PRE-SEASON TRAINING FOR WOMEN'S BASKETBALL AT THE UNIVERSITY OF WISCONSIN PART II: PRE-SEASON PROGRAMMING

In my first article, I wrote about my pre-season training plan for our women's basketball team at the University of Wisconsin. In Part II, I will share some specific details on my program set-up and philosophy.

First, I am not a genius when it comes to programming. Most of my programming ideas have come from some of the best coaches in the business. Therefore, I must give credit to Mike Boyle, Robb Rogers, Brijesh Patel, Jeff Oliver, Elizabeth Proctor, Art Horne, Jim Snider, Brian Bott and the list goes on.

Second, my programming strategy works best for my training environment. I am fortunate to have the support, athletes, facilities, and resources to create my set-up. My programming set up may not work at another basketball program but hopefully it will give you some insight on how the women's basketball team trains during the pre-season at the University of Wisconsin.

PLANNING TO DEVELOP THE PLAN

I think it is understood by most strength coaches that training programs must have a set of goals and a plan to achieve those goals. The collegiate basketball season is long, physical and mentally exhausting and the objective in preparing for the season is to develop and enhance the physical and mental qualities needed to perform at a healthy and productive level.

I start off the new training year (after our last competitive game) by developing a set of goals (and a plan of action) on what I want to accomplish prior to the competitive season (Table 1).

Apr	May June July Aug		Sept	Oct	Nov - Mar				
Post	Off-season		Pre-season		Competitive season				
GPP	HYP	MxS	Power	HYP	S + P-E		<mark>S + P-E</mark>		Maintenance/Strength
Recovery	General Conditioning		Specific	Conditioning	Practice and Games				

Table 1: Basic Yearly Plan

GPP = General Physical Preparedness, HYP = Hypertrophy, MxS = Maximum Strength, S = Strength, P-E = Power Endurance

My goals and plan is then shared with the head coach. This meeting also allows me to share my training insight and clear any myths or fallacies pertaining to strength training and female athletes.

One of the keys to having a successful training program is to have constant communication with the coaching staff and with individuals that support the team. Communication keeps the coaching staff abreast to your plans and gives them a level of security and confidence in your area of responsibility.

Since I work with female athletes, strength work is priority. In my opinion, strength is the number one limiting factor for improving athleticism when dealing with female athletes; especially athletes that are traditionally novice in weight training. I'll continue to reiterate that strength is a physical quality that helps reduce the risk of injuries associated with playing basketball. And when you compare a female basketball player to their male counterpart they are often more prone to on-court related injuries because of neural and physiological differences.

CONSTRUCTING THE PLAN

Our pre-season training was divided into two (2) phases. Each phase was approximately four (4) weeks long.

The goal during phase one (1) is to prepare our team for the start of official practice and the volumes and intensities incurred during that time period. The goal for phase two (2) is to prepare our team for the beginning portion of our non-conference game schedule.

Table 2 (see below) shows how I divided Phase 1 training session into two (2) training blocks. The immediate goal is to improve bilateral and unilateral strength and speed by using the Canadian Ascending and Descending method (this will be explained more in depth). Improving on-court conditioning is our secondary goal.

 Table 2: Pre-season I Training Blocks: September – October (4 Weeks)

 Blocks
 Duration
 Goals (Targets)

	DIOCKS	Duration	
l	Block 1	2 weeks	Bilateral Strength + Speed (Canadian Ascending+Descenting); Specific Conditioning
ĺ	Block 2:	2 weeks	Unilateral Strength + Speed (Canadian Ascending+Descenting); Specific Conditioning

Every workout starts with a warm-up which is approximately 15 – 20 minutes long. Our warm up/movement prep strategy, which I learned from coaches Robb Rogers and Brijesh Patel, is as follows:

Inhibit:	Foam rolling: inhibit overactive and tight muscles
Lengthen:	Static stretching: stretching the areas that were overactive and inhibited
Activate:	Turn on the muscles that are dormant/inactive
Integrate:	Incorporate the muscles turned on into functional movements
Mobility:	Warm up movements and improve ROM

Proceeding our mobility work, we will conclude with some drills to reinforce landing mechanics and to "jump start" our CNS (Tables 3 and 4).

