



## CONTENTS

---

### 2 Coach Talk

Tony Smith - Huddersfield Giants Head Coach 2001

### 6 Self Assessment

With John Dixon - Brisbane Broncos Development

### 8 Ruck Defence

With Glenn Bayliss - QRL Southern Division

### 10 Benefits of Kick Play

By Kurt Wrigley - Sharks Development

### 12 Rugby League's Marathon Men

By Rudi Meir - Senior Lecturer in Human Movements SCU

### 16 Increasing Training Intensity in Country Rugby League Players

By Tim Gabbett - Head Conditioner Runaway Bay Seagulls

### 17 Diet & Supplement: What is Factual, What is Fiction?

By Doug King RCpN, Dip Ng, L3 NZRL Trainer, SMNZ Sports Medic

### 20 Off-Season Checks

By Doug King RCpN, Dip Ng, L3 NZRL Trainer, SMNZ Sports Medic

### 22 What's In Your Sports Drink (Part 2)

Enduro Sports

### 24 SKILLS / DRILLS / GAMES

Training skills and drills



# Coach Talk

## Tony Smith - Huddersfield Giants RLFC

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*Tony Smith began his playing career in Casino on the Northern Rivers of NSW.*

*During his junior years, Tony always played up an age group and developed into a strong defender with a good tactical kicking game. In 1985, Tony joined the Lismore Workers RLFC and played First Grade as an 18 year old, the Workers were then coached and by Graham Murray, nowadays of Sydney Roosters and ex-Leeds Rhino's fame.*

*Tony was graded in 1986 with the Illawarra Steelers and thus began his professional career in Rugby League, finishing as a player with Bradford Bulls in 1997.*

*Being appointed as the assistant coach in 1998 to his brother Brian Smith at the powerful NRL Parramatta Eels whetted Tony's appetite to one day become a Head Coach of a elite Rugby League club.*

*His opportunity came in October 2000 when he was appointed Head Coach of the Super League Huddersfield Giants for 2001.*

*Andrew Bartlett one of Tony's first coaches at junior level in Casino knows him well and said recently "Whilst playing as a junior Tony had the ability to read the game and showed from a early age he is a 'thinker' of Rugby League".*

### **RLCM We hear coaches talking about winning the game in the ruck area.**

**TS** That's right, it is a competition, and for a lot of teams that is where their game is won or lost, just purely through that competition in the ruck area.

The 'play the ball' may only take a couple of seconds, but winning this part of the game can make a difference in the end result. That is why people say winning the ruck or winning the game on the ground is important. For some teams if they win it enough they will win the game, that is their philosophy and vice versa.

Nowadays it seems this is a big part of our sport, it has got, dare I say, a little bit like touch football, meaning getting the 'rolls' going. There is a huge emphasis on the speed of the 'play the ball'.

There are different theories on it, I think the ten metre rule has been more influential than anything else. When you have a eagle cam view of the game and look from above it is often 12, 13, 14 metres that players are actually having to retreat. So if you can be down quick and get a good 'play the ball' it will upset the opposition's defensive line and that will reflect on them not making good decisions.

I have seen individuals dive and go in low, then the next runner not looking so much to go through the line, maybe poke their nose through it to get the defence going backwards, not attempting off loads, Rugby League Coaching Magazine

not looking to break on that particular play, they may have two or three of those plays, then try to break you on later plays. I think most teams have tactics like that.

A 'roll on' is very difficult and tough to stop when the opposition gets you going backwards. It is something that must be worked on.

Whereas if you slow their 'play the ball' down it gives your defensive line a long time to get back, turn around and nominate.

### **RLCM Lets talk about holding up, turning or turtle players onto their backs and other techniques of tackling that enhance winning the ruck.**

**TS** Players must practice all techniques of tackling and of being tackled in the ruck area. Getting underneath is difficult to do at speed in training, but you do have to take that risk from time to time. Vary the degree of contact, sometimes just go down on the ground, roll over, have somebody jump on top of you, that sort of stuff. So, you can go from very little contact up to some weeks of heavy work, remember our game is a contact sport, you have to do contact drills.

Try to come up with other quirky little ideas that you can do, sometimes even doing the old lounge room footy on your knees and that sort of stuff where you wrestle each other onto the ground.

Wrestling is good but beware you risk injury when you get into a full on wrestle either standing up or on your knees. But you must practice it, put the football jersey on and go out on the field and practice wrestling, particularly the turtle part of it.

### **RLCM *And in the gym?***

**TS** Weight training is more specific to the game nowadays, once upon a time players would relate to how much they or others could bench press. Now it is getting a more practical. There is a bigger movement of the weights nowadays even with their squatting and their clean and jerks. Parramatta have a machine, called the Dominator, it is for twisting and throwing and very specific to our game. It is a good piece of equipment.

### **RLCM *What happens when your players get turtled, how do you advise them to respond?***

**TS** Once they have been put on their back, they must get on to their chest or front first, it sounds silly but some players will try to get up from their back to their feet. That is the slowest way that you can get up.

Once on their back you often see players pushing out, trying to force the opposition players away from them, but the more that they push the wider they become and give the opposition big levers (arms) to control, thus they are more vulnerable to being held down by holding their shoulders with downward pressure.

If the player can make himself tighter and can get into a little ball on his shoulders, and spin, then he is more likely to be able to turn over onto his front. His power to spin comes from keeping his feet on the ground.

When players are lying on top holding down, the only positive thing about pushing and kicking out is that you can sometimes attract a penalty. But it won't help you turn over. It will actually slow you down.

### **RLCM *The speed of the play of the ball.***

**TS** When I was at Parramatta we would change our thoughts on this situation from time to time, it would depend who we were playing. Against an opposition that bases their game on fast 'play the balls', if we let them do it and let them feel comfortable, then we would have a hard game on our hands. There were other teams when playing the ball quickly was not so important and we would play in a different way.

But in every game you need some quick 'play the balls', they can set up the big plays. Parramatta changed their philosophy on it, sometimes a slow 'play the ball' can actually be a good one for you. I think the obvious one is getting out of your own area, most players won't take a lot of risk in that zone.

We talk about playing the ball really quick and catching the defence off guard, but sometimes it can actually throw the offence off also, because they are not set up and ready to go on that particular play. Sure you can run at them and you might find fault in one of the opposition from time to time. But a few of your own players will also not be ready for what you are about to do. So sometimes by having ordinary speed 'play the balls' can be an attacking advantage.

Some players have got the wrong mix on the 'play the ball' contest, while they are fighting hard to get up quickly to 'play the ball' they come up with errors. The question is, at the end of the day what would you prefer, retain the ball by having ordinary speed 'play the balls' or have a quick 'play the ball' but have to surrender the ball every now and then.

So, be aware the emphasis on fast 'play the balls' can be overdone and react against you if errors are made in your own half.

### **RLCM *The role of the dummy half***

**TS** I believe a dummy half has to have good vision and be a good schemer. Some dummy halves count numbers and others just run on instinct.

Some see one marker and just go, that's their rule, it doesn't matter what else is called, that's what they do in the game and they will run either side. They run when somebody is left lying on the ground or they notice two players peeling off but struggling at the side the players, they will run and their aim is to achieve a quick 'play the ball'.

A perfect dummy half should have good vision and good instinct on reading situations.

Forwards are the players to start the roll and are the ones to get a team on the front foot. But it is often these little dummy halves with a simple instinctive scoot from the ruck gaining easy metres and then a quick play the ball which allows for two or three big forwards to run over the advantage line continuing the roll.

I think Melbourne's style of the flat ball is a good way for dummy halves to play. Their dummy half goes forward before passing and disguises whether the pass is forward or flat, I think most teams are adopting similar tactics.

**RLCM** *Being a dummy half cannot be left to one player, you obviously have other players for that role.*

**TS** That's right, if your dummy half is just passing off to the forwards you maybe wasting a few of your outside backs ability. Say to your dummy half, take off, get tackled, start us on a roll. This gives you a chance to watch other players perform at that position.

**RLCM** *The Short side.*

**TS** Dummy halves with good vision can exploit the short side, players often go there for a rest.

Often it is where some weaker defenders are or the star opposition attackers, waiting in defence. If so, aim attack at them to make them tackle, obviously to make them tired. Also, be aware the opposition will attack your short side for exactly the same reasons.

**RLCM** *The role of the markers.*

**TS** The role of markers is an ever changing one and a complicated subject. With the ruck area and the speed of the 'play the ball' being so dominant nowadays coaches are expecting a different role from their markers. They are required to be more efficient than they were in days gone by, where the simple instructions were first marker left, second marker right

Markers need to be more aggressive than we have seen in the past. They are needed to stop some of the advantage line quick 'play the balls', by being able to slow up the attacking player who dives down in the ruck area.

The marker needs to be able to tackle runners side on and low, allowing the other defenders to put him on his back and negate any roll on through quick 'play the balls'.

I would expect markers to be situational to where they are on the field, they should know what is required of them in that section. They should know what tackle it is, how many players the opposition has behind the ball, which way the opposition is likely to go and what is needed to combat and defend their position for the play that is in front of them.

All scenarios of what can happen around the ruck should be put into game situations at training so the markers can recognise it when it comes into the game.

