **FLOOR PRESS** - 5-3-2 PREP 2X2 WORK<br>**PAIR ALL SETS**<br>**TRX ROW TEMPO** - (:1S/:2S/:3S) - X6 |
| 10 MINS | **BAAR** - 6 SPOT - 1 ROUND X:30S<br>**INSIDE/OUTSIDE EDGE** X 30S EA<br>**EXTREME ISO HAMMY HANG** - BIG X1:15 - INTER X1:30 - SKILL X1:45 | |

# CAMP

| 45 MINS | SATURDAY | |
|---|---|---|
| | **NEAR SIDE (BIGS)** | **FAR SIDE (RUNNERS)** |
| 20 MINS | **CLDL** - 4X1 - START W/ RACK WT. | **BOX SQT** - 5-3-2 PREP<br>**PAIR INV. CURL** - X3 @ BWT |
| | **BOX SQT** - 5-3-2 PREP 2X:5S STAND<br>**EXTREME ISO HAMMY HANG** - X1:45 | **EXTREME ISO SPLIT STACKED NO SCISSOR**<br>*****R. FOOT ELEVATE W/ AGILE BAG*****<br>SET 1X:45S SET 2X:30 SET 3X:15 |
| 20 MINS | **FLOOR PRESS** - 5-3-2 PREP 3X1 WORK<br>**PAIR DB ROW** - X2-3 REPS - ALL SETS | **FLOOR PRESS** - 5-3-2 PREP 3X1 WORK<br>**PAIR DB ROW** - X2-3 REPS - ALL SETS |
| | **AMASOV & SPINE HYGIENE TO FILL** | **AMASOV & SPINE HYGIENE TO FILL** |
| 5 MINS | **INSIDE/OUTSIDE EDGE** X:30S EA<br>**SPRING ANKLE** X:30S EA | |

# IN-SEASON

| 45 MINS | TUES/WED |
|---|---|
| 2 MINS | **AFSM** X:5S - **1-2SETS TBD** / **SLAM** X1 / **CROSS** X10-10 |
| 18 MINS | **FLOOR PRESS** - 5-3-2 PREP 3x1 WORK<br>**PAIR PREP DB ROW** - X4-4 WT. CHOICE<br>**PAIR WORK SA DB SHRUG** - X 8-8 WT. CHOICE<br><br>**FILL - AMASOV ELBOWS - KNUCKLES** |
| 5 MINS | **BIKE EFFORT** X3<br>**BIGS - LOWER - LOWER - TOTAL**<br>**ALL OTHERS - LOWER - TOTAL - TOTAL** |
| 7 MINS | 1. **4-WAY 90/90** - X:60S EA<br>2.**SPLIT SQT - STACKED - SCISSOR - KNEE DOWN** - X:7S EA<br>3.**BANDED (ANT) CONTRACT / RELAX** - X:30S EA |
| 8 MINS | **BAAR** - 8 SPOT - 1 ROUND X:30S EA<br>QUAD/QUAD - HAM/HAM - ACHILLES - GROIN - ROCKER - HAMMY HANG |
| 2 MINS | **INSIDE / OUTSIDE EDGE** - X:30S EA |

# IN-SEASON

| 55 MINS | TUES/WEDS |
|---|---|
| | **NON RUNNERS** - **BOX SQT** - PREP: 3-2 **DYN.** -1 **STAND** X:7S - WORK: 2X:5S STANDS |
| | **PAIR PREP 1** - **INV. CURL** - X3 \| **PAIR PREP 2** - **SPLIT SQT KNEE ↓ ACCEL** - X:15S |
| | **PAIR PREP 3** - **SPLIT SQT STACKED** - X:7S EA, **WAVE SQT** - X2-2-2-2 |
| | **PAIR WORK 1 & 2** - **AFSM KNEE BENT** - X:5S - **SL BOX SQT** - X3-3 |
| 45 MINS | **NON RUNNERS** - **FLOOR PRESS** - PREP: 5-3-2 **HOLDS** X:7S - WORK: 2X:5S HOLDS |
| | **PAIR PREP 1** - **HAND WALK** - X2, **ISO BOTTOM PUSH UP** - X:10S, **DB ROW** - X3-3 |
| | **PAIR PREP 2** - **HAND WALK** - X2, **TEMPO PUSH UP** - :3/:2/:1 - X2, **DB ROW** - X3-3 |
| | **PAIR PREP 3** - **TEMPO PUSH UP** - :3/:2/:1 - X2, **DB ROW** - X3-3, **PLATE R. DELT** - X10 |
| | **PAIR WORK 1 & 2** - **PLATE R. DELT** - X10 |
| | **RUNNERS** - **BOX SQT** - PREP: 3-2-1 **STANDS** X:7S WORK: 2X:5S STANDS |
| | **PAIR PREP 1** - **BWT KDL** - X3-3 \| **PAIR PREP 2 & 3** - **SPLIT SQT KNEE ↓ ACCEL** - X:15S |
| | **PAIR WORK 1 & 2** - **SPLIT SQT STACKED** - X:7S EA |
| 45 MINS | **RUNNERS** - **FLOOR PRESS** - PREP: 5-3 **DYN.** -2 **HOLD** X:7S - WORK: 2X:5S HOLDS |
| | **PAIR PREP 1** - **HAND WALK** - X3, **ISO BOTTOM PUSH UP** - X:10S, **DB ROW** - X3-3 |
| | **PAIR PREP 2** - **HAND WALK** - X3, **TEMPO PUSH UP** - :3/:2/:1 - X3, **DB ROW** - X3-3 |
| | **PAIR PREP 3** - **TEMPO PUSH UP** - :3/:2/:1 - X3, **DB ROW** - X3-3, **PLATE R. DELT** - X10 |
| | **PAIR WORK 1 & 2** - **PLATE R. DELT** - X10 |
| | **BWT CONTRACT/RELAX** - X:45S |
| 10 MINS | **INSIDE/OUTSIDE EDGE** - X:30S |
| | **BAAR** - 8 SPOT - 1 ROUND X:30S EA @ RACK<br>QUAD/QUAD - HAM/HAM - ACHILLES - GROIN - ROCKER - HAMMY HANG |

