# FITNESS FOR RUGBY LEAGUE

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# Contents

# ENERGY SYSTEMS

There are three energy systems, which allow the body to perform physical tasks. Rugby League players require all of these systems to some extent during a game. Different positions require a greater input of some energy systems than others.
It is important to understand each system and how it is developed. The development of each system will be outlined in greater detail in further chapters.

***N.B Italics = practical definition***

**Adenosine Tri-Phosphate (ATP)**

- ATP is a molecule, which, when broken down, provides- energy for muscular contraction.

**ATP-PC ENERGY SYSTEM**

- The breaking down of stored ATP to provide large amounts *of energy for a* very short period of time.
- The ATP system is fatigued very quickly, normally lasting less `than ten seconds.
- ***Provides energy for short duration, very high intensity efforts, such as short sprints and tackling.***

**LACTATE ENERGY SYSTEM**

- The breaking down of stored carbohydrates in the muscle produces a large source of ATP.
- If there is an insufficient oxygen supply to keep up with this breakdown, the body produces a waste product called Lactate, which causes muscular fatigue. This energy system provides energy for approximately 45 seconds.
- ***Lactate Energy System provides energy for high intensity, moderate duration activities, such as moving up and back in defence and performing two or three tackles in a row.***

**AEROBIC ENERGY SYSTEM**

- The breaking down of carbohydrates (as well as fats), in the presence of an adequate supply of oxygen, creating a long term source of ATP.
- The Aerobic system becomes fatigued when the body starts to run out of carbohydrate stores.
- *Provides energy for long term activities, such as* ***running, swimming*** *and cycling.*
- *The Aerobic system replenishes the Lactate and ATP PC energy systems, and therefore very important for recovery.*

All energy systems work together at the same time. The energy system, which provides the greatest supply of energy, will depend on the intensity and duration of the exercise.

- Low intensity long duration activities, use predominately the Aerobic system.
- High intensity moderate duration activities use predominately the Lactate System.
- Very high intensity, very short duration activities use predominately the ATP-PC System.

# MUSCULAR CONTRACTIONS & CHARACTERISTICS

## MUSCULAR CONTRACTIONS

There are three different types of muscular contractions. They are Concentric contractions, Eccentric contractions and Isometric, or Static contractions. An understanding of these contractions will help the coach or trainer to better understand many different forms of training. An effective conditioning program will develop strength in all three contraction forms.

**Concentric Contractions -** This refers to when a muscle shortens, when moving a resistance against gravity.
**Example -** The buttocks and quadriceps contract concentrically when driving in a tackle.

**Eccentric Contractions -** The contraction that occurs when a muscle lengthens or lowers a resistance with gravity.
**Example -** The hamstrings contract eccentrically prior to the drive phase in a sprinting stride.

**Isometric Contractions -** An Isometric, or Static contraction, occurs when a muscle tenses, without any movement occurring.
**Example -** The shoulder contracts isometrically when a player tries to hold an opponent off

## MUSCULAR CHARACTERISTICS

Elite Rugby League players are often referred to as "strong & powerful." These terms are often misinterpreted or used to describe the same characteristics.

A brief definition of some important terms will help the- coach or trainer to better understand the requirements of the modem Rugby League player and better interpret training information and literature.

**Strength** - Is defined as the ability to exert force against a resistance. Strength can be broken down to concentric, eccentric and isometric strength.

**Maximum Strength -** Maximum strength is defined as the maximum amount of force that can be applied through a given movement.

**Power -** Power is defined as strength as a function of time. The scientific formula for power is shown below.

**Power = Strength/Time**

**Strength Based Power -** Skills, such as -tackling or trying to break tackles, which require strength to be effective.

**Strength Based Power = High Strength/Time**

**Speed Based Power -** Skids, such as sprinting short distances, or stepping, which require speed to be performed effectively.

**Speed Based Power = Strength/Low Time**

All these characteristics, along with skill and tactical development, are important to creating the modern football player. The coach or trainer must develop all these areas through training.

# PHYSICAL REQUIREMENTS OF RUGBY LEAGUE

Each game can be broken down into individual sections, in which different activities are taking place. This data will help display how the game is played and how players may be better prepared. The following data describes the time frames to which a typical game of Rugby League will be divided.