Marker play is a really important area, we could spend a lot of time on talking about the role of markers.

Rugby League Coaching Magazine

**RLCM** *Where do you want your players to run. Are they aiming at a player or aiming for a position on the field.*

**TS** Often players will run into a spot player or a weak defender and I encourage players to do that. It also would depend on the tactics for the team that we are playing against.

Their marker area might weak, so we may aim to go behind the markers or we may get our dummy half to put on some plays, sending them one way attempting to get in behind them on the other side, it varies.

If you are playing a team of gorillas, would you just power it up? Probably not unless you have got a team of gorillas yourself. If you have got a big pack and you can keep them on the park all the time, you don't have to vary that so much, you can just keep powering to wherever you want to begin your power plays.

Sometimes the game philosophy is just to go to an area and isolate certain players, not necessarily getting them going backwards, sometimes it is just a spot or a situation that they do not handle too well, that has been noticed in research.

This is where a juggling act comes in for players, we may say our tactics for this game are 'we want get to this point on the field to put on these type of plays'. So, do they put their helmets on and just run to that spot of the field, just purely so that they can put that play on, or do they run somewhere else where they think there is a bit of weakness.

Now, this is why smart players are needed, if they don't go to that spot hopefully it was because they had a good reason and they might put a chink in the opposition somewhere else, allowing for a try.

Certain players will only do exactly what you want them to do, they will just go to that spot, some players are always going to be a like that, but teams need smart players who can get see a different option.

So to answer the question, yes we will send players to a spot on the field that we want to set up, because if you put this play on against this team they struggle with it, although, they might shut you down on the first couple of plays and maybe even the fifth one, but you might score on the sixth.

Coaches must try to get this message and to teach players that although there is a team plan and you are going to a spot on the field, if a player sees something else on, tell him to do it.



# Self Assessment

With John Dixon - Brisbane Broncos Development

Written by Robert Rachow

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Everybody needs barometers of their success in life, they help to attain old goals while at the same time, set higher targets for the future. For Rugby League coaches such barometers are of particular use. In an occupation where there can often be more back-stabbing than back-slapping, self-assessment soon becomes a valuable tool.

Above all its importance is to ensure the team is performing at a level close to its potential, signifying the coach's recognition of skills and application of strategies are sound. Importantly, this will keep the wolves at bay for a short time. But secondly, on a more personal level, a positive assessment can give the coach increased motivation to continue and provide an often-needed boost in confidence.

Unfortunately win-loss records are not an adequate form of assessment in themselves. For although there is usually a correlation between victories and correct coaching, the true signs of quality guidance are in the improvement of both individuals and the squad as a whole.

On the subjects of assessment and player improvement, John Dixon is as close to an expert as they come. A former teacher who has held the position of Development Manager with the Brisbane Broncos since 1996, Dixon has ushered a bevy of talented teenagers into the ranks of the NRL.

Although he is a firm believer that no coach should enter their career with limits or outside expectations, the ex-Toowoomba representative supports the theory that positive self-assessment should reflect a growth on both sides of the player-coach relationship.

"In the case of a swim coach that has been with one kid for 30 years, does that necessarily mean he has 30 year's experience?" Dixon poses.

"Or does it mean he has one year's experience, 30 times over? If there isn't any improvement in the quality or technique of coaching, then I would argue he has just one year worth of skills. You have to progress, learn more, know your athlete better and maybe try your skills on other kids. Hopefully natural Rugby League Coaching Magazine

maturation of the athlete will demand that sort of progression. I suppose I am lucky learning with Wayne (Bennett), because it is almost like information overload. I'm probably in the easiest experience of my life. The difference between someone like him and me is that I am a gleaner of information. I take bits from here, bits from there and decide which bits I want. On the other hand, Wayne is at the forefront because he is an innovator. He looks at something and can tell whether it will work. He and other innovators are the ones that set the trends."

A self-critique has the ability to judge the past, the present and even, in part, the future. It is vital the third prong of this equation should be remembered when reflecting on the success of any career. Indeed the children that have progressed from the guidance of a particular coach can often carry indicators of

areas where there has been success or failure, in turn providing stimulus for future generations.

While many coaches will judge themselves on the basis of their current team or present batch of players, it is also integral for them to mark themselves on past graduates of their system. Obviously they can't take all the credit for a player who has been through several coaching programs, but in part that athlete's fundamentals or flaws are derivative of their unique style.

This is just one example to support Dixon's observation that self-assessment is a widespread and endless task for aspiring Rugby League coaches.

"Every time your kid or team plays it's a mark on yourself," says Dixon.

"If they are successful, then they have to bear the praise. That's the way it has to happen. But it doesn't mean you can't judge yourself. If the players are running their lines well or tackling well, then give yourself a tick.

"When you lose it is the same. Sure you have to bear some (responsibility), but so does the player. Try not to shoulder either too much of the acclamation or the

*"I think coaching is about assessing yourself all the time."*

blame. As the coach you need too find a balance where your emotions are on a level, not too high and not too low. I think coaching is about assessing yourself all the time.”

Communication and discipline are particular coaching skills which are hard to quantify by simply watching the team go through its motions on the paddock. Significantly these are two of the vital pillars of any successful coaching career.

Numbers won't justify any deficiencies or improvements in their application, but according to Dixon there are key pointers to watch for.

- The coach displaying discipline within themselves, while also emphasising drive and dedication.

- Setting an effective, but minimal number of boundaries. The more (unnecessary) rules that are placed upon the team will only decrease the fun, flexibility and respect of the coaching system. Dixon says his basic elements for discipline are having players turn up on time and listen attentively.

The learning process in Rugby League is almost endless. Even when a team goes through a season undefeated it would be folly for a coach to suggest

## ***There's not five skills in Rugby League, there are 5000***

**Communication:** Inevitably, Dixon says, good communicators are usually the people who go furthest in coaching. He opines that the reason many ex-football stars fail to make a mark in coaching is because, despite all their knowledge, they are unable to impart that important information on others.

Good communicators can consistently:

- Pass their knowledge and intentions on to players and support staff without feeling frustrated or stuck for words.
- Receive information as well as they can impart it.
- Give instructions or observations without the use of vulgarity or raising their voice.
- Bring an infectious sense of enthusiasm to the team.
- Ignore personal distractions away from football, while accepting that players will have their own problems.

**Discipline:** As part of the Bronco ethos to make players not only better people on the field, but off it as well, Dixon believes discipline is crucial to the 'whole box and dice'. Of course at the professional level there are more direct ways to enforce a set code (via fines and relegation), as opposed to the junior ranks where children view football as an escape from the constraints of school. But still many of the elements remain the same.

Effective discipline relies on:

- Above all else, consistency and fairness. If rules such as 'no train, no play' are only enforced randomly, then players will have no respect for the system and problems will multiply.

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there is no more room left for improvement. Ignoring the fact that there would be better sides and different situations for both the coach and players to encounter over coming years, in terms of skills and techniques alone there are enough intricacies and ambiguities for a lifetime's worth of education.

“There's not five skills in Rugby League, there are 5000,” Dixon says.

“For every one of those skills there should be four or five key elements you can identify. And you have to learn to store them mentally after a while, because you can't carry a book around with you all the time. So there are lots of areas where you can keep improving and learning.

“Then you get very interesting debates about skills. For instance, what is the 'target area' in tackling? Some people say right on the hips, others say just above, some say just below. I find one of the beauties is that it is all very individual. If you tried to bring down Steve Renouf with a traditional side-on tackle, then he would just swerve around you.”

As has been stressed, the crux of self-assessment is to identify ways in which improvement can be made. But what is also crucial is that there should be no pre-determined concept of how large or how smooth these processes will be. Expectations can often weigh heavily on aspiring coaches' shoulders and setting the bar either too low or too high will only be to long-term detriment. Sure, goals need to be set for a sense of ambition, but the correct use of self-assessment can constantly update these aims and find which of the myriad branches of coaching that an individual needs to pursue for constant betterment of the team, rather than short-term success.

# ***Ruck Defence***

*With Glenn Bayliss - QRL Southern Division, ARL Level 3 Coach*

Written by Robert Rachow

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A common saying with Rugby League coaches is that the ruck is the centre of the universe. So what better area to start with when teaching children the defensive systems of the game?

Later on in their careers, players will realise that each play-the-ball is a mini-battle of its own. It is imperative therefore, that from an early age they learn the basic components of marker defence and defending the 'black hole' at the back of the ruck.

## **RUCK DEFENCE BASICS**

When attacking runners receive the ball, it is vital for one of the markers to chase and for the inside defenders to move up quickly. This serves a number of purposes:

- So that the four ruck defenders (first marker, second marker and defenders either side of the ruck) can come together and effectively 'fold out' to form a straight line laterally.
- To push the attacker away from the gap behind the ruck and into the team's most effective tacklers, usually second-rowers.
- To make the attacker run on a slight angle, thereby increasing the target area for tacklers and limiting the number of metres gained by the opposition.
- To discourage the inside pass and limit the number of options available for the attacker.