# IN-SEASON

| 40 MINS | TUES/WED |
|---|---|
| 7 MINS | **4 WAY HIP 90/90** - X1 MIN EA - **FLEXION GAPPING** - X:45S EA |
| 6 MINS | **2 ROUNDS:** SPLIT 1/2 & 1/2 |
| | **DMAX** - ROT.-ROT. 1X:10S EA - **SLAM** X1 |
| | **PAIR** - **BAND SH** - **RD 1** IR/ER X10-10 - **RD 2** ST. ARM SIDE X10-10 |
| | **BIGS ONLY** - **BENT KNEE AFSM** - 1X:5-:7S - 4/RACK |
| 15 MINS | **FLOOR PRESS** - 5-3-2 PREP - 1X1 CHOICE - 1X1 :7S HOLD |
| | **PAIR** - **DB ROW** - 5X3 CHOICE |
| 5 MINS | **LOWER** |
| | **1. SPLIT SQT KNEE ↓ "ACCEL" & LONG** - X:15S EA (LIKE SUNDAY) |
| | **2. ISO BOTTOM PUSH UP** - X:10S |
| | **3. SPLIT SQT STACKED** - X:7S EA |
| | **4. INSIDE / OUTSIDE EDGE** - X:30S EA |
| 7 MINS | **BAAR** - 8 SPOT - 1 ROUND X:30S EA @ RACK<br>QUAD/QUAD - HAM/HAM - ACHILLES - GROIN - ROCKER - HAMMY HANG |

# BYE WEEK 1

| 90 MINS | TUESDAY | |
|---|---|---|
| 32 MINS | 1/2 = 1. BIKE TOTAL X 3MINS CADENCE 55 GOAL 2. SL STAND X 30S EA WAY 3.AMASOV 3WAY 30 S EA 4. BIKE TOTAL X 3MINS @ CADENDCE/SHEET 5. BAND 3 WAY SH X 15 EA (IR/ER/DOWN) 6. BIKE TOTAL X 3MINS @ CADENDCE/SHEET (DROP?)<br><br>**1/2 = 1. SMR** BACK60, LAT, PEC, GLUTE, HAM, CALF, QUAD, GROIN @ 30S **2. LBALL FLEX GAP** X1M EA **3. HIP 90-90** X1M EA | |
| 10 MINS | **ALL QUADRUPED / REACH AND TWIST X 5-5/ STANDING / 3WAY TJ SPINE / 3 WAY SS NECK / SS SHRUG TBD** | |
| | **ALL ISO CIRCUIT - 1 ROUND** (SPREAD OUT) | **MOD TBD** |
| | **1. TOP PUSH UP** - X:20S (ALL) | **2. RACK STRETCH** - X:20S (ALL) |
| | **3. BOTTOM PUSH UP** - X:10S (ALL) | **4. WAVE ISO SQT** - X3 - ISO HOLD FOR :20S<br>RD 1 - ¼, RD 2 - ½, RD 3 - ¾ |
| | **5. MCGILL CRUNCH UP X 5-5** | |
| 8 MINS | **ALL V-STRETCH** - X:30 | |
| | **CONT./RELAX** X:45S **- SPLIT SQUAT ACCEL KNEE DOWN** X:15S EA SIDE | |
| | **INSIDE/OUTSIDE EDGE** X 20 SEC EA WAY | |
| | **BILATERAL SPRING ANKLE** X 20 S | |
| 30 MINS | **CIRCUIT x 3** | |
| | **1. RD 1&2 - INV. CURL @ BWT** - X3<br>**RD 3 - HAMMY HANG** - X:30S | **2. SL BOX SQT** - X3-3 |
| | **3. TEMPO DB BENCH** X4 @ 321 TEMPO (PUSH UP MOD) | |
| | **4. BAND PULL APART CROSS -X 10-10** | **5. PLATE R.DELT** - X10 (5-10LB) |
| | **6. TENSION PULL DOWN** - X20 | **7. TENSION TRICEP** - X20 |
| | **8. TRX ROW** - X6 | |
| 10 MINS | **BAAR 8 SPOT** X1 ROUND X:30S QUAD - HAMMY - ACHILLES - GROIN- ROCKER - HAMMY HANG | |

# BYE WEEK 2

| 57 MINS | WEDNESDAY | |
|---|---|---|
| 22 MINS | 1/2 = 1. **BIKE TOTAL** 3 MINS @ CADENCE/SHEET<br>1/2 = 1. **SL STAND** X30S EA 2. **AMASOV 3WAY** X20S EA 3. **BAND 3 WAY SH** X15 EA (IR/ER/↓), **SPINE ROLL** XREMAINDER<br>**ALL FINISH:** 1. **3-WAY SS NECK** X:20S EA, 2. **LBALL FLEX GAP** X1MIN EA, **FILL SPINE BENDS**<br><br>**1/2 = 1. SMR** BACK, LAT, PEC, GLUTE, HAM, CALF, QUAD, GROIN X:**30S, 2. HIP 90-90** X1M EA | |
| 10 MINS | **ALL ISO CIRCUIT - 1 ROUND** (SPREAD OUT) | **MOD TBD** |
| | **1. SS SHRUG** - X:20S | **2. TOP PUSH UP** - X:20S (ALL) |
| | **3. RACK STRETCH** - X:20S (ALL) | **4. BOTTOM PUSH UP** - X:10S (ALL) |
| | **5. WAVE SQT** - X3-3-3-3<br>**ISO HOLD** ½ TO ¾ X:20S | **6. MCGILL CRUNCH UP X 5-5** |
| | **CONT./RELAX** X:45S **- SPLIT SQUAT ACCEL KNEE DOWN** X:15S EA SIDE | |
| | **INSIDE/OUTSIDE EDGE** X 20 SEC EA WAY | |
| | **BILATERAL SPRING ANKLE** X 20 S | |
| 15 MINS | **CIRCUIT x 2** | |
| | **1. INV. CURL @ BWT** - X3 | **2. SL BOX SQT** - X3-3 **@HEIGHT** |
| | **3. TEMPO DB BENCH** X4 @ 321 TEMPO (PUSH UP MOD) | |
| | **4. BAND PULL APART CROSS** - X10-10 | **5. PLATE R.DELT** - X10 (5-10LB) |
| | **6. TENSION PULL DOWN** - X20 | **7. TENSION TRICEP** - X20 |
| | **8. TRX ROW** - X6 | |
| 10 MINS | **BAAR 8 SPOT** X1 ROUND X:30S QUAD - HAMMY - ACHILLES - GROIN- ROCKER - HAMMY HANG | |