These figures are based on a game at senior level, which will last 80 minutes.

## THE TEAM,

**BALL IN PLAY -** 45 minutes (56% of actual playing time)
N.B. This period can be divided defence and attack.

### SET OF SIX TACKLES

AVERAGE TIME - 41.2- seconds
No per GAME - 32.6

### PLAY THE BALL

AVERAGE TIME - 3.39 seconds
TOTAL TIME - 12 minutes (22% of actual playing time)

### TACKLES

AVERAGE No of TACKLES - 226

### METERS RUN

AVERAGE TOTAL PER. GAME - 1481 metres
AVERAGE METERS PER BALL HANDLE - 7.07m

The workload is not evenly shared amongst the players that are on the field. Each position can be analysed to show the individual requirements of that position.

# PHYSICAL REOUIREMENTS OF THE DIFFERENT POSITIONS

## 1. FULLBACK

| GAME FACTOR | AVE | SD | % of total |
|---|---|---|---|
| No of tackles | 8 | 4.82. | 4.2 |
| Metres run | 137.83 | 47.78 | 11 |
| Ball handles | 15.75 | 2.87 | 8.6 |
| Metres per handle | 8.19 | 3.43 | 12.7 |

**ATTACK - Percentage involvement 8.6%**
**DEFENCE - Percentage involvement 4.2%**

**ENERGY REQUIREMENTS**

The position requires predominately the ATP-PC energy system for returning kicks and last line defending, with some Lactate involvement in tight defending situations.

## 2. WINGERS

| GAME FACTOR | AVE | SD | % of total |
|---|---|---|---|
| No of tackles | 4.67 | 2.1 | 2.6 |
| Metres run | 91.92 | 50.85 | 7 |
| Ball handles | 10.25 | 4.53 | 5.4 |
| Metres per handle | 9.54 | 1.81 | 14.8 |

**ATTACK - Percentage involvement 5.4%**
**DEFENCE - Percentage involvement 2.6%**

**ENERGY REQUIREMENTS**

The position requires predominately the ATP-PC energy system for running the ball and tackling opposing wingers, with some Lactate involvement, normally if the player is caught around the ruck or defending their line.

## 3. CENTRES

| GAME FACTOR | AVE | SD | % of total |
|---|---|---|---|
| No of tackles | 14.1 | 3.85 | 7.4 |
| Metres run | 85 | 22.75 | 6.5 |
| Ball handles | 12.63 | 3.54 | 7 |
| Metres per handle | 6.93 | 1.89 | 10.7 |

**ATTACK - Percentage involvement 7%**
**DEFENCE - Percentage involvement 7.4%**

**ENERGY REQUIREMENTS**

The centre predominately uses the ATP-PC energy system in defence and attack, with a greater involvement of the Lactate system, due to their position closer to the ruck than the fullbacks and wingers.

## 4. FIVE EIGHTH

| GAME FACTOR | AVE | SD | %of total |
|---|---|---|---|
| No of tackles | 14.83 | 3.06 | 7.9 |
| Metres run | 96.67 | 56.33 | 7.4 |
| Ball handles | 17 | 7.66 | 9.2 |
| Metres per handle | 6.02 | 2.03 | 9.3 |

**ATTACK - Percentage involvement 9.2%**
**DEFENCE - Percentage involvement 7.9%**

**ENERGY REQUIREMENTS**

The five-eighth requires the ATP PC system for short sprinting bursts and tackling. The Lactate and Aerobic systems are also important in their position in setting up, trailing the attack and recovering in defence.

## 5. HALFBACK

| GAME FACTOR | AVE | SD | % of total |
|---|---|---|---|
| No of tackles | 8.83 | 4.49 | 4.8 |
| Metres run | 72.17 | 54.04 | 5.5 |
| Ball handles | 13.75 | 10.53 | 7.6 |
| Metres per handle | 4.22 | 1.58 | 6.5 |

**ATTACK - Percentage involvement 7.6%**
**DEFENCE - Percentage involvement 4.8%**

**ENERGY REQUIREMENTS**

The halfback will use predominately the ATP-PC energy system, primarily when performing short runs with the ball, in an effort to set up attack & tackling. The halfback often defends just behind the defensive line and will only call on the Lactate system in tight defending situations, or if they are defending up in- the line.