Our lower body strength exercise will typically determine our warm-up and movement prep protocol (Table 5). For example, on bilateral strength days, we will do static stretches and hip mobility drills for the hip flexors, hip extensors, and hip external rotators as well as activation work for the psoas and glute max. Core exercises will mostly consist of anti-rotation work as well as single leg landing drills.

Following our warm up and movement prep we will proceed to our lift for that day. In Block I, we will have two lower body (push) bilateral days and one lower body (push) unilateral day. In Block II we will do the opposite (two unilateral days and one bilateral day). Typically, single leg posterior chain work is done on bilateral days and double leg posterior chain work on unilateral days.

Monday	Wednesday	Friday	
MOVEMENT PREP Inhibit Lengthen Activate [core] Integrate Landing Reinforcement Neurological	MOVEMENT PREP Inhibit Lengthen Activate [core] Integrate Landing Reinforcement Neurological	MOVEMENT PREP Inhibit Lengthen Activate [core] Integrate Landing Reinforcement Neurological	
LIFT 2 Leg Push Controlled Rep Method 2 Leg Push Strength Speed Method	LIFT 1 Leg Push Pair Upper Horizontal Pull Barbell Complex	LIFT 2 Leg Push Strength Speed Method 2 Leg Push Speed Strength Method	
2 Leg Push Speed Strength Method 2 Leg Pull [Post Chain] Pair Upper Vertical Pull On-court (shuttles)	Sleds Stretch	2 Leg Push Controlled Rep Method 2 Leg Pull [Post Chain] Pair Upper Vertical Pull Bike (steady-state)	
Stretch		Stretch	

Table 3: Program Structurefor Block I

Wednesday	Friday
MOVEMENT PREP	MOVEMENT PREP
Inhibit	Inhibit
Lengthen	Lengthen
Activate [core]	Activate [core]
Integrate	Integrate
Landing Reinforcement	Landing Reinforcement
Neurological	Neurological
LIFT	LIFT
2 Leg Push (hybrid)	1 Leg Push
J () ,	Strength Speed Method
Upper Vertical Push	Pair
Pair	Upper Horizontal Push
Upper Horizontal Pull	
Pair	1 Leg Push
2 Leg Pull	Speed Strength Method
	Pair
Sleds	Upper Vertical Pull
Stretch	1 Leg Push
	Controlled Rep Method
	2 Leg Pull [Post Chain]
	Pair
	Upper Vertical Pull
	Bike (steady-state)
	Stretch
	Wednesday MOVEMENT PREP Inhibit Lengthen Activate [core] Integrate Landing Reinforcement Neurological LIFT 2 Leg Push (hybrid) Upper Vertical Push Pair Upper Horizontal Pull Pair 2 Leg Pull Sleds Stretch

Table 4: Program Structure for Block II

Table 5: Bilateral and Unilateral Lower Body Prep

DOUBLE LEG DAY	SINGLE LEG DAY
LOWER BODY ACTIVATION	LOWERBODY ACTIVATION
HIP MOBILITY 1 (posterior hip)	HIP MOBILITY (lateral hip)
(Clear hip flexors + rotators)	(Clear adductors)
Increase Hip Extension ROM	Increase Hip External Rotation + Abduction
GLUTE ACTIVATION (GLUTE MAXIMUS)	GLUTE ACTIVATION (GLUTE MEDIUS)
HIP MOBILITY 2 (anterior hip) (Clear hip extensors) Increase Hip Flexion ROM ACTIVATION (PSOAS)	
UPPERBODY ACTIVATION	UPPERBODY ACTIVATION
T-SPINE MOBILITY (EXTENSION)	T-SPINE MOBILITY (ROTATION)
LOWER TRAPEZIUS	SERRATUS ANTERIOR (SCAPULA)
SUBSCAPULARIS (INTERNAL ROTATION)	SHOULDER EXTERNAL ROTATION
CORE	CORE
ANTI-ROTATION	ANTI-EXTENSION
LIFT	LIFT
SINGLE LEG POSTERIOR CHAIN	DOUBLE LEG POSTERIOR CHAIN
UPPER BODY (REPS)	UPPER BODY (HEAVY)

THE PLAN

PHASE I

In Block I and II, Monday and Friday sessions are devoted to strength and speed work (Example 1 and 2). This year, I used the Canadian Ascending-Descending Complex Training (CAD) method popularized by Christian Thibaudeau to improve those physical traits. This method of training gives me the best opportunity to develop strength, power and speed in a relatively short period of time. The players are able to develop the neurological adaptations associated with training with light and heavy loads.