# BYE WEEK 3

| 30 MINS | THURSDAY |
| --- | --- |
| | **BOX SQUAT - BIG** |
| | 3-2-1 PREP **PAIR** INV. CURL X3 @ BODYWEIGHT |
| | 4X1 WORK |
| | **BOX SQUAT - INNER** |
| | 3-2-1 PREP **PAIR** INV. CURL X3 @ BODYWEIGHT |
| 30 MINS | 3X2 @ :3S ECC, 1X:5S STAND WORK |
| | **BOX SQUAT - SKILL** |
| | 3-2-1 PREP **PAIR** INV. CURL X3 @ BODYWEIGHT |
| | 2X2 @ :3S ECC, 2X:5S STAND WORK |
| | ACCEL SPLIT SQUAT KNEE ↑ - **BIG** X:15S - **INNER** X:20S - **SKILL** X:25S |
| | HAMMY HANG X2 MINS |

# BYE WEEK 4

| | TRANSITION WT. ROOM |
|---|---|
| 5 MINS | 1. **BIKE TOTAL** 1 MIN @ 50 CADENCE / 3 MINS @ SPECIFIC CADENCE ON SHEET |
| 10 MINS | **FLOOR PRESS** 5-3-2 PREP **PAIR 3-WAY BAND PULL APART - CHEST - OH BENT - OH ST.** X10-10-10 |
| 10 MINS | **DB ROW** 5X2 ASC. TO TOP WT. - **PAIR** FIRST 3 SETS W/ **TEMPO GOBLET SQT** (:3/:2/:1) X3 |
| 25 MINS | **CIRCUIT X3 ROUNDS** |
| | **1. TEMPO PUSH UP** (:3/:2/:1) X3-4-5 |
| | **2. BAAR HAMMY** X:30S |
| | **3. V-BAR CABLE TRICEP** X12 |
| | **4. BAAR GROIN** X:30S |
| | **5. MACHINE** X8 - (TRAVEL 2SETS ROW/1SET PDOWN-----NON-TRAVEL 2 SETS PULL DOWN/1 SET ROW) |
| | **6. BAAR QUAD** X:30S |
| | **7. BB SHRUG** X20 (185-225) |
| | **8. BI-LATERAL SPRING** X:30S |

# IN-SEASON

| 86 MINS | SUNDAY | |
|---|---|---|
| 32 MINS | GROUP 1 - BIKE - TOTAL BODY - 55 CADENCE - X4 MINS (CHECK SEAT) | GROUP 2 - HIP 90/90 X1 MIN EA |
| | GROUP 3 - FLX GAP X1 MIN EA - GAST./SOLEUS X:30S EA | GROUP 4 - SMR - CHOICE R/L - X2 MIN EA |
| | 1. QUAD - CAT/CAMEL, T-ROT X:20S EA, 3-WAY HIP X5-5-5, BIRD DOG X5-5 , REACH & TWIST X5-5, TOP OF PUSH UP X20S | 2. STANDING - CIRCLES FWD/BWD/OH X:20S, O&B X5, TRUNK ROLLS X:20S EA, V-STRETCH X5-5, WAVE 2-2-2-2 |
| | 3. 3-WAY SPINE HYGIENE, 3 WAY SS NECK, 3 WAY AMASOV X 30S EA | 4. SS SHRUG |
| 24 MINS | **CIRCUIT x 3** | |
| | **1. INV. CURL @ BWT** - X3 | **2. SL BOX SQT** - X3-3 |
| | **3. BAND PULL APART CROSS** -X 10-10 | |
| | **4. TEMPO DB BENCH** X4 @ 321 TEMPO | **5. GOBLET SQUAT** X 2 @ 321 |
| | **6. KB SHRUG** X 6-6 | |
| | **7. TRX ROW** - X 6-8 | **8. TENSION TRICEP** X 20 REPS |
| 12 MINS | **BOX SQT**<br>**PREP - 3-2 DYNAMIC - 1 :3CT ECC - WORK 1X2 :3CT ECC** | |
| 8 MINS | 1. V-STRETCH - X 1:30 | 2. CONT./RELAX X:45S - SPLIT SQUAT ACCEL KNEE DOWN X:30S |
| | 3. INSIDE/OUTSIDE EDGE X 30 SEC EA WAY | 4. SPRING ANKLE X 20 S EA WAY (UNI- FLOOR) |
| 8 MINS | ALL FINISH AT RACK W/BAAR - 7 SPOT - AT RACK - QUAD/QUAD/HAM/HAM/GROIN/ACHILLES/ROCKER X:30S EA | |
| 2 MINS | ALL ISO HAM HANG X 90 SEC ALL | |

