

Strength & Conditioning for Basketball

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Key to life?

REPS!

How do you get better at free throws?

Shoot more free-throws

How do you play better man to man?

Practice more man to man

How do you get stronger?

Lift weights

What are you training for?



Bodybuilding?

Powerlifting?

Olympic lifting?

SPORT

PERFORMANCE!!!

Goals

Injury prevention

Force production/reduction

Measurable improvements

Injury Prevention

OVERUSE INJURIES

flexibility issues

muscle weakness

muscle imbalances

volume of training

“Work smarter not harder!”

Smarter not harder cont...

Know what you are conditioning, the mind or the body.

Understand work to rest ratios.

Are your drills specific to what is required during the game? Are you training for a sprint or a marathon?

Force Production/Reduction

Acceleration/Deceleration

Multi-planar

sagittal

frontal

transverse

Measurable Improvements



Testing

Vertical Jump

Hang clean

Squat

Bench press

Wins vs. Losses

Basic Principles

1. Train the entire body each workout session
2. Train multi-jointed exercises
3. Train movements not muscles
4. Sport Specificity: I.e. standing not sitting, fast not slow, multi-directional not unidirectional
5. Use a progressive approach!!!

Progressions

Crawl-Walk-Run

Layups before jumpers!!!

Slow to fast

Simple to complex

Stable to unstable

Low force to high force

General to specific

Modes of Resistance

Bodyweight

Barbells

Dumbbells

Cords

Manual resistance

Machines?!?!

Where to Start

Training age determines

Training age of 0-1 – Beginner

99% high school athletes

Program can remain unchanged for 6-8 weeks

First 13 weeks – Neural adaptation

Amount of weight not important!

Chronological Age

Age 13, 14, 15 are the most crucial time in an athlete's development!

Basic motor skills

Running/Jumping/Skipping

Flexibility

Technique

Train like a football player?

Strength Relative absolute	Power Force x distance/time Vertical jump	Agility Change direction under control
Speed - Acceleration Create separation	Flexibility Dynamic Static	Conditioning Aerobic Anaerobic
Reduce injuries	Muscle size? Probably not Possibly	Structure & Discipline

How strong is strong enough?

It takes approximately .7-.9 seconds to produce maximal force!

During running you have approximately .08-.3 seconds to produce force.

Power

Olympic lifts

Clean & Jerk

Snatch

Assistance lifts

Power clean/Hang clean/High pull

DB Snatch/Push jerk

OL lifts cont...

Very explosive
Triple extension

Should you implement??

USA Weightlifting Certification

Alternatives to OL

Med Balls

DB squat jump

Exercise selection

Squat

Lunge

Step up

Squat

Press

Bench

Military

Push press

Exercise selection

Pull

High pull (explosive up row)

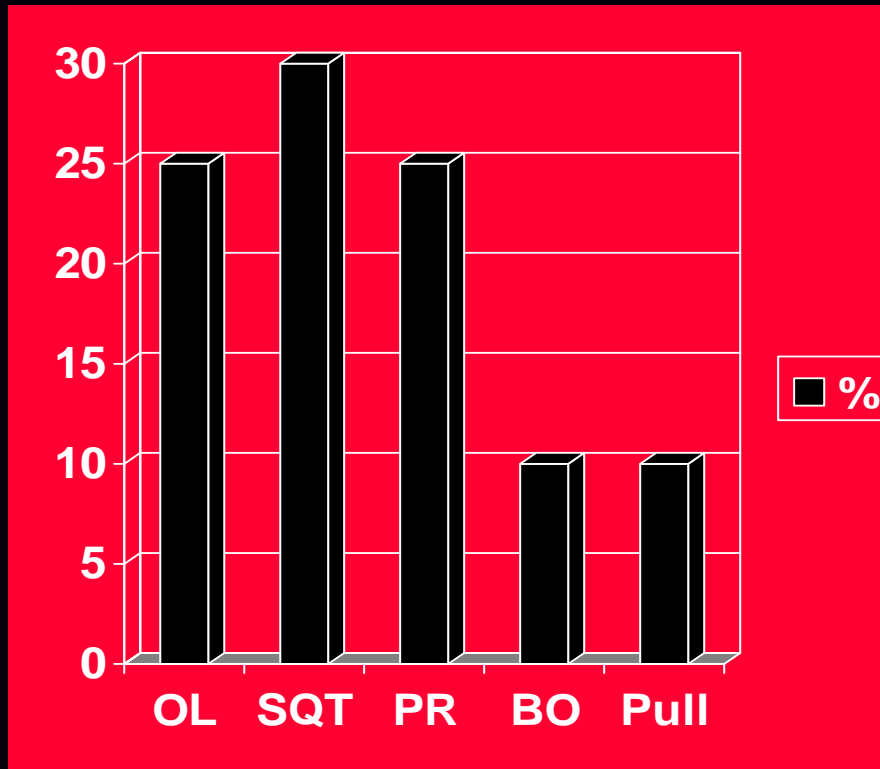
Pull ups

Bend-over

RDL

Good morning

Putting it together



- 25% OL lifts
- 30% Squat
- 25% Press
- 10% Pull
- 10% Bend-over

500 Reps/month

Sets + Reps

Reps 1-5 (100-85% 1RM)

Strength increases from neural drive

Reps 6-8 (83-78%)

Optimal compromise of max strength & size

Reps 9-12 (76-70%)

Best muscle size gains

Reps 13-20 (68-60%)

Strength Endurance

Plyometrics

What are plyometrics?

Why do we need them?

Are they good for my team?

Plyometrics cont...

Plyometrics are jumps that elicit the stretch shortening cycle.

Walking/running/jumping rope

Bounding/Depth Jumps

Progressive approach

Do we need plyometrics?

Double edged sword

Yes if properly implemented.

Order in workout

Work:rest

Plyometric exercises

Split squat jump

Tuck jump

Depth jumps

Bounding

Zig zag bounds

Strength shoes/plyos

Marketing gimmick?

Claim is valid

Some research supports it

Results seen in anyone untrained

Risk to reward benefit

Exercises

Lower Body

Squats

Lateral Squats

Lunges

Lateral lunges

Posterior lateral lunges

BW Leg circuit

RDL

Exercises cont...

Upper Body

Bench press

Push jerk

Military press

Upright row

Complexes

DB Matrix

10% BW

DB combinations

Squat jump/Sqt/Push jerk

DB Snatch/Upright row/Lunge