The CAD method is an extended version of the traditional complex training method. Instead of doing a complex of two (2) exercises (a slow speed strength exercise and a high speed strength exercise), you will use a complex of 3 - 5 exercises each with various loading parameters. In addition, we will use a horizontal loading scheme in which we will perform all the sets of one exercise before moving onto the next exercise.

Our program used three (3) exercises in our complex scheme. The Monday workout is a descending workout starting with the slowest but heaviest exercise (controlled rep method) and ending with the quickest but lightest exercise (speed strength method). Since strength is still a priority during the preseason we will start the week with more strength work. The Friday workout is the reverse starting with the quickest and lightest exercise and ending with the slowest but heaviest exercise. I used this method for lower body training only.

The Wednesday sessions are devoted to more low impact metabolic work and may include a circuit or some form of a dumbbell or barbell complex.

Conditioning is completed at the end of weight training sessions on Monday and Friday. On Monday, conditioning is performed on the basketball court and primarily consists of shuttle drills. Prior to our shuttle drills we will do some on-court movement prep (Example 3). On Friday, we will do a steady state bike workout as recovery work from the long week of activities.

You will notice in our program that I do not use an Olympic lift exercise for our strength-speed efforts within our CAD training method. In fact, you will notice that I have excluded the Olympic lifts (specifically the clean and snatch) from our entire pre-season program. First, before I am crucified by my peers, I think the Olympic lifts are great for developing and maximizing explosive power. There are tons of literature and research developed by Charlie Francis, Dr. Mike Stone, Mark Rippetoe, Dan John, and a host of other authors that prove this theory to be accurate.

Other benefits from using the Olympic lifts are:

- 1. The ability to synchronize several muscle actions to produce one fluid, powerful motion
- 2. The ability to develop strength and power in the posterior chain
- 3. The ability to absorb force
- 4. The ability to train the CNS to recruit high threshold muscle fibers/motor units

However, given the benefits there are some disadvantages. The major drawback is the time required to teach and learn a very complex movement to a group of athletes. As I mentioned previously, the competitive season in college basketball is very long; starting in October and ending in March. The ability to maximize strength during that time period is extremely challenging. With that being said, once the season is over, off-season (summer) training must be extremely productive. It is the best (and only) time to develop the physical qualities needed to compete for the upcoming competitive year. At the University of Wisconsin, our on-campus off-season training is only eight (8) weeks long. Spending that time period to teach a group of athletes a complicated lift is not an efficient use of time in my opinion. I rather spend the time teaching athletes to perfect the traditional lifts (i.e. squat, various deadlifts, etc.) and combine those lifts with various jumps or use other effective training tools to improve power production.

have used some pulling variations of the Olympic lifts to simply reinforce triple extension of the ankle, knee, and hips. This may include clean pulls from the block; snatch pulls from the block, down and up shrugs, prop pulls, and segmental pulls from the block to name a few.

PHASE II

In phase II, official practice has begun and the intensity and volume of activity on the court has increased dramatically. However, weight training is still a priority and this is demonstrated by having three (3) total body lifts per week until our first competition (Example 4). The focus during this phase is to maintain strength gains. We will eliminate all jumping specific exercises from our training protocol and concentrate more on strength work. In addition, we will still do some lower body bilateral and unilateral strength work throughout the week. Conditioning will take place during practice sessions.

CONCLUSION

Once again, I am fortunate to work with a great coaching staff at the University of Wisconsin. My training ideas and creativity would not be possible without the support of the head coach. I encourage strength coaches to be the best at doing what you do! Believe in your work and never underestimate your training philosophy. If it works for you and your athletes then you are on the right path to success. Good luck this season!