## 6. LOCK

| GAME FACTOR | AVE | SD | % of total |
|---|---|---|---|
| No of tackles | 12.67 | 8.41 | 6.9 |
| Metres run | 71.83 | 45.52 | 5.5 |
| Ball handles | 11 | 7.16 | 6 |
| Metres per handle | 7.97 | 1.6 | 12.3 |

**ATTACK - Percentage involvement 6%**
**DEFENCE - Percentage involvement 6.9%**

**ENERGY REQUIREMENTS**

The Lactate system is used to a greater degree by the lock forward. This is due to their position closer in to the ruck. The ATP-PC is used in making tackles and in running the ball. Due to their greater workload, there is more need for the Aerobic system in the recovery process.

## 7. SECOND ROW

| GAME FACTOR | AVE | SD | % of total |
|---|---|---|---|
| No of tackles | 22.5 | 9.18 | 12.2 |
| Metres run | 135.5 | 42.35 | 10.4 |
| Ball handles | 16 | 4.04 | 8.6 |
| Metres per handle | 8.27 | 1.71 | 12.8 |

**ATTACK - Percentage involvement 8.6%**
**DEFENCE - Percentage involvement 12.2%**

**ENERGY REQUIREMENTS**

The Second Rower's greater involvement in the play requires them to use the Lactate system, particularly in defence, the ATP-PC system in carrying the ball forward, and a much greater need for the aerobic system to allow adequate recovery.

## 8. PROP

| GAME FACTOR | AVE | SD | °/° of total |
|---|---|---|---|
| No of tackles | 20.18 | 6.16 | 11 |
| Metres run | 109.36 | 46.52 | 8.4 |
| Ball handles | 15.5 | 5.48 | 8.6 |
| Metres per handle | 7.7 | 1 | 12 |

**ATTACK - Percentage involvement 8.6%**
**DEFENCE - Percentage involvement 11%**

**ENERGY REQUIREMENTS**

The Prop will require the Lactate system more than any other player. This is due to their "close in" position in defence, which requires them to move up and back on more occasions. The ATP-PC is used in making tackles and particularly when running the ball. Again, there is a need for the Aerobic system in the recovery process.

## 9. HOOKER

| GAME FACTOR | AVE | SD | A of total |
|---|---|---|---|
| No of tackles | 19.75 | 4.99 | 11 |
| Metres run | 86 | 26.81 | 6.6 |
| Ball handles | 17 | 2.83 | 9.2 |
| Metres per handle | 5.75 | 0.87 | 8.9 |

**ATTACK - Percentage involvement 9.2%**
**DEFENCE - Percentage involvement 11%**

**ENERGY REQUIREMENTS**

The Hooker requires a much greater involvement of the Aerobic system, due to their role in trailing around behind the attack & in recovery. They require the Lactate system in defence, due to their position close into the ruck and the ATP-PC system when running from dummy-half and tackling.

# MUSCULAR ANALYSIS OF RUGBY LEAGUE SKILLS

Rugby League involves many different skills that players must be able to perform. These include physical skills, such as running, sprinting & jumping, as well as football skills, such as tackling & passing.
In this chapter, we will outline the muscle groups that are used to perform these skills.

## PHYSICAL SKILLS

### Running

1. *The major muscle, groups that are used in running are, in order of importance;*
2. *Hip extensors (gluteus maximus and hamstrings),*
3. *Knee extensors (quadriceps)*
4. *Ankle plantiflexors (gastocnemius & soleus)*

### Stepping

The same muscles will be utilised when a player sidesteps. They will begin to use the following muscles

1. *Hip abductors (gluteul muscles) on the plant foot*
2. *Hip adductors (adductors, or groin muscles) on the lead leg*

### Torso Stability

Strength & stability in the torso is required in many different skills & actions including sprinting passing & off loading in tackles. The following muscles are involved;

1. *Spinal Rotators & Lateral Flexors (Obliques)*
2. *Spinal Flexors (Abdominal & Obliques)*
3. *Spinal Extensors (Erector Spinae)*

## FOOTBALL SKILLS

### Tackling

Many different muscle groups will be used in a tackle, depending on the technique that used, if the tackler is first or second into the tackle and the response by the player in attack. The muscle analysis *that* is used in this example is assuming that the player is making a 'hip level tackle.