Choosing which marker should chase and which

marker should hold has been a matter of contention for quite some time. However of late, the trend has been for the first marker to chase and the second to hold. This serves three purposes. Firstly, the front marker is closest to the offence and, although slightly impeded by the ball player, should have greater range of vision than the back marker and be able to pre-empt what is going to happen more accurately. Secondly it safeguards against dummy-half runners more effectively, because by holding, the second marker has optimum time to adjust to scoots or inside plays. Thirdly, it benefits communication by allowing the back marker to direct the front marker and provide encouragement. If it were the other way around it would not be so effective, as the back marker would be out of the front marker's vision while chasing.

Another important facet of defence around the ruck comes when the attacking team has the option of a spacious blindside close to the tryline. In an instant where there are two defenders matching up on the blindside and eight on the open, the dummy-half may choose to run to the blind and effectively form a third man, creating an overlap. This is a particularly dangerous scenario, as it would be much easier to defend nine on eight, rather than three on two. In such a situation strong consideration should be given to placing a third defender on the blind, and although this does present a double-overlap on the open (if the dummy runs), players should have enough time to adjust.

*(Continued next page)*

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## **Coaching Kids**

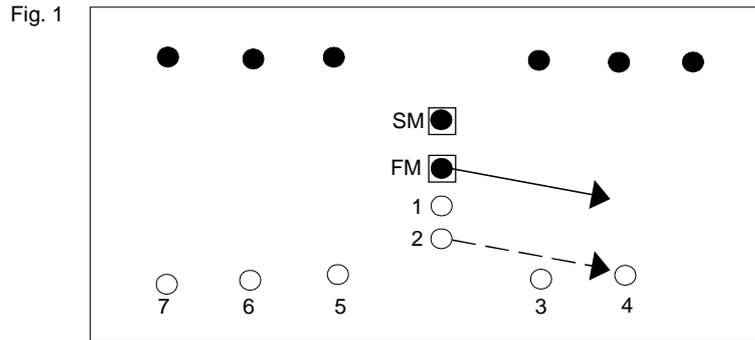
One Coach's Philosophy

**A RLCM Publication**

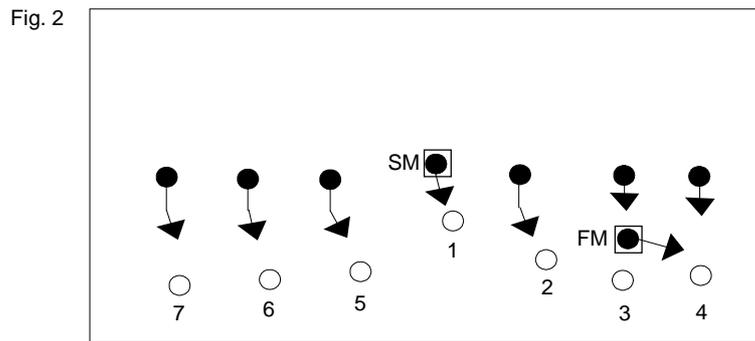
Written by Nigel Goodings

# Ruck Defence

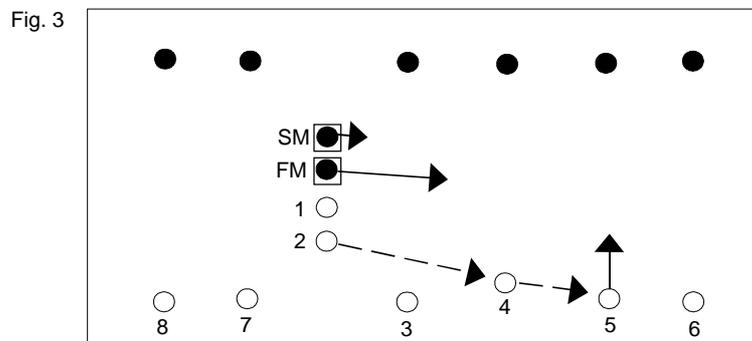
FM - First Marker SM - Second Marker



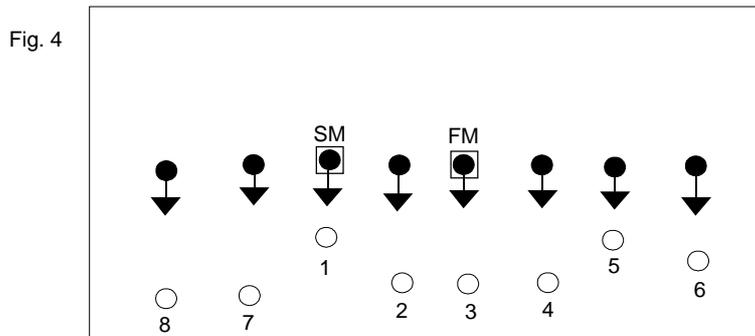
Proactive chase by First Marker. Players must move up and take ground. Second Marker 'holds'.



Players have 'formed' with second marker. The 'tight spot' disappears and players 'adjust' to where the ball carrier and support are.



Where a play takes the ball wider than a 'proactive' chase can cover. The chase becomes 'passive' and forms with line.



Players have 'formed' with defensive line eliminating 'gaps' that can be exploited.

# ***Benefits of Kick Play***

*By Kurt Wrigley - Sharks Development*

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*Kurt Wrigley is Assistsant Coach at the Sharks, one of his roles is the kicking and catching coach. To generate new ideas for kicking drills he has looked at Australian Rules Football and modified them suit Rugby League.*

Kicking, like most components of the game, is commanding more specific training time and specialist coaching in most NRL programs.

And its little wonder, especially considering the benefits a strong, smart kicking game can have for the team. Those benefits include:

- Field Position – with 40/20 rule and the possible change to the in goal rule
- Exert pressure – via repeat sets
- Line breaking ability – given opposition's good defensive systems
- Try scoring ability – high percentage of tries involve kicks

John Lang (Sharks Head Coach) believes that if you have a number of competent kickers in your team, then it puts the opposing team's defence under constant strain. The Kicking/Catching Coach should work with the halves, hookers, fullbacks, wingers, centres as well wide running forwards.

The most used kick in Rugby league is the distance punt in general play – either drop punt or torpedo (spiral punt). The current Steeden NRL footballs are more suited to the drop punt, due to their lightweight and pointy shape. However, the Gilbert ball used by Rugby Union and Superleague are heavier and rounder and better suited to torpedos.

Regardless, the AFL has shown that the drop punt is the safest and most accurate kick performed quickly under pressure. With practice a player can kick a drop punt just as far as a torpedo.

The technical points for the two kicks differ immensely. In the drop punt, the ball is dropped down in a controlled manner by the kicking foot hand to the foot (Hence DROP punt). However in the torpedo, the ball is placed on a pretend shelf approximately waist height and the foot is brought UP to the ball.

The main points and common errors of both kicks are as follows:

## **Drop Punt**

- incorrect grip (thumbs should be on top and at the front of the ball with fingers spread down the side)
- start with the ball in front of the kicking leg, not in the middle
- guide the ball drop keeping it upright pointing down at foot before impact – this will ensure backspin on the ball
- follow through (toes to fingers)

## **Torpedo**

- point the ball towards target, axis horizontal
- good control with kicking side hand
- place ball on the shelf, don't let the ball drop down to foot
- slightly rotate the ball as you impact
- follow through (toes to fingers), don't kick across the ball

*(Continued Next Page)*

The following are some of the kicks to work on:

<b>KICK</b>	<b>TECHNIQUE</b>	<b>TIPS/PRACTICE</b>
Distance kick	Drop Punt (lower trajectory) Spiral	Quick release 1 Step 2 Pass kick Pressured both sides of ruck
Bomb	Conventional Spiral Floater Banana	Pressure Contact the ball when still or rising, not descending
Attacking  Grubber	Crosskick - high Crosskick - flat Reverse (disguised)  Top spinner Flat roller Drop Punt (skidder) Reverse	Land on wingers head  Look to pass first
Weighted	Drop Punt	Flat & Low Kick & Lead
Kick Off	Deep/Hang Time Short/High (Tap Back) Flat/Hard (sideline)	In corner of in goal Into wind Disguised
Penalty Kick	Drop Punt Banana	Angle and wind Close to sideline
Centring Kick	Drop Punts (low)	Catch, run & kick in goal and Chase
Catching	Off the Chest Defending Cross kicks	Don't give them a runway

Competition is the best teacher, most players who are good kickers at the senior elite level are guys who have spent countless hours as a kid on their own kicking the football. This should be encouraged, and most kids love to kick the ball. Kickers should learn to be competent kicking the ball with both left and right feet.

Progress your kickers from doing repetitive technique work on all types of kicks in the absence of pressure. Once the skill becomes more autonomous, more and more distractions are introduced until the drill becomes competitive and/or game related. Ensure that work on attacking and defending the kick is introduced. This allows for competitive games against left and right side team members.

The book "Drills and Skills in Australian Rules Football" by David Wheadon is a great resource and has generated new ideas. In general, I try to look at all sports for help.