Example 1: PRE-SEASON PHASE 1 [Block 1]: Strength + Speed Complex Work [Canadian Ascending and Descending], Bilateral

MONDAY 9/6		WEDNESDAY 9/8			
INHIBIT	SETS REPS	INHIBIT	SETS REPS		
MFR [add t-spine ext]	10	MFR			
Rocking Ankle Mobe	10e	Gastroc stretch [slant boards]	:15e		
LENGTHEN		LENGTHEN			
Box hip flex + RF stretch [back leg on bo	x] :15e	Pulsed hip flex mobilization	5x:05e		
Glute stretch	:15e	Spider stretch	:15e		
Partner pec stretch	:15e	Pecflye	10		
Floor lat stretch	:15e	Dynamic floor lats	10		
ACTIVATION [CORE] I x2		ACTIVATION [CORE] I x2			
	12e	Partner groin [5 positions]	:05e		
Alt 1 leg box buck	10	Bench extension	87654321150		
Scap push ups [slow]	12	Side bridge	:25e		
Kneeling anti rotation rollers	:20	MB side throw [pivot] 1 response	5e		
ACTIVATION II x2		ACTIVATION II x2			
Lateral zig-zag band walks [OH reach]	2x10yd	S.leg box squat	1x10e		
INTEGRATION [PREHAB]		INTEGRATION [PREHAB]			
S.leg 3-w ay reach [Y balance]	5e	Reverse lunge [sagittal arm drivers]	5e		
D.leg hurdle hop w /band feedback [stabi	lization] 2x5	Lateral altitiude drop [stabilization]	1x5e		
EXERCISE	LOAD REPS	EXERCISE	MPO LOAD REPS		
PLATE REACH OUT SQUAT 1/5/x	5				
BOX SQUAT [PAUSE] 2/1/x	5	IMAINTAIN VERTICAL TIBI	8e		
SIT BACK	4	[8e		
SPREAD FLOOR WITH FEET AND HIPS	4	PAIR			
	4	DB ROW 8	7654321Iso x3		
	4				
	4				
ISO SNATCH PULL [AGAINST RACKS]	:05	PARTNER BARBELL COMPLEX [5	ROUNDS]		
PROP POSITION; VERTICAL TORSO	:05	[SEE SHEET]			
	:05				
	:05				
VERTIMAX SQUAT JUMPS	5				
COUNTERMOVEMENT; SQUAT THEN JUMP	5	BACKWARD SLED WALKS [VMO]	6		
CONTINUOUS, EXTEND HIPS	5				
Box hip flex stretch [front leg on top]	5				
BENCH CORD PULLDOWNS (UH)	3x12				
	240-				
	зхае				
4 Groups (3 Rounds)					
5 court crosses (:30 -:35)					
3 court crosses (:15 - :17)					
1 court cross (:05 - :07)	1		1		

FRIDAY 9/10	
INHIBIT SET	S REPS
MFR [add cook side-lying T-rotate, arm sw eep]	10e
Anterior tib	20e
Ankle mobe [frontal plane leg swings]	10e
LENGTHEN	
Box hip flex + RF stretch [back leg on box]	:15e
Glute stretch	:15e
Partner pec stretch	:15e
Floor lat stretch	:15e
ACTIVATION [CORE] x2	
Clams [bands]	12e
Alt 1 leg box buck	10
Scap push ups [slow]	12
Kneeling anti rotation rollers	:20
ACTIVATION II x2	
Lateral [staggared] band w alks	2x10yd
INTEGRATION [PREHAB]	
Lungo motrix	20

 Lunge matrix
 3e

 D.leg hurdle hop w/band feedback [stabilization]
 2x5

 S. leg diag hurdle hop [stabilization]
 2x5e

EXERCISE	TEMPO	LOAD	REPS
SO SNATCH PULL [AGAINST RAC	KS]		:05
PROP POSITION, VERTICAL TORSO		:05	
			:05
			:05
VERTIMAX SIT [SHOCK] JUMPS			5
EXTEND HIPS			5
			5
PLATE REACH OUT SQUAT	1/5/x		5
BOX SQUAT [PAUSE]	2/1/x		5
SIT BACK			4
SPREAD FLOOR WITH FEET AND HI	PS		4
			4
			4
FOI Online Onwert			4
EQI Splits Squat			
BENCH CORD PULLDOWNS (UH)			3x12
PAIR			
S.LEG BUCKS			3x8e
BIKE			
STRETCH			

Example 2: PRE-SEASON PHASE 1 [Block 2]:

