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Training for contact sports.

Predominantly people will turn to strength coaches to improve performance at many disciplines.

Contact sports have many variables to consider that are not as common place in the gym.

This article will be at a basic level, it would be unfair to each sport to suggest there is a generic style that will work and encompass all disciplines, however as a rough guide to many of the similar principles involved it should give people enough to work with to tailor their training further, and, if they are really keen to note the difference it makes and seek further coaching should they choose to push their knowledge and training to the next level.

Dynamic Strength

All of sports suggested here involve physical contact. Hard physical contact.

Technical ability of two otherwise equal players or fighters will win the day in general, so the right question to ask is “How do I become unequal?”

Faster; stronger; more robust; quicker to react etc.

Technical coaching at your chosen sport is pivotal,

this however, is not to say we cannot become stronger

and train our bodies to be able to repetitively deliver enough force to make an impact at the click of a finger when on the field, ice or mat.

What we need to realise about these sports is that the strength output needs to be in direct opposition to the force making the impact, be that a player with the ball, or making a tackle, a check or withstanding a check on the ice.

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Unlike the sport of powerlifting which many are familiar we cannot coach this in the same way.

Sure you can make muscles stronger and to an extent faster, you can improve the timing and the line the muscles naturally want to work through training and development of motor skills.

This is all well and good but it does not address one of the most fundamental issues with all of these sports: the roots!

i.e. the feet are moving when this is required,

not like powerlifting where they are static.

There are however, two strength disciplines where

movement of the feet takes place while under load,

while receiving loads and indeed moving with loads.

I speak of course of Olympic Weightlifting and

of Strongman.

How to adapt to a contact sport: Power training.

To consider this across all contact sports we need to take out what is worthwhile in training methods and eliminate what is excessively heavy, dangerous or requiring of too much technical skill and thus taking more than an acceptable time to adapt to for the sport.

We know both the sports of strongman and to a lesser extent weightlifting use the deadlift as a tool to build strength, and Weightlifting and to a lesser extent strongman use the squat.

These appear as almost obvious inclusions into most strength based routines.

For what we are interested in they will be a good source of lower body power for powerful movements and extensive core/trunk stability which will be key in delivering or accepting contact.

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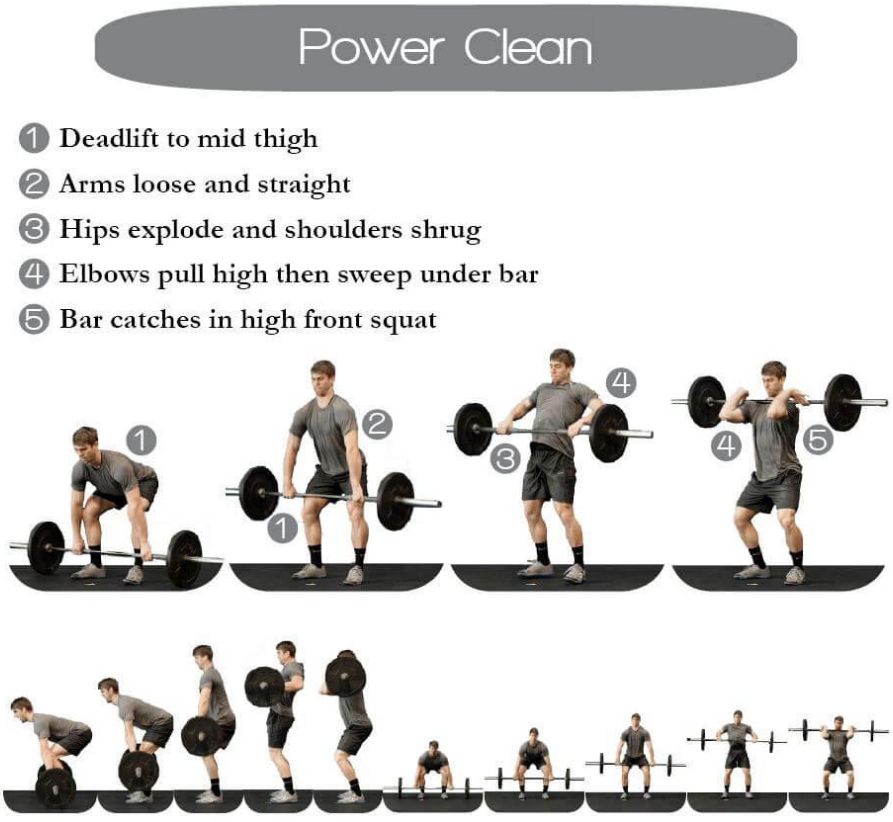
The next movement that is commonplace in both of these strength sports is the power clean. Uses as a weightlifting assistance movement to develop the full clean and hip timing and in strongman for developing multiple from the ground to a carry or shoulder position style lifts along with cleaning of axles and from time to time barbells.

The great benefit of this movement is that during it the weight is distributed around different areas of the foot including the feet actually leaving the floor.