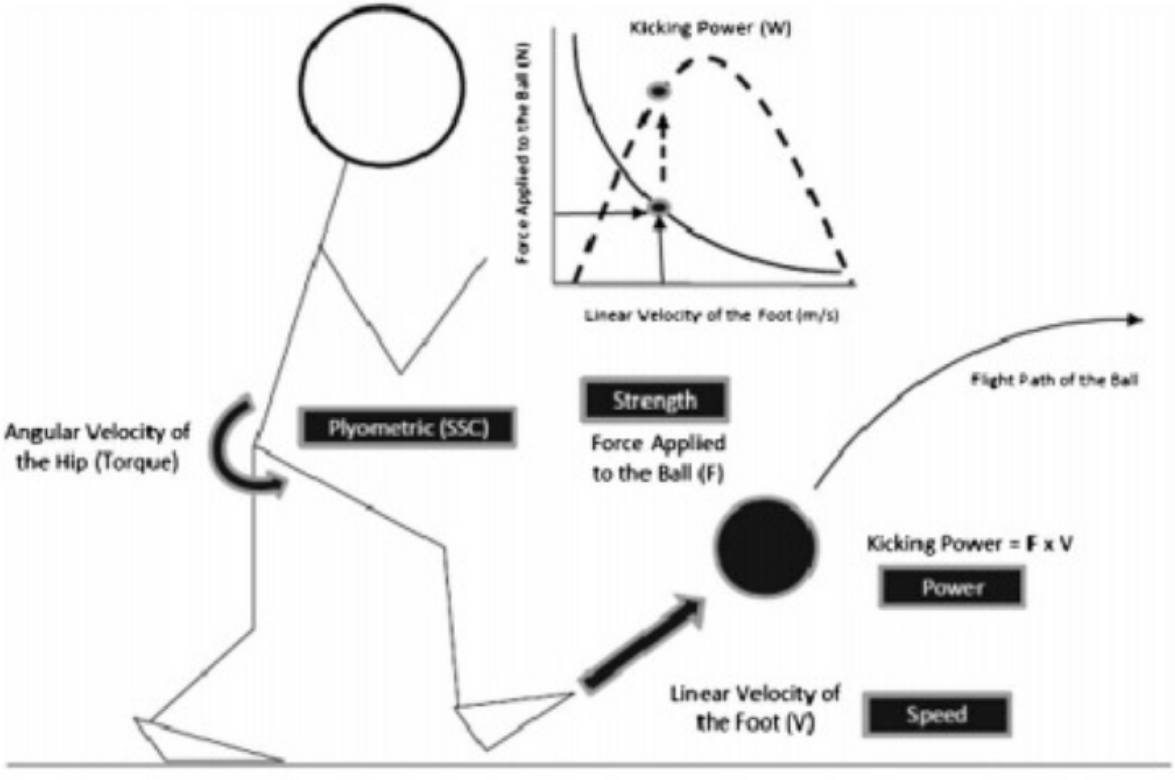
# IN-SEASON

| NOTES | 50 MINS | TUESDAY | |
|---|---|---|---|
| RUNNERS START MIDDLE FLOOR PRESS | 17 MINS | **FLOOR PRESS - PREP: 5-3-2 DYNAMIC - WORK: 3X1 DYNAMIC** | |
| | | PAIR **PREP 1** - **HAND WALK** - X2, **ISO BOTTOM PUSH UP** - X:10S / :15S | |
| | | PAIR **PREP 2** - **HAND WALK** - X2, **ISO BOTTOM PUSH UP** - X:10S / :15S | |
| | | PAIR **PREP 3** - **DB ROW** - X3-3 | |
| | | PAIR **ALL WORK** - **DB ROW** - X3-3 | |
| NON RUNNERS START FAR LOWER BODY | 17 MINS | **LOWER BODY - 2 ROUNDS** | |
| | | **NON RUNNERS** | **RUNNERS** |
| | | **1. SPLIT SQT KNEE ↓ ACCEL** X:20S | **1. SPLIT SQT KNEE ↓ACCEL** X:30S |
| | | **2. INV. CURL** X3 @BWT. | **2. BWT KDL** X3 |
| | | **3. ANKLE ROCKER** X10 | |
| | | **4. SPLIT SQT STACKED KNEE ↑** X:7S EA | **4. SPLIT SQT STACKED KNEE ↑** X:10S EA |
| | | **5. AFSM KNEE BENT** X:5S | **5. BI-LATERAL SPRING ANKLE** X:15S |
| ENTIRE ROOM | 8 MINS | **ALL: 4-WAY HIP 90/90** X1:30, **V-STRETCH** X:90S | |
| | 2 MINS | **INSIDE-OUTSIDE EDGE** - X:30S EA | |
| | 4 MINS | **BAAR** - 6 SPOT - 1 ROUND X:30S EA @ RACK<br>QUAD/QUAD - HAM/HAM - ACHILLES - GROIN | |
| | 2 MINS | **HAMMY HANG** X:90S | |

# IN-SEASON

| 62 MINS | WEDNESDAY | |
|---|---|---|
| | **4-WAY SHOULDER** - X10 EA - SLOW CONTROLLED | |
| | **UPPER BODY - 4 ROUNDS** | |
| 28 MINS | **1. DB BENCH** X5 | **MODS: 1. DB FLOOR ----- 2. TEMPO PUSH UP** - 3/2/1 |
| | **2. HAND WALK** X2 | **3. BOTTOM PUSH UP** X:10S |
| | **4. TRX SA ROW** X5-5 | **5. TENSION PULL DOWN** X10 - SLOW CONTROLLED |
| | **LOWER BODY - 2 ROUNDS** | |
| | **NON RUNNERS** | **RUNNERS** |
| | **1. SPLIT SQT KNEE ↓ ACCEL** X:20S | **1. SPLIT SQT KNEE ↓ACCEL** X:30S |
| 15 MINS | **2. INV. CURL** X3 @BWT. | **2. 1ST INV. CURL X3 @BWT , 2NDBWT KDL** X3 |
| | **3. ANKLE ROCKER** X10 | |
| | **4. SPLIT SQT STACKED KNEE ↑** X:7S EA | **4. SPLIT SQT STACKED KNEE ↑** X:10S EA |
| | **5. AFSM KNEE BENT** X:5S | **5. BI-LATERAL SPRING ANKLE** X:15S |
| 5 MINS | FLX GAP X1 MIN EA - GAST./SOLEUS X:30S EA | |
| 6 MINS | **ALL: 4-WAY HIP 90/90** X1MIN, **V-STRETCH** X:90S | |
| 2 MINS | **INSIDE-OUTSIDE EDGE** - X:30S EA | |
| 4 MINS | **BAAR** - 6 SPOT - 1 ROUND X:30S EA @ RACK<br>QUAD/QUAD - HAM/HAM - ACHILLES - GROIN | |
| 2 MINS | **HAMMY HANG** X:90S | |