Strength + Speed Complex Work [Canadian Ascending and Descending], Unilateral

WEDNESDAY 9/29

SETS REPS

:15e

5x:05e :15e

10

10

10

10

5e

5e

:20e

10

5e 5e

2x5

MONDAY 9/27	WEDNESDA 9/29		
INHIBIT	SETS REPS	INHIBIT	
MFR [add t-spine ext]	10	MFR	
2 w ay ankle mobe	10e	Gastroc stretch [slant boards]	
LENGTHEN		LENGTHEN	
Box hip flex+ RF stretch [back leg on box] :15e	Pulsed hip flex mobilization	
Glute stretch	:15e	Spider stretch	
Partner pec stretch	:15e	Pulse trap [palms dow n]	
Dynamic lat stretch	:15e	Dynamic floor lats	
ACTIVATION [CORE] 1 x2		ACTIVATION [CORE] x2	
Side bridge [bent knee] Glute Medius	5+:05e	Partner hollow rocks	
Ecc only leg curls [platform]	10	Bench extension [10 lbs]	
Face pull with external rotation	12	MB OH throw dow ns [step]	
Pallof Press	10e	MB facing side throw 1 response	
ACTIVATION II x2		ACTIVATION II x2	
Lateral zig-zag band w alks [OH reach]	2x10yd	BB s.leg stance	
ACTIVATION III		INTEGRATION [PREHAB]	
lso split squat	:40e	Squat to stand	
		Cradle tuck	
LANDING REINFORCEMENT		Knee hug	
S.leg fwd hurdle hop [stabilization]	2x5e	CNS	

EXERCISE	TEMPO	LOAD	REPS
S.LEG ISO DEADLIFT [RACK]		vest	:05e :05e :05e :05e :05e :05e
P: L-SIT CHINS: 2x:10 ECC [3 SETS]	vest vest	4e 4e 4e 4e
ISO RELEASE BAND SPLIT JUMP: [HOLD FOR :04] P/ BAND PUSH UPS 3x10	6		4e 4e 4e 4e
SNATCH GRIP RDL P:/BALL ROLLOUT 3x12			7 7 7 7
ON-COURT CONDITIONING Quick mvmt prep Team Metabolics (full game)			

STRETCH

EXERCISE	TEMPO	LOAD REPS
HEX BAR DL		4
		4
		4
		4
		4
	0/1/	4
	2/1/X	6
		6
		6
PAIR		-
S.A RM BA ND ROW		8e
[SHORT LUNGE STANCE]		8e
		8e
		8e
PAIR		
SB LEG CURL		8
		8
		8
		8
CROSSOVER SLEDS		6
STRETCH		

lso release squat jumps [:04 hold]

FRIDAY 10/1	
INHIBIT	REPS
MFR [add Quad T-rotate+ext]	10e
3 way ankle mobe	10e
LENGTHEN	
Box hip flex + RF stretch [back leg on box]	:15e
Glute stretch	:15e
Partner pec stretch	:15e
Dynamic lat stretch	:15e
ACTIVATION [CORE] 1 x2	
Side bridge [bent knee] Glute Medius	5+:05e
Ecc only leg curls [platform]	10
Face pull with external rotation	12
Pallof Press	10e
ACTIVATION II x2	
X band w alks	2x10yd
ACTIVATIONIII	
lso split squat	:40e
LANDING REINFORCEMENT	
S. leg diag hurdle hop [stabilization]	2x5e

EXERCISE	TEMPO	LOAD	REPS
ISO RELEASE BAND SPLIT JUMP: [HOLD FOR :04] P:/ BAND PUSH UPS 3x10	S		4e 4e 4e 4e
SPEED RFE SPLIT SQUAT P. L-SIT CHINS: 2x:10 ECC [3 SETS]	vest vest vest	4e 4e 4e 4e
S.LEG ISO DEADLIFT [RACK]			:05e :05e :05e :05e :05e
SNATCH GRIP RDL P/BALL ROLLOUT 3x12			7 7 7 7
BIKE CONDITIONING			

Example 3: MOVEMENT PREPARATION

Prior to on-court conditioning

On-court Preparation Linear

Linear Knee Tuck Spider Lunge to Hip Flex Lateral Squat Shift Skip fwd + Retro Shuffle Retro + Exchange S-Pattern Run + Retro Backpedal S Backward Run + Reach 45 Cut [plant and pivot]

Lateral

Crossover Front Shuffle Carioca Change direction Lateral Jumping Jacks Lateral Push x2 to crossover sprint