**a. Legs**

1. *Hip extensors (gluteus maximus and hamstrings),*
2. *Knee extensors (quadriceps)*
3. *Ankle plantiflexors (gastocnemius & soleus).*

**b. Arms**

The following muscles are used;

1. *Shoulder Horizontal adductors (pectoralis major and anterior deltoid).*
2. *Shoulder Girdle abductors and upward rotators (trapezius).*
3. *Elbow Flexors (biceps)*

***Passing***

There are many different ways of passing the ball. The most basic outline has been given here.

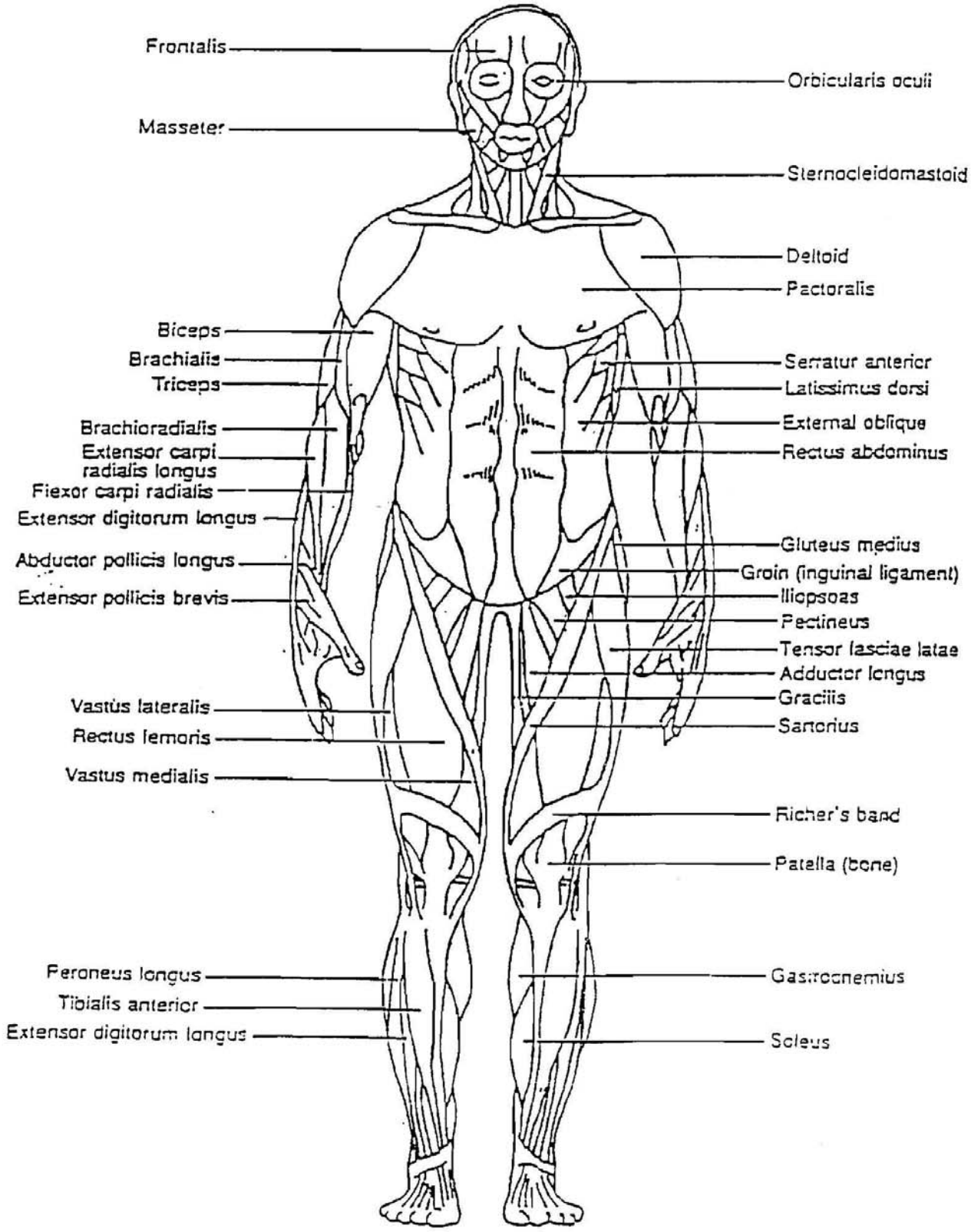
1. *Spinal Rotators* (obliques)
2. *Shoulder Medial & Lateral Rotators* (Rotator Cuff)
3. *Shoulder Horizontal Adductors* (Pectoralis Major & Deltoid)
4. *Shoulder Abductors (Deltoid)*
5. *Shoulder Girdle Adductors & Upward Rotators* (Trapezius)
6. *Elbow Extensors* (Triceps)