# FORCE VELOCITY CURVE APPLIED TO KICKING



# EXAMPLES:

General:

- Box squat – wide stance
- Free squat – sport stance
- Clean deadlift
- Clean pull
- Conventional deadlift
- Sumo deadlift
- Bench press
- Low back considerations
- Foot structure
- Spring ankle positions

General to specific:

- Box jump rotations
- Hip exercise selection
- Rotational mid-section

Specific

- Duffins row
- Psoas crunch mid-section
- Swing velocity
  - OCI
  - AFSM
  - Rebound shock

# VISUALS:

**Duffins Row**

**OCI**

**AFSM**

**Rebound Shock**

# 2020 SPECS

**Thoughts for SPECS planning:**

- Waving drill selection within periods throughout the week
  - If SPECS period goal is GREEN, script after a RED period preferably
- Depending on where SPECS periods are placed within practice:
  - Top of route concepts
  - Tempo into lanes,
  - When GREEN repetitions, consider number of reps along with rest & recovery
- Utilize kickers on the GREEN repetitions, if we need an exposure on a unit, not GREEN period, consider utilizing jugs machine to aid in management of kickers
- Can also look to manage individuals - KO vs. Punt vs. FG/PAT throughout the week

**Historical areas of concern:**

- SPEC period placement within practice
- Management of player repetitions
- Management of player rest recovery
- Management of SPECS kicking volumes & intensities
- TE's, Gunners (punt), intensities compared to guys on line (punt) intensity comparison
- How much do we need to practice KOR when fair catch guarantees us at the 25... Return and get to 22 lost 3 yards (looking back at amount of times we fair catch vs. take it out) 80/20 rule
- Repetition management of starters vs. backups
  - Offensive or Defensive starter, who is also starting on SPECS
    - Their back up's repetition volume / preparedness, especially if the O/D starter is removed from starting position on SPECS
    - SPECS players who are backups to starters on O or D, who may step into starting role and their back up on SPECS or person moving into SPECS roll repetition volume / preparedness

**Kicking Intensity & Volume Progression:**

Moderate Intensity YELLOW Moderate Volume: Wk1: 16 reps, wk2: 18 reps, wk3: 14 reps, wk4: 20 reps
High Intensity GREEN Low Volume: Wk1: 4 reps, wk2: 6 reps, wk3: 7 reps, wk4: 5 reps
Low Intensity RED High Volume: Wk1: 24 reps, wk2: 20 reps, wk3: 22 reps, wk4: 18 reps

**Drill selection menu from SPECIALISTS:**

**Drill Selection – Field Goal Kicker:**
Low Intensity Drills: short range, short distance, 1 step field goals, contact drills, taping steps
Mod Intensity Drills: medium range field goals, last second field goal prep (might put this in the high intensity bucket)
High Intensity Drills: all field goals with game mechanics and intent

**Drill Selection – Kick Off:**
Low Intensity: steps, onside kicks
Mod Intensity: 3 step kick offs, squib kicks, sky kicks
High Intensity: deep kick offs

**Drill Selection – Punting:**
Low Intensity: walking drops, chute steps, catch radius, direction dry work, dry swinging
Mod Intensity: pooch punts, roll punts, one step punts, no step punts
High Intensity: Full Punts

**Drill Selection – Snapping:**
Low Intensity: seated targets, slow motion snaps
Mod Intensity: Legs extended targets, vertical set blocking, coverage fits, hand fighting, pooch drill
High Intensity: Full Snap with pursuit

**SPECS PROGRESSION:**

**Wednesday, July 15, 2020**

1. BOX JUMP W/VEST X7 REPS TOTAL – RECORD TOP HEIGHT
2. PSOAS DL KICK X4 @:5S (3 SILVER BANDS)
3. 3X4 **ORANGE** BANDED SL SQUAT TO BOX (BOX SQUAT HEIGHT)
   DE INTENT & REPETITION STYLE
   PAIR WITH PSOAS CRUNCH 3X12

**Saturday, July 25, 2020**

1. SEATED BOX JUMP X7 REPS TOTAL – RECORD TOP HEIGHT
   BOX HEIGHT IS EQUAL TO BOX SQUAT HEIGHT
2. PSOAS DL KICK X4 @:5S (3 SILVER BANDS)
3. 3X5 **ORANGE** BANDED SL SQUAT TO BOX (BOX SQUAT HEIGHT)
   DE INTENT & REPETITION STYLE
   PAIR WITH PSOAS CRUNCH 3X15

**Friday, July 31, 2020**

1. PERFORM SQUAT AS SCRIPTED
2. PSOAS DL KICK X4 @:6S (3 SILVER BANDS)
   a. REMEMBER TO KEEP FRONT SHIN LOADED, TOES TO SHIN SOFT KNEE BEND AND HOLD FOR DURATION
3. PSOAS CRUNCH 2X20

**Wednesday, August 5, 2020**

1. 1 STEP APPROACH JUMP X5 REPS TOTAL – RECORD TOP HEIGHT
   LEG BACK IS SWING LEG FOR FIELD SPECIFIC SKILL
   START IS SIMILAR TO DROP STEP / OPEN STEP ON LUNGE MATRIX
2. HAMSTRING AFSM AS SCRIPTED
3. 5-3-2 PREP BOX SQUAT (DOUBLE EXPOSURE WT. FROM 7/31)
4. DYNAMAX SEATED GOODMORNING 3X15

JUNE:

LACTATE RENENTION METHOD – ADAPTATION PHASE

WKS 1-4 (4 WKS TOP)

**EXPOSURE 1: JUNE 18TH**

X3 SETS – 3 ATHLETES / BIKE
LEGS ONLY - :20S ON PAIR :40S WALL ISO – FOCUS ON BREATHING AND JUST BOTTOMING OUT
2 MIN RECOVERY BETWEEN SETS

**EXPOSURE 2: JUNE 25TH**

X4 SETS – 3 ATHLETES / BIKE
LEGS ONLY - :20S ON PAIR :40S WALL ISO – FOCUS ON BREATHING AND JUST BOTTOMING OUT
2 MIN RECOVERY BETWEEN SETS

