

ROUND TABLE DISCUSSION - WHAT INFLUENCE DO THE METHODS OF ATHLETES INVOLVED IN POWER LIFTING AND (OLYMPIC) WEIGHTLIFTING PLAY IN THE PROGRAMMING OF STRENGTH-POWER TRAINING FOR YOUR SPORTS (ATHLETES IN THOSE SPORTS OTHER THAN WEIGHTLIFTING AND POWER-LIFTING)? WHAT IS YOUR RATIONALE?

Dr. Daniel Baker.

As I am a Life Member of the University of Queensland Powerlifting & Weightlifting Club (UQPWC), I would have to say I have been greatly influenced by both sports. Back when I joined that club (the early 1980's) there was very little good strength training research available and no way of learning the practical things (like lifting technique, how to coach, etc) from university courses. In fact I was taught in 2nd year exercise physiology that lifting weights was old fashioned, that isokinetics would soon take over as they were much more effective! As bodies like the ASCA would not exist for another decade, there was no other way to learn the realities of strength and power training than through a competitive lifting club. The UQPWC was fantastic, great lifters, most very helpful – I learned most of my practical knowledge and the basic framework upon which I now can still base most of my thinking from there.

The training direction I had then is still my fundamental approach today. I (we) trained a mixture of powerlifting and weightlifting exercises, a within-week heavy-light system or what is now called max-effort/dynamic effort system. For example, as a power-lifter, on days that I did heavy power-lifting style squats, I also did snatch and clean pulls and then Modified Romanian Deadlifts (RDL's) and then some higher rep work on back extensions etc. So that was max effort for squats, but a dynamic effort or weightlifting approach for pulling work on that day. On heavy deadlift day, I did either front squats or Olympic "high-bar" squats first, then snatch pulls (again the weightlifting approach) and then heavy deadlifts (powerlifting).

So the basic premise for developing strength and power was to mix the best of both worlds and try to fill in the gaps with higher rep assistance and supplementary exercises.

Basically lifting only heavy weights in powerlifting makes you strong but slow, weightlifting exercises make you more explosive (1, 10-13) – but weightlifters are not well muscled in the upper body, so you can't just do weightlifting style training alone for rugby league or other sports. This is how I approach things today, it is just that with resistance training for other sports, the assistance and supplementary and movement exercises are also of importance.

Attainment of NRL status in rugby league (RL) is, statistically speaking, most dependent upon maximal upper body strength, then upper body power, lower body strength, lower body power, sprint momentum (speed x body mass) and then body mass only (3, 5, 8). Running speed is also of great importance to outside backs (8). Any training that improves those factors must be considered, so given the nature of weightlifting and powerlifting, it would be foolish not to integrate some of their training into the preparation of RL players.

So for RL my approach is to develop strength in the bench press and chin-up for the

upper body and the squat and RDL for the lower body. I believe conventional powerlifting deadlifts from the floor are too taxing on the body for RL players, I prescribe cleans pulls instead. The strength that is developed by those four key exercises is then trained and converted into power by training in the jump squat, bench press throw (both in the smith machine) and the power clean from hang and push press/power jerk. From there we need to develop power into the positions that are more seen in RL, the split and /or alternating foot and arm positions, so we do a lot of split jerks (barbell and dumbbell), split leg hang cleans and split leg jump squats and 1-arm bench throws. We do overhead squats and dumbbell or kettlebell snatches only with very light weights for warm-up and thoracic mobility – the shoulder structure and history of impact preclude these exercises being done with large resistances for power development in RL players.

I DO NOT do a lot of the Weightlifting exercises with younger players – just the opposite. The Weightlifting exercises are the last bastion, not first, of power training and when commencing power training, I start with basic jump and throws, not cleans. So when teenagers have developed good body posture and basic muscle control/strength endurance (eg. see the ASCA DVD for Child/Youth Resistance Training), they then progress to basic barbell strength work and bodyweight jumps and medicine ball throws and then to added resistance jumps and so on as they become more experienced. Weightlifting exercises are near the end, not the beginning of the power training spectrum for RL players, or most athletes. In fact I think the use of bands and chains for either max effort and dynamic effort training has been the most effective and revolutionary change in strength/power training for sports other than weightlifting and powerlifting (6, 7). The use of the bands and chains now means athletes can get power training effects from using these methods plus some jump squats, throws and simple plyometrics and never have to bother to learn the Weightlifting exercises! Irrespective of how you judge their effectiveness, you must also consider that many athletes do not like cleans etc so an alternative methodology is always good to have.

So I am fairly holistic in my exercise inclusions for both powerlifting and weightlifting, but I also realize the limitations of these methods done alone – they need to be supplemented with high rep work for muscle size, with movement exercises (eg. walking lunges, explosive lateral lunges), with bodyweight resistance exercises (eg. chin/pull-ups, push-ups), with grappling exercises, rehab/prehab exercises and so on. Just mimicking the training of either weightlifters or power-lifters alone will give you some initial success, but it won't address "the holes" in each methodology and the athletes will never attain anywhere near their potential. So a coach may come in and see one of my sessions in November and not see any cleans, jerks etc. just basic exercises done for sets of 10 reps, short rest periods, but if they come in three months later, they will see lots of clean variations, jerks/push presses, jump squats and bench throws as well as powerlifting dynamic effort methods (bench presses and box squats with bands and chains).

As for programming sets and reps etc., I have my own templates that I have developed over a long time, appropriate to different levels of training age/experience. They are a mixture of powerlifting and weightlifting cycles (e.g. 2, 4, 9, 14, 15). My in-season wave-cycle (2) is directly taken from former Soviet weightlifting in how to prescribe volume across a 3-week period (9, 14), but obviously the exact reps are developed to suit the exercise and its objectives. So you could look at it from a weightlifting coach perspective and see the influence or from a modern Westside Barbell powerlifting approach and see the similarities. There is a congruence of

methods in training now.

In summary, I use both weightlifting and powerlifting methods as well as the methods of gymnasts, martial artists, track & field, or whatever method is necessary but I use them where I deem them appropriate.

So the methods of powerlifting and weightlifting greatly influence me, but do not dictate to me, as a strength & conditioning coach.

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