**Fending**

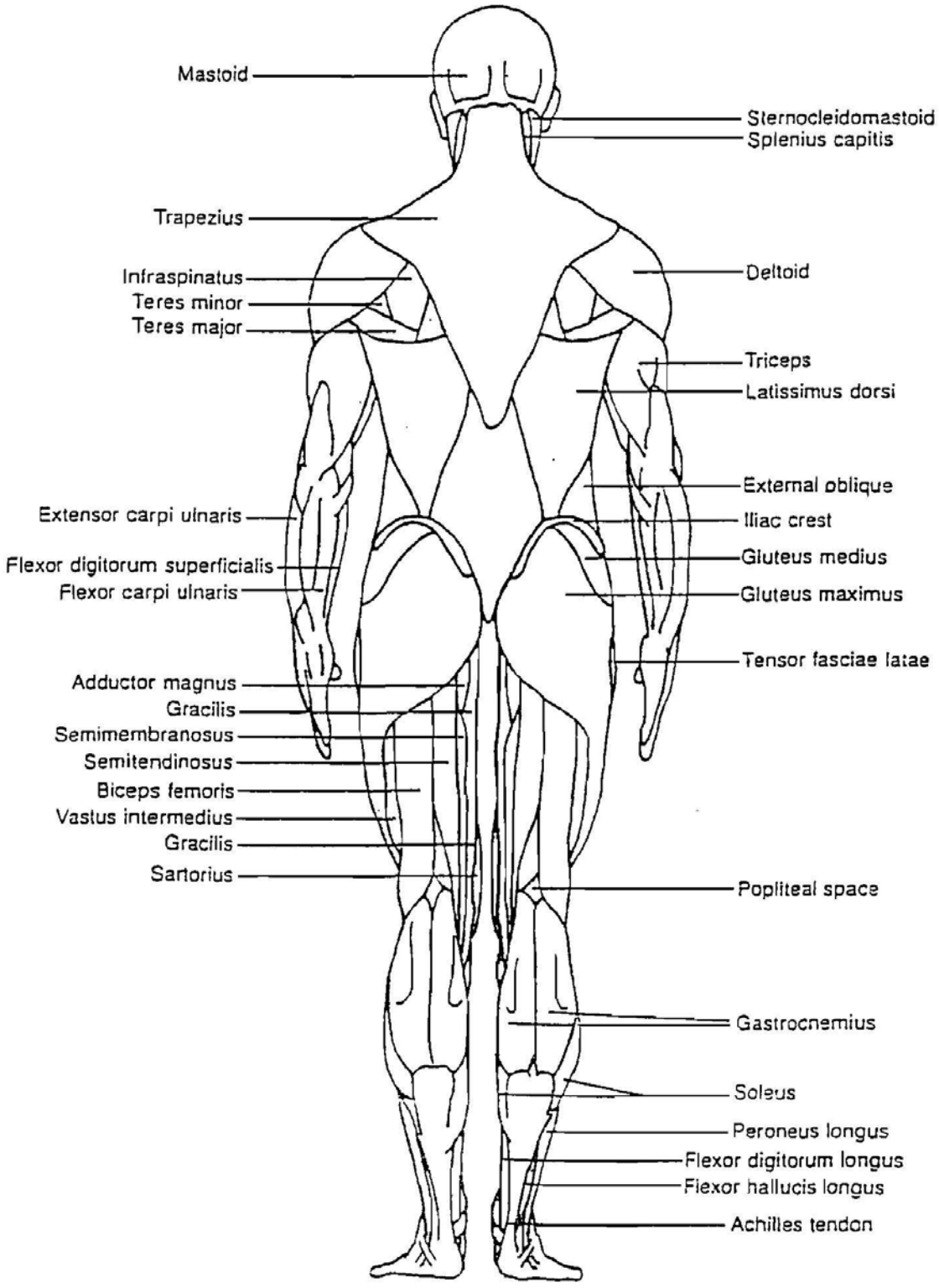
Just like tackling, a player will use a variety of methods to fend a player off, depending on the level of the tackler.