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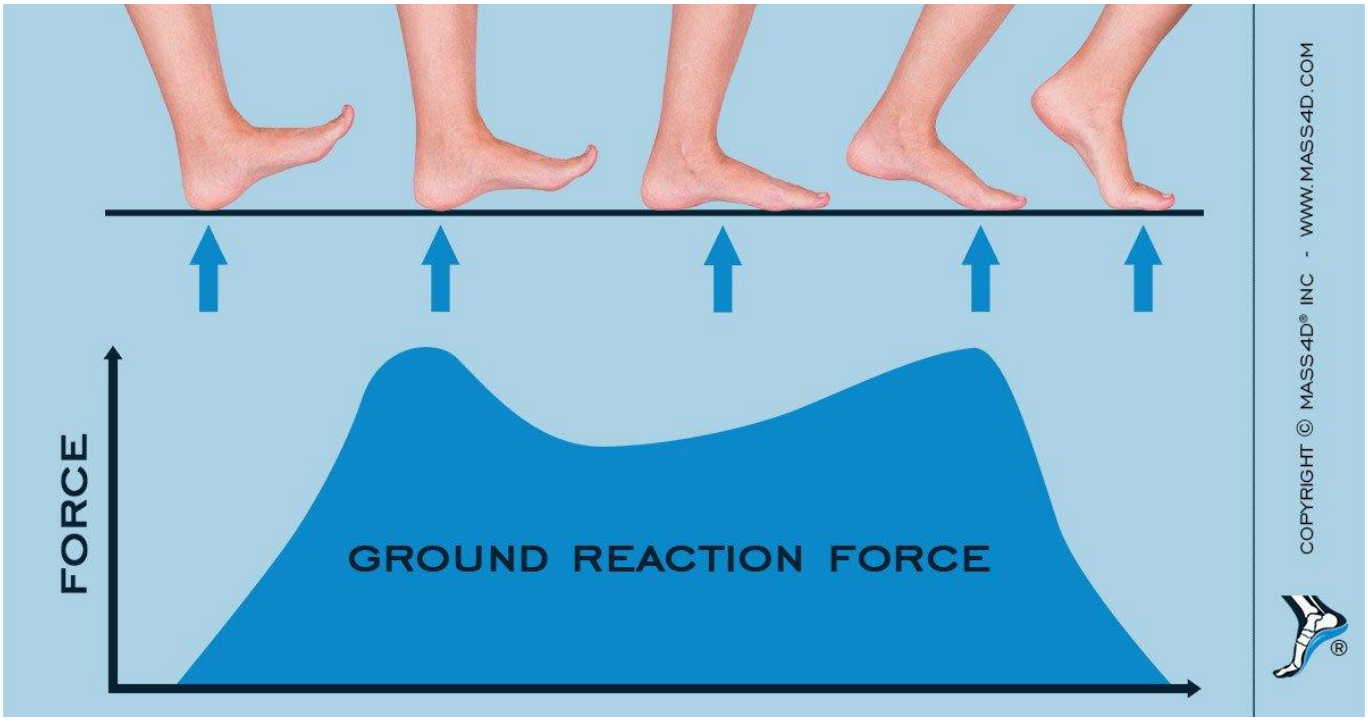
Many cite power cleans or full cleans as capable of developing more power and generating more lower back joint loads than for example a deadlift, however Burnett et al (200) reported that compressive forces at the L5 joint were 7020 ± 1463N (6.5 ± 1.1 times bodyweight).

Sheer forces were 1065 ± 112N (1.0 ± 0.1 times bodyweight). In a comparable study, Cholewicki et al. (1991) investigated the lower back joint load in nationally ranked powerlifters. In the same weight class compressive forces at the L5 joint were 14487 ± 1282N and sheer forces were 1673 ± 104N.

Similar results were found for ground reactive forces.



Where Weightlifting does come into its own is with the velocity of the barbell travelling almost twice as fast as comparable deadlifts by similar level athletes; not enough however to measure more power.

This is not to say that the clean or power clean are not useful, far from it; the lift is dynamic in its execution so it is easy to understand why it is not possible to develop as much power from a moving base.

Considering the moving nature of contact this makes the movements very beneficial for the sports in question, more so when we consider the likely loads a player will be able to generate.

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Additional Movements

When considering power for sports it would be foolhardy not to look at the benefits of plyometric training.

Timing, athleticism, coordination, flexibility and joint stability coupled with low loads make this style of training a highly attractive tool for a contact sport athlete.

When considering power, the plyometric vertical jump has been shown to deliver the most power even taking into account the deadlift and the Olympic clean

We cannot discuss the sports without a consideration towards shoulder, knee, hip and ankle stability. Fortunately squatting, cleans, deadlifts and plyometrics all assist in developing stability from the core downward for our athletes.

What we do need to look at with that largely taken care of is the stability of the shoulder joint under impact. To do this some level of muscularity while maintaining good flexibility is the key to our goal.

It's no use having giant shoulders if they are un-flexible as at the moment of impact there is little displacement of force due to the static holding of the joint from over tight and large muscles, which will result in injury eventually.

