

M | **MICHIGAN BASKETBALL**
Jon Sanderson | **Strength & Conditioning**

M | **WATCH YOUR ATHLETES PLAY**

- How athletic are they?
- How well do they move laterally?
- Do they jump better off 1 leg or 2?
- How tough are they?
- Are they contact seekers or avoiders?
- Do they pursue rebounds or do they ball stare?
- Do they land with balance and pivot well?

M | **HOW DO YOUR ATHLETES LOAD ?**

- Inefficient loading mechanics and anterior translation of center of gravity (forward in loading) will result in less force application and diminished performance



HOW DO YOUR ATHLETES LAND ?

- Inefficient landing mechanics will result in more stress on the knees.
- The hips are the strongest part of our body and are equipped to decelerate forces generated through landing.



Efficient landing mechanics



Inefficient landing mechanics



ARE YOUR ATHLETES VALGUS ?





HOW DO YOUR ATHLETES RUN ?


- Excessive movement in the transverse plane is inefficient
- Tight hips will lead to compensation patterns like this




M |  **HOW DO YOUR ATHLETES MOVE
LATERALLY ?**



Mobile Hips = Better Defender

M |  **ARE YOUR ATHLETES CONTACT
SEEKERS OR AVOIDERS ?**



M |  **HOW AGGRESSIVE ARE YOUR
ATHLETES AT PURSUING REBOUNDS ?**



M | J

MOBILITY SPECTRUM

MEN'S BASKETBALL

NEEDS EXTRA STABILITY

NEEDS EXTRA MOBILITY

M | J

PERFORMANCE TESTING-NBA COMBINE

- Standing vertical jump
- Max vertical jump
- ¼ court jump
- Lane agility
- 185 Bench press test

M | J

PERFORMANCE TESTING-WEIGHT ROOM

- Power Clean
- Back Squat
- Bench Press
- Chin-ups (3 sec. Cadence)

M | **PERFORMANCE TESTING-WR CONT.**



2017 NBA Slam Dunk Champion Glenn Robinson III squatting 415lbs.

M | **CONDITIONING ASSESSMENT**

Gauntlet

- 17 lengths sideline to sideline
- 1 min rest
- 17 lengths sideline to sideline
- 1 min rest
- 8 lengths sideline to sideline



M | **CONDITIONING ASSESSMENT**

Celtics Conditioning Test

- 3 min. continuous run from baseline to baseline
- Record maximum lengths achieved
- Give ¼ credit if they finish at the free throw line
- Give ½ credit if they finish at half court
- Give ¾ credit if they finish at the opposite free throw line



ADVANCED TECHNOLOGY

FORCE PLATE TESTING

MOTION CAPTURE ANALYSIS

MENTAL/MOTIVATIONAL APPROACH

NIK STAUSKAS

HOW LONG WAS I AWAY? JANUARY

BRANDON JOHNS

LOCK IN! JUNE

MOTIVATION SPECTRUM

CREATING A PROFILE

ATHLETE PROFILE SHEET

PERFORMANCE TESTING

- VERTICAL JUMP: 32 IN
- LANE SPRINTS: 10.07 SEC
- 3/4 COURT SPRINTS: 3.48 SEC
- POWER CLEAN: 155 LBS
- BACK SQUAT: 185 LBS
- BENCH PRESS: 165 LBS
- CHIN-UPS: 9

MOVEMENT SCREEN

- ANKLE: EXCELLENT
- HIP: EXCELLENT
- T-SPINE: EXCELLENT
- ANTERIOR SHOULDER: EXCELLENT
- LANDING MECHANICS: CLEARED
- KNEE VALGUS SCREEN: CLEARED
- POSTURAL SCREEN: CLEARED

NOTES:

- Athlete needs to gain 10-15 lbs. of lean muscle mass
- Develop deficits in total body strength
- Average in Speed/Agility/Jumping
- Excellent total body joint mobility
- Needs to develop overall toughness

NIK STAUSKAS


6'6" | 192 | FRESHMAN GUARD

M | 

TRAINING METHODS


- Address Individual Needs
 - Mobility, Stability, Weight Gain etc.
- Speed/Agility/Conditioning is developed in multiple ways based on our athletes needs
 - Cone agility drills, Fit Light, Versaclimber, etc.
- Implement Injury Prevention Strategies
 - Predictors of Injury:
 1. Prior Injury
 2. Accumulation of Fatigue
 - Teach landing mechanics
 - Improve ankle strength/proprioception
 - Postural control