1. *Shoulder Horizontal Adductors* (Pectoralis Major & Deltoid)
2. *Shoulder Flexors* (Deltoid & Pectoralis Major)
3. *Shoulder Girdle Abductors & Upward Rotators* (Trapezius)
4. *Elbow Extensors (Triceps)*

# Anterior View of some Major Skeletal Muscles



# Posterior View of Some Major Skeletal Muscles



# PLANNING A TRAINING PROGRAM

- A properly planned training program will allow a player to develop and maintain the many different fitness characteristics needed to play Rugby League.
- The important physical characteristics of Rugby league are endurance, agility, power and speed.

## ORGANISATION

- The trainer must first identify the pre-season and season proper and determine how much time will be devoted to pre-season training.
- Teams over 16 years needs to set aside from 8 to I b weeks for pre-season training. Younger teams need to set aside from 5 to 8 weeks.
- It is in this period that the bulk of fitness training will occur.
- The next decision concerns how much time should be spent on training each week.
- This will vary depending on the age of the players, the level of competition and the time available to the players for training.
- Teams should allow at least two or three hours a week, divided into two, 60 to 90 minute sessions, less for younger players.
- Finally, the coach must determine what facilities and equipment is available.

## THE TRAINING PROGRAM

- An effective and efficient training program should be divided into three phases. These phases- are in order,

1. The Preparation phase which lasts from four to eight weeks.
2. The Pre-Competition phase which lasts four to eight weeks & should lead up to the first competition game.
3. The Season Proper.

### 1. PREPARATION

- The Preparation phase addresses aerobic & anaerobic endurance.
- A Rugby League player with good endurance has better concentration, recovers faster between efforts on the field and can continue to perform for the duration of the game.
- Preparation is a particularly important period of training for forwards as they require greater level of endurance.
- Four to eight weeks should be set aside to develop endurance.
- Developing endurance should be carried out specific to the needs of Rugby League. A number of drills have been outlined at the end of this chapter
- The Preparation phase should also include some agility and speed development training.

- Acceleration and deceleration, change of direction, sideways movement and developing good speed technique are important skills that should begin to be addressed in this phase

- Time must of course be taken to develop skills. Basic skills such as tackling, passing, kicking and, catching, need to be practiced and improved, particularly in younger players.

## 2. PRE-COMPETITION

- The Pre-Competition phase will commence at least four weeks before the start of the season proper.
- Fitness training, in this phase, becomes more intense and moves from basic, to more specific activities.
- Drills to increase power can begin to be introduced early in the pre-Comp phase. A player with greater power has increased speed, can break tackles and can tackle more effectively.
- At least four weeks before the beginning of the season, start training to increase a player's speed, specific to the needs of the sport.
- This includes running with the ball in hand, running and changing direction, reacting quickly to other players and performing skills at speed.
- This includes running with the ball in hand, running and changing direction, reacting quickly to other players and performing skills at speed.
- During the pre- competition phase, skills training should switch from individual and group skills to ball-work and team tactics.
- The time spent on fitness will decrease and the time spent on skills and tactics must increase.

## 3. SEASON PROPER

- During the season proper, the coach or trainer must try to maintain the level of fitness already achieved.
- Drills that are similar in action and intensity to the game, and do not reduce the time that should be spent on skills training, should be implemented.
- Training will generally vary during the year according to how the team is performing, physically. For example, if endurance requires further work, endurance based training will be carried- out.
- During the week, training sessions must be placed so the players are fresh for the game on the weekend Longer, harder sessions should be carried out early in the week and shorter sessions carried out later in the week.

# PLANNING A TRAINING SESSION

- A properly planned training session will allow for both fitness and skill training to be carried out.
- More time needs to be set aside for fitness activities as players mature. Younger players should emphasise skill development.
- A planned training session will be structured to ensure that no area is neglected, such as warm ups and stretching and the required equipment is always available.