# ***Rugby League's Marathon Men***

*Written by Rudi Meir*

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*Rudy Meir is presently a Senior Lecturer in Human Movements at the Southern Cross University.*

*Over the past 12 years Rudi has developed an international reputation for his consultancy work in Australia and overseas with both Rugby codes - League and Union.*

*During the same period he has developed training programs for numerous teams including League clubs Wigan, Leeds, Salford, and the Nth Qld Cowboys. In recent years Rudi has also worked with Wayne Bennett at the Brisbane Broncos as a Specialist Skills coach.*

I doubt that any of us would argue with the fact that professional Rugby League is one of the most physically demanding of the team sports. However, I'm sure that for most of us this view is based primarily on either our own experience or simple "observation" of players during competition. In order to be more objective about what is actually occurring on the field during play, it is necessary to conduct some form of time and motion analysis. Such an investigation can provide coaches with useful information for designing and prescribing sport specific training programmes. It may also allow the coach to develop programmes that relate specifically to individual team positions.

To develop a sport specific training programme the coach needs a detailed knowledge and understanding of the demands placed on players during play. To this end, time and motion analysis represents a practical alternative to more sophisticated procedures that can provide detail relating to the type and frequency of match play activities being performed, and for what period of time. It can also help to identify the frequency and ratio of work to recovery, overall distance covered and an estimation of intensity of effort. This could then allow some determination of the dominant energy systems being utilised during play.

The game's ruling body makes rule changes, in part, in an effort to make our sport more "entertaining". However, such changes are often made without consideration for the impact on the players. One of the most significant rule changes to League in the past decade has been the requirement of the defending team to retire 10 metres from the play-the-ball. While some will argue that has encouraged more open, attack-orientated play, it has also potentially increased the physical demands on players during play.

In order to try and identify just how significant these

changes may be, two students from Southern Cross University, Paul Colla and Cynthia Milligan, conducted a time and motion analysis of a First Grade team competing in two games of the 1997 ARL competition. This information was then used to identify changes in play which differ from those reported previously under the 5 metre rule.

Four playing positions were analysed (ie prop forward, hooker, half-back and winger). In order to accurately quantify the nature of the activity and distances covered, 4 video cameras were used to record each position throughout both games. Using the cadence values determined at training for the various forms of locomotion to be analysed (eg walking, jogging, sprinting, etc.) it was then possible to estimate the actual intensity of effort and distances covered during play.

## **Low Intensity versus High Intensity Unrewarded Locomotion**

For the purpose of this study, low intensity unrewarded locomotion was defined as any activity that involved walking (forwards or backwards), cruising (forwards or backwards) or jogging in a forward direction while not in possession of the ball and without coming in to contact with an opposing player. High intensity unrewarded locomotion was defined as any activity involving jogging backwards and sprinting in a forward direction while not in possession of the ball and without coming in to contact with an opposing player.

Analysis of the two games indicated that on average forwards spent a greater amount of time in high intensity activity compared with the backs (see table). However, not surprisingly the vast majority of time is spent in low intensity activities for both groups.

Specifically, forwards appear to be spending more time jogging forward under the 10 metre rule than was the case under the 5 metre rule. Logically, this is due to the increased distance between the defensive and offensive lines, placing greater pressure on the forwards to either move forward with the attack or defensive line over a greater distance. The increased distance from the play-the-ball back to the defending line means that defending players potentially have more distance to retire in order to be onside before the next attacking play. Typically forwards turn and jog back when returning to set the defensive line because this is quicker and less demanding physically than recovering the ground by back pedalling alone. However, if a player has only moved 2-3 metres off his defensive line, he is more likely to simply jog backward to regain his position in the line. This possibly accounts for the slight increase in the time spent in this form of locomotion under the 10 metre rule than under the 5 metre rule (see table below). The increased time spent by forwards jogging forward and backward appears to account for the decreased time spent either walking or cruising. With respect to the backs, the increased time spent walking may be a result of having to move forward over a greater distance as players in this position follow play on the edge of their respective defensive or offensive lines.

Activity	% Time under 5 Metre Rule		% Time under 10 Metre Rule	
	Forwards	Backs	Forwards	Backs
<i>Low Intensity:</i>				
Walking	26.5%	27.1%	24.0%	37.5%
Cruising	26.4%	27.4%	18.6%	21.4%
Jogging Forwards	3.8%	5.3%	11.3%	6.3%
<i>High Intensity:</i>				
Jogging backwards	0.2%	0.9%	2.2%	0.7%
Sprinting	0.6%	1.7%	1.1%	0.9%

### **Rewarded versus Unrewarded Match Play**

Rewarded play was defined as any activity that resulted in an outcome that was beneficial to the team eg time spent in possession of the ball or tackling an opposition player, etc. Conversely, unrewarded play was defined as any activity that had no specific outcome eg sprinting, walking, standing, etc. While there were slight differences between rewarded and unrewarded play by position, the overall time spent in these forms of activity varied only marginally from the previous study under the 5 metre rule. The most notable change appeared to be with respect to time spent in possession of the ball for the forwards.

These results suggest that forwards are running more during the course of play but actually spending less time in possession of the ball. Under the 5 metre rule one of the primary attacking functions of the forwards was to hold possession and run the ball straight at the defensive line. However, with the introduction of the 10 metre rule ball movement tends to be greater as teams shift the ball in attack and attempt to capitalise on the space that is potentially created by having the two teams further apart at the start of each offensive play. This requires players to run more in support of the ball. This may be reflected to some extent by the slightly higher percentage time recorded in this study for unrewarded activity (eg 89% for forwards) compared with unrewarded activity under the 5 metre rule (eg 86% for forwards).

Notwithstanding the above, compared with the backs, forwards spend more time in rewarded activity under the 10 metre rule (3.0 and 11% for backs and forwards respectively). A similar outcome was found under the 5 metre rule. We would expect this, given that forwards are typically more involved in running and retaining the ball in attack and also more heavily involved defensively. However, when comparing time

in possession between play under the 5 and 10 metre rules some differences were seen. For example, the hooker under the 10 metre rule spent approximately 46% less time in possession than under the 5 metre rule. Similarly the prop spent approximately 24% less time in possession.

These differences may, in part, be a result of the higher number of play-the-balls per game under the old 5 metre rule. The acting dummy-half role is also no longer exclusively the domain of the hooker. Under the 5 metre rule forwards also had less distance to travel per unit of time before being tackled in possession and were often used to simply drive the ball to the defensive line committing opposition defenders while retaining possession. However, under the 10 metre rule forwards appear to be spending more time in support of the ball carrier (designated unrewarded activity) running decoy angles and the like.

## Distance Covered During Play

The results of this study show that across all positions players are covering more total distance under the 10 metre rule than was the case under the 5 metre rule. For example, the hooker and prop have increased their overall distance covered during play by 49 and 50% respectively. The half-back and winger have also increased their overall distance covered by 19 and 11% respectively (see table below).

The forwards continue to cover a greater total distance during play than the backs. In fact, this figure has increased markedly with the introduction of the 10 metre rule with both the hooker and the prop on average covering approximately 10,000 metres, while the winger on average covers approximately 7,400 metres and the half-back covers 9,400 metres.

Position	Average Distance Covered Under 5 Metre Rule	Average Distance Covered Under 10 Metre Rule	Average Total Increase in Metres	Percentage Change
<b>Forwards:</b>				
Prop	6,530	9,806	3,276	+50
Hooker	6,764	10,052	3,288	+49
<b>Backs:</b>				
Half-Back	7,921	9,450	1,529	+19
Winger	6,750	7,466	716	+11

## Work to Recovery Ratio

Work was defined as those activities involving high intensity forms of locomotion eg jogging backwards, sprinting forward and any rewarded play as identified previously. Recovery was defined as those activities involving low intensity forms of locomotion eg standing, cruising forward or backward, jogging forward, etc.

Under the 5 metre rule it was estimated that work to recovery ratios during play for forwards and backs collectively were 1:6 and 1:8 respectively. Under the 10 metre rule these work to recovery ratios have now increased to 1:10 and 1:7 for the hooker and prop respectively and 1:12 for the half-back and 1:28 for the winger. This means that on average every 4 seconds of high intensity activity is followed by approximately 31 and 48 seconds of low intensity activity for the forwards and backs respectively. At no time during either of the games examined did high intensity activity for any position exceed 10 seconds.

It could be argued from this that the increased intensity of work performed by players when involved in play, necessitates longer periods of recovery before they repeat the effort. The introduction of the unlimited interchange rule (used at the time of this analysis) has meant that players can perform their role at a high intensity knowing that they can be interchanged without restriction at any time during the game. While comparison between the 5 and 10 metre rule for work to recovery ratios are similar for the hooker, prop and half-back, the same is not true for the winger. This position showed a significant increase in the recovery period between high intensity match play activities, possibly reflecting the low intensity nature of activity used in this position while constantly moving up and back on the edge of the offensive/defensive line.

## Training Implications

What can we determine from all this? Well, it appears that the introduction of the 10 metre rule has placed increased demands on the aerobic capacity of professional players. As a result, there is a need to devote an appropriate period of time to developing optimal aerobic capacity prior to competition. Similarly,

because of the high number of physical confrontations (eg tackling, being tackled, playing the ball after being tackled to the ground, etc.) experienced during the game, which greatly increase the overall intensity of work effort, there is also the need to improve the strength and power of players.