**EXPOSURE 3: JUNE 30TH**

X5 SETS – 3 ATHLETES / BIKE
LEGS ONLY - :20S ON PAIR :40S WALL ISO – FOCUS ON BREATHING AND JUST BOTTOMING OUT
2 MIN RECOVERY BETWEEN SETS

JULY:

HIGH QUALITY LACTATE WORK FOR COMPETITION

WKS 5-8 (4 WKS TOP)

LACTATE PERFORMANCE – TABATA / SPORT SPECIFIC METHODS

IDEALLY 4 EXPOSURES - **JULY 9TH, JULY 15TH, JULY 22ND , JULY 29TH**

Motor Skills Development February 4, 2021

Mental toughness: performance while experiencing thought

4 levels of learning:
1. Unconscious incompetence
    a. Don't know you don't know
2. Conscious incompetence
    a. Know you don't know
3. Conscious competence
    a. Know how through conscious involvement
4. Unconscious competence
    a. Know how through unconscious habit

*Technical / tactical development, drill selection & progression is critical, dynamic correspondence needs to be present through entirety… Dynamic correspondence  carry over

Vulnerability – all men suffer from lack of vulnerability  goes against societal norms… this hinders development

Motor Skill Development: 4 stages of motor skill development
1. Unconscious incompetence
    a. State novice / beginning / young athletes in that they are highly inefficient at certain aspects of sport technique, and they are completely unaware of it
2. Conscious incompetence
    a. Athlete begins to recognize their inefficiency (they are aware); yet the technical inefficiency remains
3. Conscious competence
    a. Athlete has worked out technical inefficiency and are now efficient; however, must consciously think about what they are doing. Movements remain in the forebrain in which cognitive thought processes occur.
4. Unconscious competence
    a. Highest stage of motor learning.

At this point, the athlete demonstrates automated movement efficiency – they no longer think about what they are doing and they do it very well. The movement is now predominantly governed in the aft brain where body awareness, perception, and movement coordination occur.

**Each stage of learning requires a different approach to coaching** – drill selection / drill focus

The athlete who moves awkwardly and is unaware of it, who moves awkwardly and is aware of it, who moves efficiently yet only if they concentrate on it, or who moves efficiently without even thinking about, all necessitate a level of preparatory instruction commensurate with their mode of learning. All athletes, regardless of skill level, learn by way of one or more combinations of the following modes of instruction:

- Audible/verbal/written – being told or reading about what to do
- Visual (in another) – seeing the movement demonstrated by another
- Visual (self) – seeing themselves on film or in a mirror performing the movement; potentially along with tactile sensory feedback

Unconscious incompetent athletes are not necessarily a lost cause. The younger the athlete the more likely it is expected they demonstrate unconscious incompetence in their movements due to the fact every human demonstrates this condition upon entering the world. It becomes a question of what intervening forms of stimulation and preparation the developing athlete is exposed to prior to entering the tutelage of an organized sport preparatory environment.

Conscious incompetent athlete presents greater coaching challenges than their unconscious incompetent teammates. This is due to the fact the conscious incompetent sorts are keenly aware of what they have yet to sort out. Their frustration, then, is an added factor to contend with; aside from the problem solving that must be directed towards advancing their current state.

Conscious competent athletes represents a unique case in which their movements are now optimized; yet at the expense of cognitive work that may otherwise be devoted to processing sensory input of a tactical variety. Fundamental for these athletes are preparatory objectives themed in relaxation that allow the forebrain (conscious thought) work to gradually shift to the aft brain (unconscious though).

Unconscious competent athletes provide for the greatest ease of instruction and their road to mastery in all relevant movement realms presents the least amount of obstacles outside of the performance paradox (the better one is the harder it is to get better).

Regardless of where the athlete exists on the learning scale, the coach must identify the mode(s) of instruction the athlete is most receptive to and ensure that the forms of movement(s) in which they demonstrate any degree of inefficiency are either slowed and/or modulated/simplified as much as necessary in order to ensure they optimized execution

Technical skill development:

Must recognize that there is a significant difference between demonstrating a technical position and the actualization of that technique at the level of intensity intrinsic to high-level competition.

Most important exercises an athlete can perform in training are the competition exercises themselves **in addition to movements that serve to enhance them**.

What cannot be overstated is that even more important than the performance of these movements, however, is the way in which they are performed. “How” the movements are performed, in a large part, dictates the level and quality of skill development in an athlete.

Far to often athletes are not put through incrementally advanced (scaled) intensities of movement; nor are they allowed to rehearse singular aspects of specialized movement in a manner commensurate with the athletes ability to execute them efficiently. By contrast, in **pre-season training camps**, it is not uncommon for athletes to be i**ntroduced to a new skill/technique and in short order, be required to practice it at near competition intensity**. As a result, a**ny aspect of the technical execution that is inefficient will be further entrenched into the athletes movement along with the heightened potential for injury and error during the exposures to competition intensity/speed/efforts.**

These points are presented in order to give insight as to why technical drill selection is so critical and why there is a need to be able to progress and regress based upon the individual athletes stage of motor skill development. This should also re-iterate why the dynamic correspondence (carry over) of drill selection is critical.

Technical drills should give athletes skills needed to have success at positional demands as well as support the tactical demands of the larger group.

Example: O-Line -> stance – ability to operate in run game – ability to perform inside zone. As the athletes motor skill development stage climbs the advancement of the technical side would become as a possible example be technique needed and drill selection utilized to now advance skill set to be able to handle a defensive lineman that is stunting on the snap of the ball while performing inside zone....