Multi-directional [specific]

Post + Perimeter: Lane runs [call for ball]

Perimeter: Arc chase [get through screen simulations] [R+L] Perimeter: Closeout to 3 point line to pop back (or slide)

Post: Baseline + box-out + rebound [turn and run] [R block + L block] Post: Pit Drill

Example 4: PRE-SEASON PHASE 2 Maintenance

MONDAY 10/18		THURSDAY 10/21
INHIBIT	SETS REPS	INHIBIT
MFR [add t-spine ext]	10	MFR [add side-lying T-rotations]
2 way ankle mobe	10e	Rocking ankle mobe
LENGTHEN		LENGTHEN
1/2 kneeling hip flex + RF stretch	:15e	Rack hip flex + OH reach
Glute stretch	:15e	Spider stretch
Partner pec stretch	:15	Split stance kneeling adductor stretch
Dynamic floor lat stretch	10	Floor lat stretch
ACTIVATION [CORE] 1 x2		ACTIVATION [CORE] x2
Lateral band w alks [2 steps turn]	10yds	Lying hip flexor pulls
KB swings [hip ext]	10	Bench s.leg hip thrust
Face pulls	12	Side elbow bridge w/leg raise
SB arm circles [plank]	10e	
INTEGRATION		INTEGRATION
Squat to stand	6	OH lunge w alk
OH reach reverse lunge	5e	Alt lateral lunge w alk
Lateral squat shift	10	Cradle tuck
LANDING REINFORCEMENT		LANDING REINFORCEMENT
S.leg fwd hurdle hop [stabilization]	2x5e	Lateral box jump off
CNS		CNS
lso release split squat jumps [:04 hold]	1x5e	MB side throw [1 response]
		

	FRIDAY 10/22	
SETS REPS	INHIBIT SE	TS REPS
10e	MFR [add side lying ext+int rotations]	10e
10e	2 w ay ankle mobe	10e
	LENGTHEN	
:15e	1/2 kneeling hip flex + RF stretch	:15e
:15e	Glute stretch	:15e
10e	Partner Pec Stretch	:15
:10	Dynamic floor lat stretch	10
	ACTIVATION [CORE] x2	
5+05e	Staggared band w alks	10yds
8e	Band pull throughs	10
5+05e	Face pulls w/ER	12
	SB arm circles [plank]	10e
	INTEGRATION	
10yds	Squat to stand	6
10yds	OH reach reverse lunge	5e
10yds	Lateral squat shift	10
	LANDING REINFORCEMENT	
2x3e	S.leg diag. hurdle hop [stabilization]	2x5e
	CNS	
1x5e	lso release squat jumps [:04 hold]	2x5

EXERCISE	TEMPO	LOAD	REPS
HEX BAR DEADLIFT			3
			5
			5
			5
PAIR			5
MANUAL SIDE-LYING ER		5	3x10e
DB BENCH	3/1/x		4x6-8
S.ARM DB ROW P:	876543	321lso	4
D.LEG SB LEG CURL			4x8
MCGILL SIDE BRIDGE		4	321e/s

EXERCISE	TEMPO	LOAD	REPS
ECC CHIN UPS [PARTNER ASSISTED CONCENTRIC	:10 Ecc]		3 3
PAIR			3 3
DB INCLINE [HVY] [3RD HOLE]	2/1/x		6-8 6-8
			6-8 6-8
SNATCH GRIP RDL [HVY] P:			4x6-8
SQUATTING S.ARM BAND ROTA P:	TIONAL	ROW	3x8e
TALL KNEELING PALLOF PRESS	10 hold		3x3e
STRETCH			

EXERCISE	TEMPO	LOAD REPS
DB SPLIT SQUAT	2/1/x	6-8e
		6-8e
		6-8e
		6-8e
PAIR	ļ	10
ITALL KNEFLING		10
		10
		10
BACK EXT [10LBS] P:	765432	1lso x3
BAND PUSH UPS P:	3/1/x	3x10
INVERTED ROW [OH]		3xamrp
MCGILL CURL UP		2x5e (:02)
1		
1		
STRETCH		-

STRETCH

References

Thibaudeau, Christian (2006). Theory and Application of Modern Strength and Power Methods: Modern methods of attaining super-strength. F. Lepine Publishing.