On this basis, and by considering the results presented here, we can conclude that the major physiological stress on players in terms of energy utilisation is being placed on both aerobic and anaerobic alactic (ie ATP-CP energy system) systems. As a result, the primary objective of any training regime for professional players should be to focus on stressing these energy systems by developing specific activities that will simulate match play activities and conditions. However, developing both these qualities is not as straight forward as it may seem. Developing strength/power and endurance concurrently is a complex process and requires the coach to consider carefully the structuring and sequencing of training in order to optimise improvements in these areas of physical performance.

We know from the research in this area that concurrent strength and endurance training may reduce the potential gains in these fitness qualities. High levels of strength and power have been the focus of professional Rugby League training programmes for the past decade, along with an emphasis on players possessing relatively high levels of muscle mass. In particular, given the increased demand for optimal levels of aerobic fitness, changes to the training format may be required which could become problematic. It is possible that this increased demand on aerobic capacity, resulting from the increased distances being covered during play, may decrease the potential gains in strength and power being sort by the training programme. We already see evidence, particularly in some forwards, of players becoming leaner and more “athletic” looking. This might be attributed to players having less total mass due to the increased endurance activity being completed during play/training.

Research has shown that optimal gains in strength and endurance are best achieved by designing programmes that train these qualities independently of each other. While improvements in strength and endurance can be achieved by training these two qualities concurrently, the research shows that strength gains will be compromised in the lower body when training is done in combination with endurance work. It has also been shown that combination training fails to improve power as measured by vertical jump and 20 metre sprint time.

Combination (or complex) training, if not programmed correctly, could limit the ability to produce significant gains in lean body mass, which plays an important role in the development of optimal strength and power qualities for Rugby League.

However, on the other hand, having too much muscle mass may be detrimental to performance since the player has to expend considerable amounts of energy moving that mass around the field. For example, under the 5 metre rule it was shown that during just 40 minutes of football a prop may move forward on more than 80 separate occasions. This requires 80 separate starts (accelerations) and 80 separate stops. Add to this having to lift the body up repeatedly from the ground and you can see how a player must expend a lot of energy to simply overcome inertia.

### **Conclusion**

This study has provided some insight into the impact of the 10 metre rule on key match play activities. However, a word of caution, the results may only apply to the team being studied. Obviously variations in match tactics may also produce differing results between teams. On this basis we should be careful when relating these results to the wider Rugby League playing population.

Notwithstanding this, it appears that this rule change has placed increased demands on the aerobic capacity of players and has implications for the way the game is played. Clearly optimal aerobic capacity, specific to the demands of League, needs to be developed along with all the other fitness qualities associated with match play. As a result, a periodised approach to the development of fitness qualities and positional play over time is essential. This might be achieved by the use of interval type training, which progressively overloads players by reducing the work to recovery ratios identified earlier, and integrates specific skill and match play activities relevant to the playing position.

## **NOTES**

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# ***Increasing Training Intensity in Country Rugby League Players***

*Tim Gabbett - Head Conditioner Runaway Bay Seagulls*

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Rugby League is a game that requires players to draw upon a number of fitness components including muscular strength and power, speed, agility, skill, and endurance. Due to the complex nature of the game, the implementation of game-specific conditioning drills that transfer to improved performance in matches, poses a considerable challenge to the Rugby League conditioning coach. This is particularly true for country Rugby League.

## **The Traditional Approach To Conditioning**

Country conditioning coaches have typically used traditional conditioning activities (i.e. running activities without the ball), to elicit improvements in physical fitness. A major limitation of this form of training is that it provides few additional challenges to the individual other than that imposed on the body's energy systems. Given that most country teams participate in two 90-minute sessions per week, valuable training time could be lost if conditioning coaches spend unnecessarily long periods without the ball in the players' hands.

Clearly, conditioning coaches need to optimise training time in order to develop as many fitness components as possible, while also providing drills that encourage decision-making and problem solving.

## **The Games Approach To Conditioning**

An alternative approach to conditioning for country players is the application of skill-based conditioning games. Skill-based conditioning games are seen as an effective method of conditioning as they offer an additional challenge to players that would not normally be present in non-skill related conditioning activities. Players are required to think under pressure and fatigue, while competing in a game that simulates the specific movement patterns and intermittent nature of Rugby League. More importantly, skills learnt from participating in skill-based conditioning games are more likely to be applied in a competitive environment.

Errors made in attack and defence during critical periods of matches are often attributed to fatigue or pressure-induced reductions in concentration and skill. There is little doubt that traditional conditioning activities will provide, at least in part, the necessary fitness to minimise these occasions. However, traditional conditioning activities alone are insufficient to provide the necessary skills to handle pressure situations, such as controlling the football while exiting from one's own try line, or

continuing to communicate effectively when defending for multiple sets.

By simulating these and other pressure situations in training, conditioning sessions become highly game-specific, with players likely to perform confidently when placed under similar pressure during matches.

Conditioning games should have a purpose that relates to improving the skill and performance of the individual and/or the team. Conditioning coaches can design games that emphasise coordination and communication in defence, quality second-phase play, field positioning skills, and ball control (to name a few). The development of these games is limited only by the imagination of the conditioning coach. These games can be designed to suit an individuals' workspace, with rules and field sizes modified to meet the physical demands and challenges placed on different positions. Ultimately, the goal is to develop tactically smarter players.

The implementation of skill-based conditioning games requires players to perform multiple high intensity sprinting activities in different directions, in an environment that promotes the development of aerobic endurance. These activities will develop speed, speed-endurance, agility, and aerobic endurance that is specific to the requirements of Rugby League. Requesting players to perform repetitive sprints or longer intervals in non-competitive tasks will very rarely generate the same intensity as that obtained in skill-based conditioning games. Therefore, it is a necessity that conditioning sessions are competitive in order to increase training intensity.

## **Summary**

Physical conditioning is typically the component of Rugby League that players enjoy least, and skill-based conditioning games, without doubt, offer a method of encouraging players to perform physical work. Country players in particular will use many and varied excuses to avoid physical training. If training is enjoyable, players are naturally more likely to participate. Rather than wanting to avoid conditioning sessions, the use of skill-based conditioning games places players in the unfamiliar situation of wanting to train.

Therefore, conditioning coaches that develop enjoyable and challenging sessions are more likely to provide a positive experience for players while also improving the performance of the individual and the team.

# DIET AND SUPPLEMENT:

## *What is Factual, What is Fiction?*

Written by Doug King *RCpN, Dip Ng, L3 NZRL Trainer, SMNZ Sports Medic*

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### **Introduction.**

For the individual who wishes to be able to participate professionally and competitively within their chosen sport, they need to undertake to implement and utilize all legal methods available to achieve their maximum potential. This usually includes the use of appropriate training skills, techniques, competitive equipment and methodology as well as rest, injury prevention and the supply of the appropriate “fuels” for their body. This usually includes amending their diet to achieve their maximum potential which sometimes includes the introduction of dietary supplementation to assist in achieving this.

The aggressive marketing of dietary supplements to these athletes has seen sports participants reach for the use of these in increasing numbers but are they all they are made out to be? What is actually within these supplements, are they within the Recommended Daily Allowance (RDA) or Dietary Reference Intakes (DRI) guidelines and what long term effects do they have upon the user’s body in the long term?

### **What is it?**

Nutritional or dietary supplements have been identified as being “*any product taken by mouth that contains a so called “dietary ingredient” and its label clearly states it is a dietary supplement*”. The dietary ingredient component may include a range of substances including “*vitamins, minerals, herbs, amino acids as well as substances such as enzymes, organ tissues, metabolites, extracts or concentrates*” and these are found in forms such as “*pills, tablets, capsules, liquids or powders*”.

These can be either recommended by many sources, such as Physicians, Dieticians, and Personal Trainers through to self-referral for the supplements. The usage of these is financially big business which has seen increases from \$4 billion in 1993 with 4 in 10 adults regularly taking dietary supplements, \$6.5 billion in 1996 and \$13.9 billion in 1999 with 7 in 10 adults consuming them. The labels of these can also make health claims, (e.g. produce x may reduce the risk of disease) and/or so-called structure or function claims

(e.g. it will benefit a structure (musculoskeletal system) or a function (gastrointestinal) within the body.)

People consume these for many reasons, ranging from beliefs about the lack of quality within the food that they consume through to requirements for their health as recommended by various sources. They range from the very young, male and female exercisers, the injured, ill and elderly. There are also many thoughts about consuming dietary supplements that also vary and depending upon the source of the information they will either reinforce the requirement for supplements, identify that they may be appropriate in specific situations or identify that sufficient nutrients are best achieved through a balanced diet enabling naturally balanced intake of the necessary elements.

### **Medical Perspective**

Medically there is a relevant place for supplements, in the form of vitamins and minerals. These may be prescribed for the prevention or treatment of many scientifically researched disorders and these are normally medically monitored. But the non-medically monitored dietary supplements consumed is usually purchased over-the-counter. These may be unmonitored in their production, and the claims made on their packaging may be misleading.

There have been incidents where the product consumed has been utilized with contraindicated substances (e.g. ginko biloba and aspirin due to both substances having blood thinning effects) that may have potentially fatal outcomes, or components of the supplements are not yet fully understood. The amount and quantity of the supplemental ingredients are also unmonitored in its production and the consumer increases the potential for overdose on these components due to misuse and increased consumption.