# GOAL: SUBMAXIMAL TO MAXIMAL (BASED ON FRIDAY)

- AFTER SEEING THE OVERALL PROGRESSION OF PRACTICE FRIDAY, IT IS APPROPRIATE TO GET INTO MAXIMAL EXPOSURES WITHIN DRILL WORKGUIDEANCE FOR SCRIPTING SATURDAY PRACTICE:

- POST FSA LINES: GIVE THE ATHLETES A LOW PERIOD
  - (WALK THRU/ISO POSITION HOLDS) THIS WILL ALLOW THEM TO GATHER THEMSELVES AND THEN GIVE THE EFFORT AND INTENT NEEDED FOR A MAXIMAL DRILL

- AFTER THE LOW HIT THEM WITH A MAXIMAL DRILL
  - **SHORT DISTANCES AT GAME SPEED WITH GREATER RECOVERY**
  - **TAKE DRILLS FROM FRIDAY (TAKE OFF) AND SCRIPT SHORT DISTANCES AT MAXIMAL INTENT AND SPEED WITH GREATER RECOVERY**

- THEN FOLLOW WITH EITHER A **SUBMAXIMAL** DRILL OR LOW DRILL

- THEN FOLLOW WITH A MAXIMAL DRILL

- KEEP THIS PATTERN TO WAVE THE INTENSITIES

- **YOU CAN ALSO WAVE THE INTENSITIES OF REPS WITH-IN A DRILL**
  - FOR EXAMPLE YOU COULD HIT 3 REPS ON TAKE OFF AT A MAXIMAL, THEN FOLLOW UP WITH 6 TO 8 REPS AT LOW OR **SUBMAXIMAL** AND THEN FINISH WITH ANOTHER 3 REPS MAXIMAL

- HOWEVER YOU CHOOSE TO APPROACH, JUST TRY TO **WAVE THE INTENSITIES** AND AVOID MAXIMAL TO MAXIMAL EXPOSURES, ALWAYS LOOK TO FOLLOW UP A MAXIMAL EXPOSURE WITH A **SUBMAX** OR LOW, AND VICE VERSA, FOLLOW A LOW (PREFERABLY) WITH A MAXIMAL, **SUBMAXIMAL** TO MAXIMAL **WILL OCCUR BUT DO YOUR BEST TO AVOID IF AT ALL POSSIBLE**

**POINTS OF EMPHASIS WITH HEAT INDEX TODAY:**

- **PUSH HYDRATION THROUGHOUT ALL OF PRACTICE, PLAYERS & COACHES**
- **WATCH THE BREATHING PATTERNS OF YOUR GROUPS, ESPECIALLY WHEN IN TIGHT SPACES WITH GAITORS ON (ESPECIALLY BIGS), GET THEM A SERIES OF REPS (3-5), THEN SEPARATE THEM AND COACH TECHNICAL/DETAIL SPECIFICS, ALLOW THEM TO GATHER**

OVERALL GOAL IS LOW. NO GREATER THAN SUBMAX. THIS WILL SET US UP FOR A MAXIMAL TUESDAY.

*IF CHOOSING TO PERFORM SUBMAX, WAVE BETWEEN LOW AND SUBMAX PERIODS.*

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**LOW GUIDELINES**

- **STYLE FOR ALL IS WALK THRU**
  - Due to the fact that this is a walk, minimal to no rest is needed.
- **EXAMPLE FOR EVERYONE : ALIGNMENT, ASSIGNMENT, WALK**
  - ISO position holds could be beneficial at times (not in excess…see us for details).
- **NOTE:** Whatever you do on this day… maximal game reps/game speeds should be able to follow the very next day.

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**SUBMAX GUIDELINES**

- **STYLE FOR ALL IS RUN (JOG-TEMPO )THROUGH (NO SPRINT THROUGH)**
  - Eliminate exposure to maximal velocity. Encourage exposure of submaximal speed (tempo speed).
  - Due to this being submax, minimal rest (20-30 sec) rest is advised.
    - Command by using the word tempo which will guide the pace to approximately 70ish%. The kids will know what that means, and they know their pace. They also know that during tempo work we accelerate to begin with. Que with… jump off then tempo. (see us for details regarding accel. distance)
  - Keep distance of tempo work moderate to high depending on goals (see us for details regarding distance).
  - Limit number of decel. exposures, or substitute with the more appropriate option by following the example below.
    - Example (see us for specific positions, and accel distance)
      - 1. ISO POSITION when direction would change (que by saying pull down)
      - 2. POINT (foot guides direction) and ACCELERATE (que by saying jump off- similar to hop matrix)
  - When either a coach or player is throwing to a player, please note not to lead the receiver too far. Will cause unnecessary change of speed and could be counterproductive in regard to goal of the day.
- **TEAM EXAMPLE : ALIGNMENT, ASSIGNMENT, TEMPO**
  - OFFENSE DRIVE SERIES (TEMPO- SUBMAX)
  - DEFENSE PURSUIT (TEMPO- SUBMAX)
- **INDY EXAMPLES**
  - **OL ,DL** (could change if closer or farther away from ball…see us for details)
    - Limit or eliminate number of intensive punches.
    - Limit or eliminate intensive run game work.
    - Limit or eliminate intense sled work.
    - Limiting foot stress on this day would be beneficial. (see us for details)
  - **QB**
    - Limit or eliminate number of intensive throws
    - Limit or eliminate number of intensive drops.
  - **WR, RB, DB, LB**
    - Limit number of high speed decel. exposures. (example above)
      - Could change from bag to ladder to limit stress.
    - Follow guideline of velocity (above) by tracking the ball downfield at tempo pace.
  - **TE**
    - Follow OL examples above.
    - Follow WR examples above.
- **NOTE:** Whatever you do on this day… maximal game reps/game speeds should be able to follow the very next day

**QBS**

THEY ARE THROWING POST TRAINING → WILL NEED A GENERAL TO SPECIIC PREPARATION… PREPARE THEM FOR DEMANDS OF PERFORMANCE / GETTING INTO…

TARGETS TODAY SHOULD BE STATIONARY / TOP OF ROUTE / TURN & CATCH CONCEPTS… NOTHING THAT HAS A COST ON QB ARM…

THROWING DISTANCE GUIDANCE → DISTANCES SHOULD BE IN A RANGE WHERE NO GREAT TECHNICAL ADVICE NEEDED

DO NOT EXCEED 40 THROWS TODAY… DISTANCE OF THROW SHOULD NOT EXCEED 25 YARDS

OF 40 THROWS LEAVE 10% OF THEM AT 25YARD DISTANCE… SHOULD WAVE DISTANCE UP AND THEN BACK DOWN

EXAMPLE:

