

Special Strength, Speed & Flexibility for Shot Putting

Balanced Training

- Technique should be developed in unison with speed & strength
- All facets of training are developed together (speed, absolute strength, special strength, flexibility, and technique)
- How much is enough for each parameter?

Balanced Training

Breakdown in terms of time spent training

- 40% Throwing/Throwing Drills
- 35% General Strength/Special Strength
- 15% Running/Sprinting/Jumping
- 10% Agility/Flexibility

Lifting Parameters for Elite Throwers

MEN	Bench Press	Back Squat	Clean	Snatch	Push Jerk
Bodyweight	175% of BW	210% of BW	165% of BW	110% of BW	155% of BW
225 lbs	170% of BW	200% of BW	150% of BW	105% of BW	150% of BW
250 lbs	160% of BW	190% of BW	140% of BW	100% of BW	145% of BW
300 lbs	155% of BW	185% of BW	130% of BW	95% of BW	140% of BW

EXAMPLES

Adam Nelson (260lbs)	192% of BW	269% of BW	3x144% of BW	3x100% of BW	-----
Reese Hoffa (305lbs)	159% of BW	182% of BW	123% of BW	94% of BW	2x130% of BW
Brian Snyder (260lbs)	193% of BW	216% of BW	181% of BW	118% of BW	151% of BW
Brent Noon (250lbs)	218% of BW	273% of BW	152% of BW	114% of BW	-----
Brian Miller (310lbs)	145% of BW	180% of BW	120% of BW	85% of BW	-----
Rhuben Williams (247lbs)	178% of BW	251% of BW	140% of BW	-----	-----
Kyle Hall (227lbs)	161% of BW	200% of BW	134% of BW	95% of BW	-----
Daniel Vaneek (270lbs)	180% of BW	222% of BW	136% of BW	106% of BW	152% of BW

Lifting Parameters for Elite Throwers

WOMEN	Bench Press	Back Squat	Clean	Snatch	Push Jerk
Bodyweight	135% of BW	190% of BW	135% of BW	95% of BW	120% of BW
225 lbs	125% of BW	180% of BW	125% of BW	92% of BW	110% of BW
250 lbs	120% of BW	170% of BW	115% of BW	85% of BW	100% of BW
275 lbs	114% of BW	160% of BW	108% of BW	77% of BW	90% of BW

EXAMPLES

Teri Steer (198lbs)	136% of BW	217% of BW	136% of BW	100% of BW	-----
Lieja Turks (200lbs)	140% of BW	-----	120% of BW	93% of BW	-----

Special Strength

- The best form of special strength training is to throw heavy shots.
- These exercises mimic the movement as closely as possible, in terms of acceleration patterns and movement speed
- I personally use heavy shots for the stand throw for the spinners, and for the full movement for the gliders
- It is very important that the heavy implements do not effect the throwing technique and timing. For this reason I am reluctant to use heavy implements for the rotational technique

Special Strength Exercises

- Heavy Shots
- Normal conversion about 5 feet per every two pounds
- Most common shots are 18lb for men and 10lb (4.5kg) for women
- More important for training for gliders than spinners

Special Strength Exercises

- **Standing Bar Twists**
- Keep at the level that the thrower will be when they are winding up and turning out the back of the ring

Special Strength Exercises

- **Medicine Ball throws for height with jump in between**
- Use between 5-7kg medicine ball
- No deceleration phase during extension of body unlike weight room exercises

Special Strength Exercises

- Side slings with medicine ball
- Keep feet off of ground
- Use 4-6kg medicine ball
- Work both sides equally

Special Strength Exercises

- Discus Twists
- Use dumbbell weights that allow you to do the movement comfortably(10-25lbs)
- Work both sides equally

Special Strength Exercises

- Oblique Leg Roll
- Work both sides equally
- Many different variations to this exercise

Special Strength Exercises

- Oblique Leg roll with medicine balls
- Use 2kg med ball over head and 3kg med ball between legs

Special Strength Exercises

- Trunk Rotations
- Work both directions equally
- There is usually a weak side and a strong side when you start out

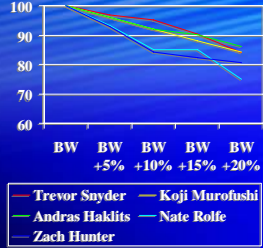
Running, Sprinting & Jumping

- "20 Minutes of Hell"
- Got it from Jud Logan
- Run 50, walk 100 for specified period of time

Jump Tests

- **Abalakov Test**

- A steeper line may imply a greater benefit to further weight training



Jump Tests

- **Standing Long Jump**

- Results will vary based on height of individual.
- Generally for male international level throwers jumps over 3.50m are excellent, over 3.30m is very good, and over 3.20m is good.
- For female throwers over 3.00m is excellent, over 2.90m is very good, and over 2.80m is good.
- Examples: Adam Nelson 3.25m, Brad Snyder 3.25m, Brian Miller 2.95m, Teri Steer 2.98m, Lieja Tunks 3.02m

Jump Tests

- **Vertical Jump**

- A very good test to measure training fatigue (overtraining).
- Sargent Jump using Vertek.
- For international level male throwers, over 90cm is excellent, over 80cm is very good, and over 75cm is good.
- For international level female throwers over 75cm is excellent, over 70cm is very good, and over 65cm is good.
- Examples: Adam Nelson 94cm, Brad Snyder 82cm, Brent Noon 81cm, Reese Hoffa 75cm, Werner Gunthor told me he could do 110cm, Teri Steer 68cm.

Running, Sprinting & Jumping

- Stair sprints & Jumps
- Hill Sprints
- Short sprints (20m-50m)
- Short sprints with resistance (sleds)
- "Long" Sprints (100m-150m)
- Hurdle Jumps (forward & zig-zag)
- Box Jumps

Special Strength Exercises

- **Trunk Rotations around stick**
- Perform facing up and facing down
- Both clockwise and counter-clockwise
- Weight vest can be added

Agility & Flexibility

- Hurdle Circuits
- Walk-throughs
- 180-degree walk-throughs
- Over-unders
- Zig-Zag/over-unders

Agility & Flexibility

- Agility Circuit (with bleed into sprint)
- High Knees
- Butt Kicks
- Straight Legs
- Carioca
- Side Shuffle (with arm circles)
- Forward skip (with arm circles)
- A-Skip
- B Skip
- Backward Skip (with arm circles)
- Skip with instep touch

Agility & Flexibility

- Skin the Cat

Agility & Flexibility

- Bird's Nest

Agility & Flexibility

- One-legged Jumps in Place
- Very advanced jumping drill