### **Fact or Fiction.**

**Fact:** Scientific reviews of supplements consumed within the bodybuilding arena have identified that there are components utilized that were previously banned by the United States Food and Drug Administration (FDA). These components had side

effects that ranged from nontoxic compounds that lead to undesirable side effects of diarrhoea and ‘fishy’ body odour, through to irreversible virilization in women, including hair loss, hirsutism and voice deepening and irreversible gynaecomastia in men.

These were also reviewed in respect of ergogenic aid and effectiveness. The results revealed that the effectiveness and increases in athletic performance remained to be yet proven and again required further investigation and were not supported by any current research data. These results were based on short term assessment only as no long term results have been completed.

One particular supplement, Creatine Monohydrate (methylguanidine-acetic acid), is a recently discussed product that has raised some controversy as to its reported ergogenic effects and side effects for both body builders and athletes alike. Reports on this supplement vary from statements of “According to every known study, the answer is that Creatine is safe” by the distributors, while the researchers have identified that “greater concern lies in the unknown effects of Creatine supplementation on various organ systems, particularly the kidneys, liver, heart, brain and reproductive organs”

As for the ergogenic effects of Creatine, recent research has identified that Creatine supplementation had “positive effects in short term exercise included into aerobic endurance exercise” and when it was added to other supplements “promoted greater gains in fat/bone-free mass, isotonic lifting volume, and sprint performance during intense resistance/agility training”. Although the associated weight gain that occurs with Creatine supplementation is speculated to have occurred from water retention which “may impede performance in runners and swimmers” and that as most of the studies on Creatine is carried out within a laboratory environment this “has led some to question whether Creatine is truly ergogenic outside of the laboratory”.

Other supplements also have been identified as requiring further research for their ergogenic effects and their safety are:

- a. Chromium Picolinate (“strongly discouraged for use and considered potentially dangerous”),
- b. Protein (“the amount of protein intake for optimal muscle synthesis during a weight training programme has not been established” and “no scientific evidence supports protein supplementation”),
- c. L-Carnatine (“should not be advocated as an ergogenic supplement” and “the bioavailability of Rugby League Coaching Magazine

*pharmacological doses of L-Carnatine is poor and its uses as an ergogenic aid is not supported by current data”*),

d. L-Tryptophan (“failed to demonstrate any improvement in subjective or objective outcomes measures when supplementing with 1.2g of L-Tryptophan”),

e. Dehydroepiandrosterone (DHEA) (“the safety of this supplement must be questioned” and “given the lack of evidence that DHEA enhances athletic performance and its potentially devastating adverse effects, DHEA supplementation is not recommended”),

f. γOryzanol and Ferulic acid (“no published results to substantiate these claims” (stimulate growth and hormonal secretion) and “are poorly absorbed from the digestive tract; therefore, ergogenic effects and toxicity are likely to be minimal”), and

g. Inosine (“little research exists to support those claims” (increasing endurance, energy enhancer, recuperation and strength)

**Fiction:** There are still companies, and individuals, advertising that the use of these supplements are beneficial and without side effects. One reviewed article referenced a scientific review of a product that resulted in a 60% extension of a lab test animals life, then stated that this product “is not only good for bodybuilding and repairing, it may also extend your life”. Some articles contain extrapolated segments of the research articles on the supplements, and have been noted for the omission of components of these articles. These are then inserted into the distributors document supporting the distributors claims on dietary supplements.

Further review of the literature on dietary supplements identified how some distributors describe the medical standing on dietary supplements. One such standing was that medical people were “generally ignorant of the facts on nutritional supplements and, therefore, scientifically skeptical” and, due to work loads and pressure of time, they are “much too busy to keep abreast of all the current scientific research” consequently “their ignorance is at least excusable”.

But the recommendation of these researched papers was that “Physicians should remain skeptical about any supplement”. One such scientific review of a dietary supplement identified that key impurities was

present in 23 different manufacturers samples of one type of supplement. These impurities also ranged in amounts for each impurity, despite known side effects for only some of the impurities, thus further reinforcing the skepticism of medical people for the use of supplements.

## Conclusion

The decision to utilize dietary supplements is still an individual's choice. The variety of information available for the consumer to review can be contradictory and lead to consumer confusion. It is our responsibility to be able to appropriately inform the consumer by ensuring that the correct information is available and this may necessitate the implementation of legal requirements to enable this to occur.

Further research is required to establish the actual long term benefits and side effects of these supplements thus enabling the sports participant to utilize informed consent in the consumption of supplements in their quest to achieve their potential.

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# Off-Season Checks

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Its the end of the season and the medical equipment has been packed away and placed in the “until next season” pile of things to do. The family will be happy your home for the summer and the restlessness of the “what to do blues” has worn off, but have you appropriately packed it all away so that you can just pick up the kit in the pre-season and be ready to go, or do you have to usually throw out some equipment and arrange for the replacement of this. Have you ensured that you are ready for the next season (or was this your last one) and know what team you are with and who the management team is? Here are a few gentle reminders for the to dos that you may want to consider for the next season:

## **Medical Kit Check**

Drag out all those lotions and potions and check for wear and tear of the packaging. Check for the expiry dates and whether they will be current within the 2000 season. Are they useable or will they require replacing? Is there any signs of contamination or “floaties” in the lotions? If there is, replace these and dispose of the expired or contaminated equipment in a safe manner. It’s also a good opportunity to check out the latest developments in sports medicine products that you may find useful in the next season (medicines available from the chemist especially)

Check all the dressing equipment (Band-Aids, Gauze swabs (we don’t use cotton wool anymore do we?), dressing packs, tweezers, disposable gloves etc.) and ensure that the stock you have is clean and safe to use. Check any packs or container’s for their expiry dates and if expired destroy them and replace with newer equipment. Anything with blood contamination should be either disposed of (if consumable) or cleaned with an approved, appropriate solution.

If you have expensive medical “tools” (scissors etc.) you may want to ensure that these are working correctly and free from rust or any signs of contamination.

## **Strapping Tape**

Check your tape supplies and how they are being stored. Ease of space says to place the tape on its side and to stack it on each other, but this can cause

“pooling” and “running” of the tape adhesive resulting in the traditional tackiness areas of tape, or the non stickiness in other areas. Store your tape on the ends and in an appropriately aired area. Don’t let dampness get to the tape, and if possible place some lunch wrap, or similar product, between each roll to ensure that they don’t stick to each other.

If, due to the storage style of the tape, you find that the rolls are full of these patches, place them in an egg carton, on their ends, and microwave them on high for 13 seconds. Let them cool and then use. This helps to respread the adhesive and rejuvenate the roll. (Thanks to the Australian Sports Trainer’s Association for this useful hint).

## **Medical Related Documentation.**

If your vigilant, and have maintained injury reports and Medical Assessments forms, place these in a safe and secure place and remember some countries legislation requires that you hold onto this information for up to 10 years. It is recommended that you hold onto this information in-case any player’s injury and subsequent management comes into question.

If you have not utilised a pre-season assessment or ongoing documentation you may like to consider using this to enable you to keep and maintain records of all the players that you care for next season.

## **Emergency Preparedness.**

Now is a good opportunity to go over any injury management that occurred during the previous season. Discuss and plan your procedures for the ensuing season and update / renew your qualifications for CPR, First Aid etc. The New Zealand Heart Foundation have released a revised standard for CPR this year so there have been some changes. Check with your local organisations.

Review any set policies that your club / team / organisation may have for emergencies. Ensure that these are up to date and relevant with the names of the right people on them. Remove/update any outdated fliers with names on them of people that have left the organisation or if the policy changes.



# What's in your sports drink?

*In this two part series many of the well known "sports drinks" are compared with the Unipro Endura sports rehydration supplement.*

## ***The importance of the Right Ratios of Electrolytes and Minerals***

In Part 1 we investigated magnesium and the importance in the rehydration process. But just replacing magnesium is not enough. To be truly effective a sports drink must include the proper ratios of their electrolytes such as sodium, potassium, calcium and chloride. Endura is specifically formulated to contain electrolyte ratios that parallel those found in muscle cells to assist in relieving muscular aches, pains, cramps and spasms.

### ***Leaving a bad taste in your mouth***

Many sports drinks are sweetened with glucose to improve their taste. The intention is to provide a quick dose of sugar to boost energy production. Studies have shown, however, that sucrose and glucose are not as efficient sources of energy as you might suppose.

A number of studies have looked at the effects of different types of carbohydrate solutions and athletic performance. Glucose polymer (maltodextrin-fructose) drinks have been proven to provide superior results, given that they do not delay gastric emptying, and provide the necessary calorie load to meet energy expenditure.

A study by B Kingress using cyclists, compared maltodextrin-fructose drinks with the high carbohydrate diet used by most athletes (for glycogen loading), and showed that the cyclists consuming both the drinks and the high carbohydrate diet had an amazing 126% improvement in performance. (Kingress B. Effect of glucose polymer ingestion on energy and fluid balance during exercise. J Sport Sci 1989; 7:3-8)

***Commonly used glucose sports drinks have been linked with reduced endurance performance due to their high concentration of sugar which causes delayed gastric emptying of fluids, and reluctant dehydration.***

Commonly used glucose sports drinks have been linked with reduced endurance performance due to their high concentration of sugar which causes delayed gastric emptying of fluids, and reluctant dehydration.