5YD THROWS X7
10YD THROWS X6
15YD THROWS X5
20YD THROWS X4
25YD THROWS X4
20YD THROWS X2
15YD THROWS X3
10YD THROWS X4
5YD THROWS X5

**SPECS**

INDY SKILL SHOULD BE VIEWED AS AN EXTENSIONS OF PREPARATION FOR BALL STRIKING

TODAY SHOULD BE **YELLOW** OVERALL, HOWEVER THIS IS THE FIRST DAY SO INTENSITY NEEDS TO BE ACCOUNTED FOR AS TO NOT RESULT IN A DISTRUPTION OF WEDNESDAY THROUGH FRIDAY TRAINING PROCESS…

GENERAL GUIDANCE…

DO NOT EXCEED 20 OVERALL CONTACTS TODAY (ONCE PREPARATION IS COMPLTETED). CONSIDER LENGTH OF PREPARATION AND TOTAL VOLUME OF WORK DONE TO GET PREPARED… EVERYTHING HAS A COST.. IF PREPARATION EXCEEDS WHATS NEEDED TO ACHIEVE CONTACT OBJECTIVE OF DAY, CONTACTS GUIDANCE WILL NEED TO ADJUSTMENT. OF THESE 20 CONTACTS BREAKDOWN SHOULD LOOK SOMETHING LIKE THIS:

NO MORE THAN 2 CONTACTS THAT ARE CONSIDERED **GREEN**

NO MORE THAN 8 CONTACTS THAT ARE CONSIDERED **YELLOW**

NO MORE THAN 10 CONTACTS THAT ARE CONSIDERED **RED**

**THIS IS A TOTAL OF 20 CONTACTS WHOS ACCUMULATION OF TOTALITY WILL EQUATE TO A "YELLOW" DAY…**

TRAINING WILL OCCUR POST BALL STRIKING

## FRIDAY 3-26

MAKE SURE QB IS PREPPED PRIOR TO THROWING AND IS READY TO ENGAGE IN PROGRESSION OF THROWING INTENSITY

**WAVE 1:** SMOOTH –ONCE AT 10 YARDS ASCEND SO LAST THROW IS 75 – 80% INTENT

5YD THROWS X3
10YD THROWS X3
15YD THROWS X3
20YD THROWS X3

**WAVE 2:** DELIBERATE DELIVERY – ASCEND INTENT – SHOULD ONLY YIELD 1 TOP END EFFORT THROW AT DISTANCE LISTED:

15YD THROWS X3
20YD THROWS X4

**WAVE 3:** SMOOTH ASCEND SO LAST THROW EFFORT IS 75 – 80% INTENT

20YD THROWS X1
25YD THROWS X2
30YD THROWS X3
35YD THROWS X3

**WAVE 4:** DELIBERATE DELIVERY – ASCEND INTENT – SHOULD ONLY YIELD 1 TOP END EFFORT THROW AT DISTANCE LISTED:

2O YD THROWS X2
25YD THROWS X3

**WAVE 5:** COOL DOWN –EFFORTLESS – "TEMPO" THROW CONCEPT

25YD THROWS X2
20YD THROWS X3
15YD THROWS X4

# Example player

- Spring 2019
  - 4/2: 498
  - 4/4: 517
  - 4/5: 561
  - 4/6: 449
- If we consider on week 3/30 was his “game load” – total amount of work performed – of 622 his 4 practices this week were:
  - 4/2 – 80% of game load
  - 4/4 – 83% of game load
  - 4/5 – 91% of game load
  - 4/6 – 72% of game load
    - Note these are “consecutive” practices… all of which would be “high”

# Touching back on W:R

Technical work upon a "mastery" level – now looking to be capacity driven

- Work being done can now be pushed to high and or maximal intentions with incomplete recovery
- We know from data collections of game exposures we are usually at a 1:4 – 1:7 work to recovery
  - Example: play duration of :5s, time until next snap is :30s, this is a 1:6 work to rest, this was the average for the ULM game played in 2019 for Defense
  - Example: play duration of :5s, time until next snap is :25s, this is 1:5 work to rest, this was the average for the WVU game played in 2019 for Defense
  - These guidelines hold true for our Offensive self scout game exposures as well…
  - Offensive averages W:R was 5.32 : 32.98
- We would be ignorant to ever truly move faster between reps than this since we know this is specific to the demands of what we are looking to have our athletes achieve on any given Saturday of the ***season,*** we are not in-season!

# Focus of practice plan / structure

- Specificity of exercise program is critical to adaptation.
- Where do you start?
- Where do you finish?
- What is the end game?
- This is all simply a progression of teaching practice structure
- Order of operations (examples):
  - Technical operations for the individual on an individual basis
  - Tactical operations for the individual on an individual basis
  - Technical operations for the group on a group basis
  - Tactical operations for the group on a group basis
  - Technical operations for the next group setting (OL & TE / or RB's)
  - Tactical operations for the next group setting
  - Tactical operations for the entirety of the side of the ball O/D/SPECS

# Focus of practice plan / structure

- Short to long → higher speeds more intensified loads → sufficient prep → low intensity high volume leads into high intensity low volume
- Part whole approach → restrict range of motion/range of drill/goals of drill, play, etc… continue to break it down or go slower!

# ADDITIONAL NOTES:

- The goal is to intensify the load
- Goodharts law – when a measurable becomes a goal it ceases to become a measurable… British India & Snakes
- Team environment → goal of training is transition into performance, assuming competent drills take all movements & drill work, movement in performance, and take aspects of these: route running, intensity of drill 90/80/70%, break route down → 1st 5m, the start → 5m+ decelerate into route out of route, add complexity into route, do ½ route if 3 cuts do one cut, coach all mechanics, make perfect in shortest amount before you add complexity
- Submax routes → tempo work strengthen connective tissue associated with cutting more stable safe efficient → extrapolate to positions – submax LIHV practices

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