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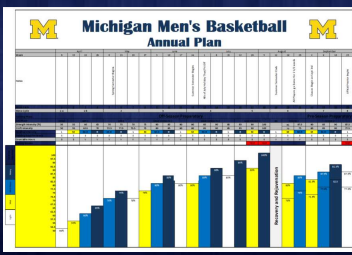
TRAINING METHODS

- Develop a strong and stable trunk/core
 - Train in all 3 planes (sagittal, frontal, transverse)
 - Teach ability to maintain a neutral spine
 - Anti rotation, Anti extension are staples
- Find creative ways to have fun in training
 - Kids play sports because their fun
 - Competitions, cross training, circuits, team building etc.
- Teach Safe and Sound Practices in the Weight Room
 - Proper technique
 - Spotting
 - Quality over quantity
- Challenge and Motivate Athletes
 - Build relationships
 - Goal setting
 - Competitions
 - Accountability
 - Clear communication




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DEVELOP THE ANNUAL PLAN



M | J
BASE TEMPLATE- PERIODIZATION MODEL

- GPP
 - 55-75% 8-12 Reps
- Basic Strength
 - 75-90% 4-6 Reps
- Max Strength
 - 90-100% 1-3 Reps
- Power
 - O LIFTS 70-80%
 - Strength movements- PAP Schemes
- Lift- MON-WED-FRI
- Agility /Cond- TUE-THUR
- Unload after 4-5 weeks of training

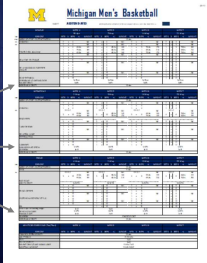


M | J
PLANNING FOR INDIVIDUAL NEEDS

Start with the base template and modify to account for individual needs.

Limited Time- Prioritize Developmental Needs

- Weight Gain
- Weight Loss
- Reduced Upper Body Volume
- Mobility
- Stability
- Contact Avoiders/Rebound Staring
- Valgus Issues
- Address Injury History (i.e. ankle sprains)
- ETC.



M | J
IN-SEASON CONSIDERATIONS

- Educate your athletes on the importance of training In-Season
 - They have to buy in
- Have the Pulse of Your Team
 - How do they feel today?
 - Are your players banged up? Can we work around it?
 - When do we play next?
 - How demanding have games/practices been (Catapult data)?
- Keep it simple
 - We don't need an exercise menu of 500 exercises, shorten the menu.
- Consistency (2 lifts/week)
 - Consistent stimulus of tapping into Strength



M|J IN-SEASON CONSIDERATIONS CONT.

- **Athlete autonomy**
 - We give all of our rotation players an option for lower body strength movements while in-season.
- **Low Volume**
 - High volume training leads to excessive soreness
 - O lifts/strength movements 1-3 reps
 - Auxiliary strength movements 4-6 reps
- **Moderate to Moderately High Intensity**
 - Strength movements 70-90%
 - O Lifts 70-85%
 - Tapping into strength
- **Develop the Scout Team Group**

M|J SAMPLE IN-SEASON MAINTENANCE LIFT

Pre-Practice 30 Min.
 Foam Roll/Power Plate
 Dynamic Warm-Up
 Activation (Glute, Core, Scap)
 Landing Series

- Explosive Movement (I.E. Power clean, weighted box jumps etc.)
- Lower Body Strength (Squat, Trap bar deadlift etc.)

Post-Practice 15-20 Min.

- Upper Body Push
- Upper Body Pull
- Posterior Chain
- Ankle Proprioception/Strength
- Complimentary Core
- Scap Stability


Individual Mobility/Recovery



M|J Trey Burke: 2013 National Player of the Year

- Averaged 80% of back squat max over the course of the season.
- Squatted 30 times over the six-month season

2012-13 TREY BURKE IN-SEASON BACK SQUAT PROFILE



Month	Day	Percentage of 1RM
October	1	100
October	2	100
October	3	100
October	4	100
October	5	100
October	6	100
October	7	100
October	8	100
October	9	100
October	10	100
October	11	100
October	12	100
October	13	100
October	14	100
October	15	100
October	16	100
October	17	100
October	18	100
October	19	100
October	20	100
October	21	100
October	22	100
October	23	100
October	24	100
October	25	100
October	26	100
October	27	100
October	28	100
October	29	100
October	30	100
November	1	100
November	2	100
November	3	100
November	4	100
November	5	100
November	6	100
November	7	100
November	8	100
November	9	100
November	10	100
November	11	100
November	12	100
November	13	100
November	14	100
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November	16	100
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March	30	100



QUESTIONS

AVAILABLE AT:
campsanderson.com