## SESSION DESIGNS

- The following sessions are examples of *how* a training session may be structured. The example used is for players, 16 and over, training twice a week for 90 minutes.
- These sessions outline the time that may be spent on different areas and in what order they should be carried out.

| **Early Preparation** | | **Late Preparation** | |
|---|---|---|---|
| *Activity* | *Time* | *Activity* | *Time* |
| Warm up | 10 min. | Warm up | 10 min. |
| Skills | 40 min | Agility & Speed | 10 min. |
| Endurance | 35 min. | Skills | 40 min. |
| Cool Down | 5 min. | Endurance | 25 min. |
| | | Cool Down | 5 min. |
| **Early Pre Competition** | | **Late Pre Competition** | |
| *Activity* | *Time* | *Activity* | *Time* |
| Warm up | 10 min. | Warm up | 10 min. |
| Agility/Power/Speed | 20 min. | Agility/Power/Speed | 15 min. |
| Skills/Ball work | 40 min. | Ball work | 50 min. |
| Endurance | 15 min. | Endurance | 10 min. |
| Cool Down | 5 min. | Cool Down | 5 min. |
| **Season Proper (Early in Week)** | | **(Late in Week)** | |
| *Activity* | *Time* | *Activity* | *Time* |
| Warm Up | 10 min. | Warm Up | 10 min. |
| Ball work | 25 min. | Ball work | 30 min. |
| Fitness | 20 min. | Fitness | 15 min. |
| Cool Down | 5 min. | Cool Down | 5 min. |

N.B. Season Proper sessions are only 60 minutes long.

## SESSION PLANS

- A session plan should be designed to help guide the coach or trainer and will help keep the session flowing smoothly. These plans should be used for both fitness and skills training.
- Important information is to be included on each plan, such as the date, training phase and the aim of the session.
- All of the drills that are to be used, any diagrams and the time each drill will take, is recorded.
- Time must be allotted to allow an adequate warm up & cool down before and after each session.
- An evaluation of the session should *be* included. This gives the coach a chance to decide if the session was of value and whether it will be used again in the future.

An example of a session plan can be seen on the following page.

# SAMPLE SESSON PLAN FORM

Phase:

Week No: Date: / /

Session Aim:

Drills:

Diagrams:

Evaluation:

# FITNESS ASSESSMENT

- Regularly assessing team fitness will give a guide to how the training program is progressing and what areas require further development.
- Any fitness assessment must be repeated at a later date. At least four weeks training should take place before re-testing.
- Each test must be carried out in similar conditions to be accurate. The weather, time, testing venue, footwear etc. must be the same for all re-tests.

Some simple and easy to administer *tests* include the following;

1. **Five minute run Test.**

- Using a track that has a known distance, such as a 400 metre running track, the players run as far as possible in five *minutes*.

2. **Sixty Second Shuttle Test.**

- The aim is to perform as many 1.0 metre shuttle runs as possible in sixty seconds. The player starts & finishes each shuttle lying on their chest.

3. **5-0-5 Test.**

- The players sprint forward five metres, turns and sprints back to the start as quickly *as* possible.
- The tester does not say "go", as the stopwatch is started when the player begins to move.

4. **10 metre sprint Test.**

- This simple test involves the players' sprinting as fast as possible over a 10 metre course. The players begin from a standing start.

# ENDURANCE TRAINING

- Aerobic endurance refers to the ability to perform low intensity activities for an extended period of time and is particularly important in recovery.
- Anaerobic endurance refers to the ability to work at high intensity for as long as possible. It-is most important when a team is defending.
- In recent years, certain rule changes have meant that aerobic endurance is a less important physical requirement of the game, *(less, not unimportant).*
- Aerobic fitness increases a players ability to recover from intense activities, such as short sprints, tackling and moving up and back in defence, in-the shortest possible time.
- Aerobic endurance improves concentration over a long period of play.
- Anaerobic endurance allows a player to keep performing at high intensities, even though they are getting very tired
- Four to six weeks of training should be spent on developing endurance

## METHODS OF ENDURANCE TRAINING

There are four different methods of endurance training that need to be incorporated into a Rugby League training program. These four methods are, in order of development are;

1. Continuous Training
2. Long Intervals
3. Short Intervals
4. Recovery Intervals

### 1. CONTINOUS TRAINING

- Continuous aerobic *activities,* traditionally running, but may include cycling, swimming, rowing etc.
- Drills are performed at low to medium intensity for 20 to 50 minutes.
- One or two sessions will be sufficient to increase fitness in most players.
- Some training programs do not incorporate *this form of training,* except for players who are overweight, very unfit or returning from injury.

