POWER-ENDURANCE TRAINING PROTOCOLS
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ABOUT COACH BOTT

Experience
• S&C Coach/ Performance Consultant with over 20 years of experience
• Has trained 3 World Medalists in Freestyle Wrestling and several CFL draft picks
• International speaker, sought after for her practical applications of the sport sciences
• Full time Professor of Exercise Science
• Author of The Wrestler’s Edge

Education & Certifications
• Master’s Degree in Exercise Science
• RKC Kettlebell Challenge Certified
• Certified Strength and Conditioning Specialist
• Contact Coach Bott at www.coachbott.com
Power is not simply dependent on strength (force generating capacity).
• It is also dependent on the athlete’s ability to ration their mechanical energy during whole
  competition exercise.
• From here, training methodology of specific exercises can be created to improve both “active and
  reactive explosive force production” (Verkoshansky 2013)
• It is possible to develop both maximum strength, single rep explosive strength and power
  endurance during the same training phase.
• Hypertrophy methods however will not work during a phase where power-endurance is a
  training goal.
• A hypothetical program would have 1-2 days per week dedicated to maximum strength and
  explosive strength and another 2 days per week dedicated to power-endurance.
• Any conditioning work of low intensity can be done on the ‘off’ days.
• Adequate warm-up is absolutely critical when performing repeat sprinting or power-endurance
  training sessions: 20 minutes minimum is necessary to increase the muscle temperature to its
  optimal level (Verkoshansky, 1989).
• The nervous system must also be EXCITED – so get arousal levels high – listen to music to get
  PUMPED!
• Select loads and reps depending on how prepared you are – meaning how fit you are.
• Never use P-E methods when you are tired or sore.
• It is better to increase the workload by increasing jump complexity, amplitude (height) and
  external load. Doing more reps is not the right manner to progress.
• Choose the methods that suit your available space and equipment!
• Benefits of these Power-Endurance Methods
  • Explosive strength
  • Muscle reactive ability
  • Maximum anaerobic power
  • Ability of muscle to relax after contraction
  • Coordination of movements
  • Acceleration improved

• Please select only 2 methods from the following 4 listed, for a 4 week training cycle.
POWER-ENDURANCE CATEGORY: JUMPS WITHOUT OVERLOAD

METHOD #1: MULTIPLE JUMPS IN PLACE

Protocol

- Select 5 different double leg (two legged) vertical jumping exercises that can be repeated in succession
- Now, your recovery interval is adjustable, but I recommend 90 seconds. During recovery, shake your legs and arms loose (shake the “meat off the bones”)
- Repeat this workout for 10 minutes.

Here is a video to watch but please note: only ONE jump exercise is shown.
https://www.youtube.com/watch?v=8q060oL08xk

METHOD #2: MULTIPLE LOW BOX JUMPS

Protocol

- Select a box approximately 30-40 cm high
- Jump on and off the box emphasizing the feet in take off force efforts
- Be relaxed in take off and flight
- Maintain consistent landings – maintain your form/posture and land in same place
- Work UP TO 40-50 reps, THEN increase your speed or the height of the box
- Do not land deep which means the knees bend more than 90 degrees.
- Be fast off the ground.
• Perform 1 set of reps (notice I did not say exactly how many – do what you can do well),
  rest for 3-4 minutes (for every 8 jumps, rest ONE minute please)
• Perform 4 sets (again choose based on your quality of work)
• Now, you must rest for 10 minutes. Yes, 10 minutes! This is called the ‘serial-repeat
  method’
• During this 10 minute rest you can shake your limbs loose. Do not jog.
• Now, perform another 4 sets, resting 3-4 minutes between each set.
• The session is complete once you have done this twice.

Here is a video to help you with this protocol: https://www.youtube.com/watch?v=aBiuudQs39M

**POWER-ENDURANCE CATEGORY:**
**JUMPS WITH OVERLOAD**

These protocols are more advanced and require an athlete to be a proficient squatter.
The training effect depends on the level of force effort of each jump, the number of jumps and the
recovery interval.

Weight can be selected according to Bosco’s rules whereby the power output stays between 80 and
90% max power on EACH REP. Most of us do not have tech to monitor such declines, so use your
common sense. If the rep feels slow, it is slow. Rest or lighten the load!
METHOD #3: CONSECUTIVE BARBELL HALF SQUAT JUMPS

Protocol

• This drill is done with a bilateral squat stance (feet approximately shoulder width apart).
• 30-60% of your 1RM plus your mass is selected for weight if you are using a barbell.
• If you are using dumbbells, then I recommend the heaviest you can handle for the reps prescribed without much loss in power (jump height)
• For males 60–100 pound dumbbells and for females 35–75 pounds, or more if possible.
• After a lengthy warm-up, perform 5 jumps on the spot with the load you have chosen.
• The depth of the loading phase of each jump is smaller than a squat. Think about the angles you use for a vertical jump test. Use those.
• There is no pausing at all in this movement and keep a vertical spine.
• Rest for 5 minutes, shaking out limbs and staying relaxed.
• Repeat 5 more jumps with 5 minutes rest. Do this for 3 sets/rounds total.
• 3 x (5:5).
• It is ok to go for a light jog between series on this protocol. Jog for 10 minutes.
• Then come back and repat for another 3 x (5:5).
• Jog for 10 minutes and repat once more.
• A total of 45 jumps will be performed in this workout.

Here is a video to help you with this protocol: https://www.youtube.com/watch?v=Y_qm_fgEfGQ

METHOD #4: CONSECUTIVE KB SQUAT JUMPS

Protocol

• The kettlebell is held with 2 hands between legs
• The KB must touch the ground on each repetition, but not ‘bang’ the ground.
• Range of motion is high on this particular drill, so keep your form/posture.
• All joints must extend in the air
• And shake fast and loose between sets
Please note there are two different protocols here. Select Option A for a 4 week training cycle then select Option B for the next 4 weeks.

Males use a 24-32 kg KB   |   Female use a 16-24 kg KB

**Option A: Increase Local Muscular Endurance**

- Perform 10 jumps, rest 5 minutes, repeat for 3 sets with a sub max effort
- Jog or shake limbs loose for 8 minutes
- Perform 10 jumps, rest 5 minutes, repeat for 3 sets with a sub max effort
- Jog or shake limbs loose for 8 minutes
- Perform 10 jumps, rest 5 minutes, repeat for 3 sets with a sub max effort
- Jog or shake limbs loose for 8 minutes
- Perform 10 jumps, rest 5 minutes, repeat for 3 sets with a sub max effort

**Option B: Increase Maximum Anaerobic Power**

- Perform 5 jumps, rest 30 seconds, repeat for 4 sets with a STRONG effort
- Jog or shake limbs loose for 8 minutes
- Perform 5 jumps, rest 30 seconds, repeat for 4 sets with a STRONG effort
- Jog or shake limbs loose for 8 minutes
- Perform 5 jumps, rest 30 seconds, repeat for 4 sets with a STRONG effort

**HERE ARE MORE COACHING INSIGHTS:**

- Respect the REST PERIOD time. This is an important part of the training method. And necessary for ATP and CP re-synthesis.
- Allows the parasympathetic system to interact with the sympathetic system during a regime of work.
- Ignoring adequate and correct methods of rest will move the training effect direction towards hypertrophy and diminish the development of speed and power.
- Between max effort sets and series, full ROM leg swinging exercises should be performed to preserve the elasticity and helps the muscle to relax.