Endura is different. With an isotonic pH-regulated formula that rapidly empties from the stomach, Endura delivers electrolyte nutrients in ratios that are scientifically formulated to improve stamina and increase endurance during exercise.

## **MALIC ACID**

Malic acid plays a pivotal role in the generation of mitochondrial ATP under both aerobic and anaerobic conditions. Exercising athletes have an increased demand for malic acid to remove the build up of metabolites which block cellular energy production. Stimulation of the breakdown of muscle tissue can occur to supply amino acids as substrate for mitochondrial ATP synthesis. This degradation of muscle tissue is often associated with musculoskeletal pain. Treatment with magnesium and malic acid has been shown to reverse these changes with dramatic improvement in muscular pain and energy levels.

## **POTASSIUM**

***Potassium is important in energy production with cellular deficiency of potassium being linked to poor muscle performance and fatigue.***

Potassium is important in energy production with cellular deficiency of potassium being linked to poor muscle performance and fatigue.

This is readily demonstrable in patients taking diuretics which deplete both magnesium and potassium depletion, but in fact this is mostly caused by a magnesium deficiency. Supplementation with

magnesium not only raises magnesium levels, but also potassium levels, even without potassium supplementation.

## **CALCIUM**

Calcium release in muscle cells triggers their contraction, so it is vital to healthy muscle function. Excessive calcium accumulation in muscle cells predisposes to muscle cramps. Magnesium is known as a natural calcium channel block. This means that magnesium is able to inhibit the flow of calcium into cells. When magnesium levels are low, muscle cells are more likely to go into spasm because of calcium accumulation. Like potassium, calcium appears to be regulated by magnesium.

*Endura has a balanced ratio of electrolytes that is scientifically formulated to parallel those found in muscle cells and is the only sports supplement to contain Met Mag™, one of the most absorbable and easily digestible forms of magnesium available.*

Endura has a balanced ratio of electrolytes that is scientifically formulated to parallel those found in muscle cells and is the only sports supplement to contain Met Mag™, one of the most absorbable and easily digestible forms of magnesium available. Designed to improve stamina and reduce fatigue and muscle cramping, Endura effectively rehydrates and replaces lost minerals and electrolytes.

***So if you're serious about the winning then you need the winning edge.***

***You need Endura.***

Endura is available from all good Pharmacies and Health Food stores, or contact Health World Limited directly on (07) 3260 3300 for your nearest stockist.

# **Are you guilty of "A Salting" your body?**

If you use many of the popular "sports drinks" you probably are. Because without magnesium and the proper ratio of electrolytes many "sports drinks" are simply sweetened salt water.

Endura with its scientifically advanced formulation provides the high level of magnesium and proper ratios of electrolytes that football players need for prolonged activity and muscle recovery.

With active minerals magnesium, calcium, potassium and sodium, Endura rehydrates the body quickly and helps relieve muscle cramping.

Ignorance is not a defence for "a Salt". Don't get caught out.

Check out now how much salt (Sodium or Na) is in your "sports drink".

### **And use Endura!**

Endura is available from all good Pharmacies and Health Food Stores or contact Health World Limited directly on (07) 3260 3300, for your nearest stockists.

*Always read the label.*

# Skills

## *Touch/Tag Games for Rugby League Training Sessions*

Provided by South Australian Rugby League

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**T**he emphasis of all these games can be changed by altering certain aspects of the rules. This can be done at both a fitness and a skill level.

Try to alter the rules to achieve what you want to get out of the game. Some may suit you others may need modifications.

For example, if you've been working on the 'play the ball' speed - why not remove the rules about ball carry and correct lines. Place emphasis on what you want to achieve out of the game.

The rules and the field size can be adjusted. Do so to achieve your aims.



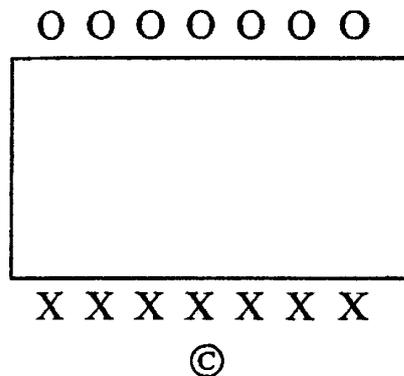
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## ***2 Minute Elimination***

20m x 30m



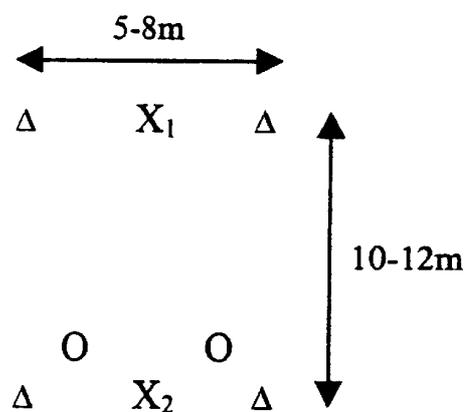
### ***Overview***

Offence starts with the ball and have two minutes to score as many tries as possible. The coach, (C), at regular intervals ( and the same for both teams) takes defensive players out of the game thereby increasing the advantage of the attackers.

### ***Rules***

- Each try scores a point
- For each mistake by the attackers (dropped ball, forward pass, incorrect PTB etc) they lose a point
- The attack can gain a point for any defensive penalty e.g. offside
- Once the try is scored the attack returns to their starting line 20m away and come straight out again
- PTB must be off the ground
- You can eliminate kicking/markers
- Swap roles after two minutes

## ***2 v 1 v 1 Challenge***



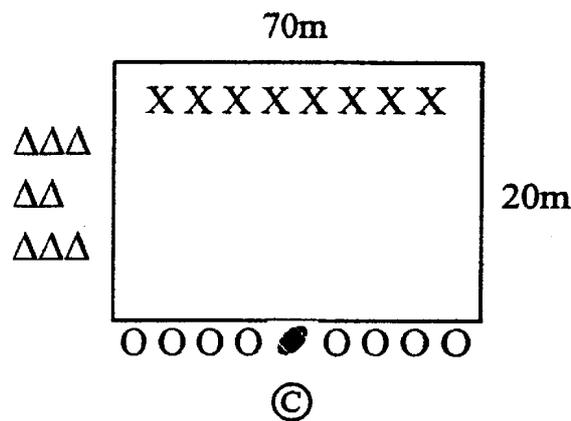
### ***Overview***

Offence have the ball and try to get past X<sub>1</sub>. As soon as they do, or if they fail, they turn around, and have to get past X<sub>2</sub>. They have 6 goes, back and forward, and see how many successful attempts they make.

### ***Rules***

- All passes to be backward
- Two handed tags
- Defending players can move forward but must return to their try line after the play

## 3 Minute Drill



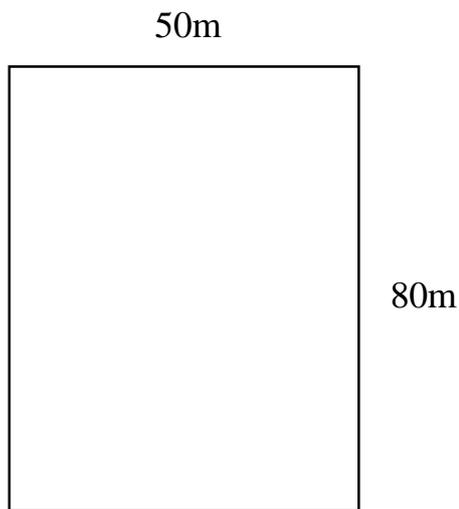
### Overview

A team has control of the ball for 3 minutes in which they try to score as many tries (points) as they can. One team defends and the other rests. After 3 minutes, teams rotate and the defence becomes the attack and the rest team is on as defence.

### Rules

- Offence start with a tap in the middle of their line
- They have unlimited tags to score
- If they make a mistake (break rules, forward pass, knock-on etc) they return to the starting line and only when everyone is onside - they start again
- Kicking is allowed
- Tries can be weighted with extra points (e.g. 3 or more pass try - worth 2 points, try scored running correct lines - worth 4 points)
- The coach (C) has spare balls that he places on the centre spot ready for X's to restart so it's continuous
- If the defenders give away 3 penalties that is worth a try to the attackers and they go back to the start again.

## ***K-10's***



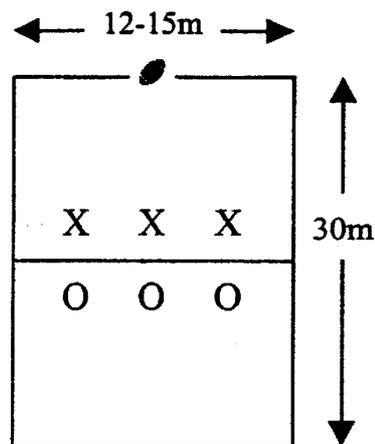
### ***Overview***

The attacking team plays to a set pattern. Other rules as set by coach.