To tackle this issue a focus will need to be made on not only strengthening the joint through conventional means, but also in developing flexibility while under load to ensure the maximum range of force producing angles is possible to minimise the risk of injury.

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How strong is strong?

It is natural for those with a background in strength sports to focus on what they know of other lifters exploits at a similar weight. I have witnessed this many times in people mainly with rugby players with such things as "Well he is 18stone so about 114kgs, well a powerlifter I know of this weight can deadlift 320kgs so your rugby player isn't that strong".

Let's just put this into perspective.

I was at a wedding dinner, one of the guests in attendance was Derek Jelley former Leicester Tigers and England RFU Prop forward.

He singled me out for a chat which I was happy to oblige recognising him and he regaled stories of training with the likes of Martin Johnson, Julian White, Graham Roundtree and Darren Garforth.

Naturally he enquired after finding out I predominantly competed in powerlifting what I lifted.

He shook his head in awe to numbers that in the strength community we would expect from a 130kg+ athlete and commented that his best deadlift was 280kgs which equalled the 6'6 Martin Johnson and Julian White was around 20kgs ahead of them both when it came to squats and deadlifts.

Can I just highlight these were all international Rugby players if you are unaware; The elite of the sport.

Now consider this for a moment. The average Rugby Union player if we take the pack as an example is around 17stones or 108kgs, around a stone and a half less for Rugby League and Ice Hockey and the largest disparity in weight being within American Football from 150kg linemen to sub 100kg Half backs.

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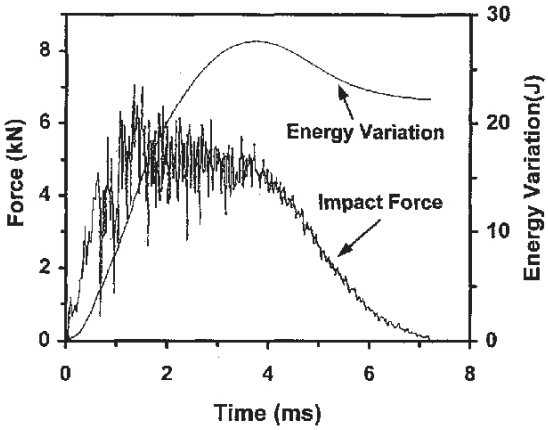
If we combine all the sports and take 150kg as a peak weight, and 90kg as a minimum weight for scrum halves – when will you ever find the need to exert 320kg + of strength? Possibly in a scrummage or on the line of scrimmage in American Football at a push, but nowhere else, and there is even less chance of it happening dynamically.



Taking this into consideration it becomes clear that as the time of impact is fast, the return of force needs to also be fast.

As contact is usually dynamic, the return of force needs to also be dynamic.

As such the question of strength comes into play, is it better for a contact sports person to be able to max out with a 350kg squat for example, or to be able to squat 220kgs for 15 sets of 2 with short rest periods multiple times a week?

If you have followed this article and what I am attempting to portray you will hopefully understand delivering what a strength athlete considers sub maximal strength, repetitively and explosively to the point where it is a motor skill to be able to do so is far more beneficial to the extra strength (and likely mass) required to lift a much larger weight once or twice.

A friend of mine is a coach for a premiership rugby team, and in a conversation with him about training methods he advised that his front row were all skilled at cleaning, 160-180kgs and they didn't not focus too much on squat or deadlift top end strength supporting my own conclusions about the necessity of such things for contact sports.

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The Workout

Before this article becomes War and Peace in length I will move onto an idea of a workout.

You will need at least two variations, one for off season or pre season work. And one for during season or close to fight night sessions.

Offseason

Your off season work should be based around Strength and power building, you have the most Opportunity for development here, so ramping up the intensity and weights during this time is ideal.

You will have more time for training and recovery so use the time optimally for bet results.

On Season

Workout time will be severely limited during this period, our aim is to maintain strength and condition and pre-hab against injury rather than getting stronger during.

Many movements will be supplemented with safer variations to eliminate injury risks or exasperate fatigue from games or fights.

During this period focus simply on keeping the body moving and healthy. Flexibility and recovery are the prime focus here.

Conclusion

If you have followed and if I have been able to put it across as I wished then I hope you have an understanding of what is required for contact sports.

Dynamic power and explosive force will deliver you much greater rewards on the pitch, mat or Ice than will a Powerlifting or bodybuilding style workout.

Keep things controlled but fast when lifting a weight or exerting force so that your body is prepared to deliver or receive force at a moment's notice.

Focus on what your actual goal is, do you wish to be a better player or do you want big pecs?, what is more important to you?.

Take these sort of questions and answer them honestly to know if first of all you are in the right sport and secondly to know if you are willing to work towards that goal.

Moderate strength with speed, athleticism and timing will always benefit someone in a team contact sport more than an all encompassing top end strength so remember to leave your ego at the gym door and remember your battlefield is not the gym, it is the pitch, mat or the ice.

If you are ready to commit to a routine that focuses on you and your sport then use one of the tags below to contact GForce Strength, Conditioning and Wellbeing.