### ***Rules***

- A pattern is nominated by the coach
    - e.g Tackle 1 - Go forward
    - Tackle 2 - Go forward off pivot
    - Tackle 3 - Hands
    - Tackle 4 - Go forward
    - Tackle 5 - Play
    - Tackle 6 - Hands/Kick
- and the team must adhere to it.

## ***Killer Touch***



### ***Overview***

The attacking team has four tags to score.

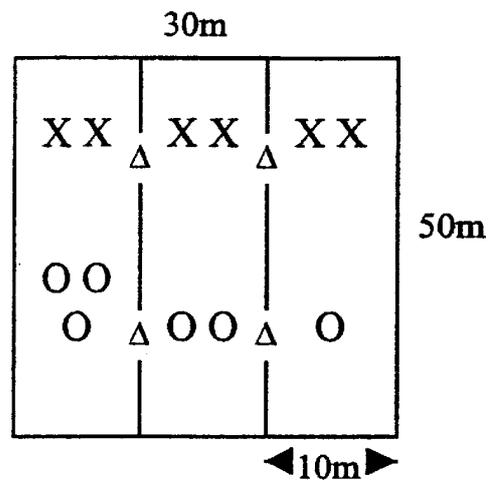
### ***Rules***

- Teams face off at half way
- On call, both teams run to their own goal line and turn around
- The attackers pick up the ball and try to score (normal rules)
- On a tag, the defenders have to get back to their line before defending again
- The tagged ball carrier must hit the ground, get up and play the ball before they continue to try and score
- The attackers are allowed four tags to score

### ***Additional Information***

If the PTB is too quick and the defence isn't getting enough time to recover, you may get the tagged player to roll onto his back or something else that slows him down.

## ***Channel Drill***



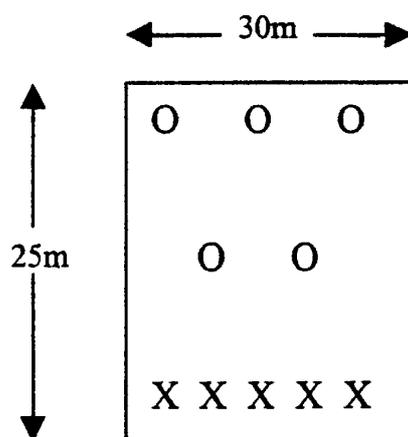
### ***Overview***

Defenders are restricted into certain 'corridors' or channels. The attack can move anywhere as long as they stay inside.

### ***Rules***

- Clearly identify the 'channels' with markers or lines on the field.
- The attackers have 6 tackles to score a try
- No markers in defence
- The defenders are given restricted areas that they are allowed in
- If a defender leaves their channel, the attackers get a new set of 6 tackles

## ***Double Layer Defence***



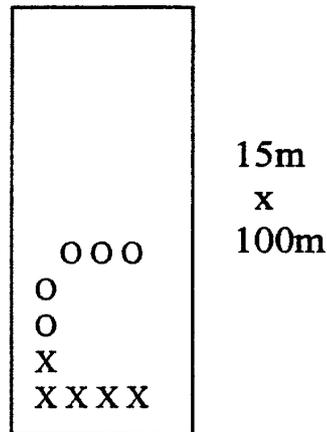
### ***Overview***

The attackers have control of the ball for 2 minutes in which they try to score as many points as possible.

### ***Rules***

- The attack has 2 minutes in control of the ball
- The object is to score tries at the far end of the grid
- They have 5 players who first try to get past the two defenders in the middle of the grid
- When they get past them, the middle defenders are out and the 3 defenders on the line may now move forward to stop the attack
- After a try is scored or the attackers make a mistake (knock on or forward pass) they return to their starting line and recommence until 2 minutes is up.
- The defenders can stop the attack by tagging them, knocking the ball down or intercepting it.

## ***2 Pass Forcing Back***



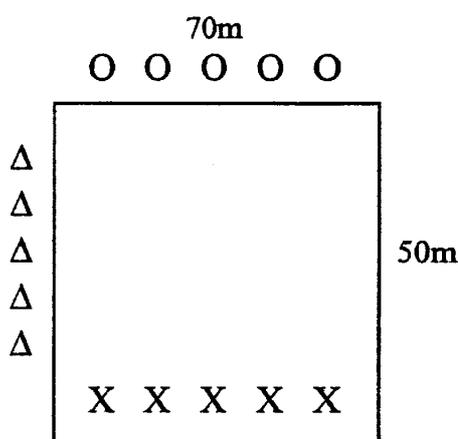
### ***Overview***

The idea is not to score tries but to force your opponents back to or over their line. When that happens, your team gets a point. The object of the game is to develop go forward play.

### ***Rules***

- The ball starts with X's on a line 25 metres out from their line
- The team with the ball gets a point if they can force the defenders back over their try line within their six tackles
- The game then restarts with the defenders now taking a tap on their 25m line
- If they don't get to the line then the other team takes over possession
- The attacking team is only allowed 2 passes per tackle
- Normal rules apply
- The defence team has to go back 10 metres at each touch apart from the markers if they are in the game
- Ball to be played off the ground

## ***Match The Defenders***



### ***Overview***

The team with the ball has as many tackles to score as there are defenders e.g. 2 defenders, 2 tackles. The coach nominates the number of defenders before giving the ball to the attackers.

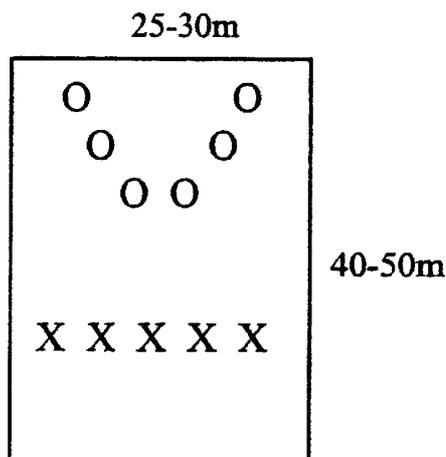
### ***Rules***

- The coach nominates the number of defenders (X's) from 1-5
- He then gets a ball to offence and they have the same number of tags to score
- If attack is unsuccessful they get to rest and they resting teams comes on as attack

### ***Additional Information***

Depending on what you're emphasizing, you can vary the rotation. To build pride in defensive effort - successful defending team remains on. To reward good attack and challenge them, the attackers can remain on.

# ***One Tackle Rugby League***



## ***Overview***

Teams only get one tackle to score a try.

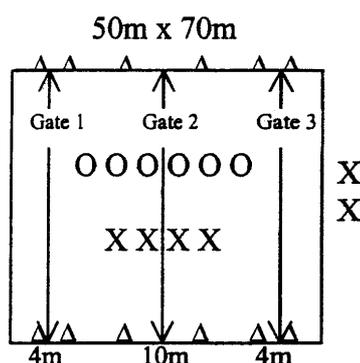
## ***Rules***

- Defensive line back 5-10 metres depending on fitness and skill level.
- If the defenders intercept or pick up a loose ball, play on and their first touch is a zero tag, they get one more go.
- The tackled player should play the ball standing up
- No markers in this game

## ***Variation***

You may wish to make this two or three tackles instead of one.

## Gate Touch



### Overview

The attackers have the ball for 6 tackles during which time they try to score a try. The gates are worth extra points if you cross the try line between them. The defenders have to decide which is the best way to defend e.g. protect the gates, or don't worry about them.

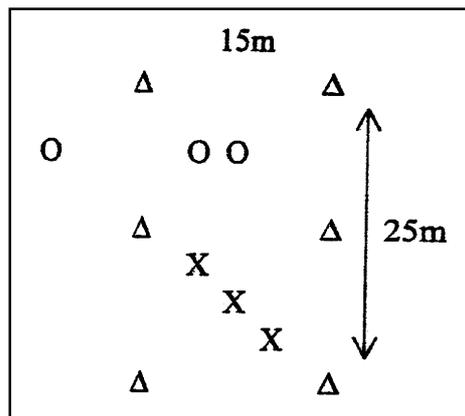
### Rules

- Normal Touch rules
- 2 defenders drop off to the side of the field at all times but come on when your team gets the ball back
- If the ball carrier crosses the try line between Gates 1 or 3 the try is worth 3 points, in between Gate 2 the try is worth 8 points. Anywhere else is worth 1 point
- Defenders can't 'camp' in front of the gate to stop the attackers coming through

### Additional Information

By varying the worth of the gate, in terms of points, you can vary the emphasis. In the above example it is most likely that the defenders will concentrate on covering the middle encouraging shifting of the ball to the edges.

## 3 v 2 Touch



### Overview

The defensive team drops a player off to the side so the attackers always have an advantage.

### Rules

- The attack has 6 tackles to score
- After a tag is effected the ball carrier stops, taps the ball against his foot and has the option of running again or passing
- A change over is ruled for forward passes and knock ons
- The defensive players retreat 3-5 metres as set by referee which is on the sideline moving up and down.

When the attack loses control of the ball or scores a try they now become the defence, a player immediately drops off to the sideline and the other teams' player returns to the field.

### Variation

This same concept could become 2 v 1, 4 v 3, 5 v 3, 6 v 4 etc. and you could also alter the number of players who drop off.

RUGBY  
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