### EXAMPLES

### a. PURSUITS

- Two groups are organised.
- Each group sets off on the run and at the same time in opposite directions, in the same course.
- The aim of this drill is for each team to try and beat the other one back to the start.

*Time: 20 to 40 minutes*
*Distance: 4 to 8km*
*Intensity: Medium*

**b. FARTLEK**

- The players run at a comfortable pace on a set course.
- Short bursts of speed, lasting from 30 seconds to 2 minutes, are included at 2 to 5 minute intervals.

*Time: 20 to 40 minutes*
*Distance: 4 to 81srn*
*No of bursts: 5 to 20*
*Intensity: Medium to high*

*c. CIRCUITS*

- A number of different exercises are performed over a set period of time, with a set period of time for rest.
- The players do as many repetitions as possible on each exercise in the set time.
- Circuits may include running, shuttles, bodyweight exercises, boxing, skipping and many other exercise forms, training the entire body.
- It is important not to overload certain muscles, such as the chest & shoulders as this may lead to injury.

*Time: 20 to 30 minutes.*
*Stations: 6 to 12.*
*Work Time Period: 30 seconds to 2 minutes.*
*Rest Time Period: 10 to 30 seconds.*

**2. LONG INTERVALS**

- Involves performing a series of efforts, such as running, shuttles, tackling & boxing.
- Each drill has a set work period of between 60 seconds. & 5 minutes, with a set rest period of between 60 seconds and 3 minutes. (N.B. Longer intervals have a shorter rest period and run at lower intensities.)
- Long Intervals require maximum effort for the duration of each work period and light activity, such as walking is the rest period.
- This form of training can include many activities specific to Rugby League, including tackling, running with the ball & passing.
- Long Intervals can be carried out at the beginning of the Preparation phase or after a period of Continuous training

**EXAMPLES**

**a. TRACK INTERVALS**

- The players complete a number of intervals by running over various distances on a 400-metre track, with a set rest period between each interval.
- A variety of different workouts can be devised.
- An example of a track interval session is would be;

    1. 2*600 metres, 2 minutes recovery
    2. 2*800 metres, 2 minutes recovery
    3. 2*1000 metres, 3 minutes recovery

*Distance: 600 to 1540 metres per rep.*
*Reps: 3 to 8*
*Total Distance: No more than 6000 metres per training session.*

**b. HIT THE GROUND SHUTTLES**

- The players, starting at the goal line, run to the 20 metre line, hit the ground, then return to the goal line.
- They repeat this to the 20, 40, 60, 80 and 100 metre lines.
- The total distance of each shuttle is 600 metre.

*Reps: 4 to 6*
*Rest: 2min*

**c. MAD BALL**

- The players are divided into groups of four, with one group defending against another group.
- *The group with* the ball attempts *to run the* length of the field, simply by continually passing, backing up and keeping the ball "alive"
- The team in defence tries to stop the other team, by continually getting back in defence to stop the ball movement
- There can be moderate body contact in this drill and the play *is to* be mistake free.

*Reps: 3 to 6*
*Time per Rep: 60 seconds*
*Rest: 2min*

**d. TACKLE AND CHASE**

- This drill requires tackling bags.
- The players start at a mark, 10 metres from the tackling bag.
- They run forward, tackle the bag, get up and run backwards to the start. This is repeated five times.
- After performing the fifth tackle, they turn and sprint 50 metres.
- The drill is performed in groups of four players, to allow adequate rest.

*Reps: 3 to 6*

**4. SHORT INTERVALS**

- Short intervals are more intense than long intervals, lasting 30 *to 60* Seconds, with a rest period of 90 seconds to 3 minutes.
- Each drill is carried out at maximum intensity.
- Short intervals can utilise many different activities, including running, hills, shuttles, tackling, wrestling and boxing.
- Drills can be designed to closely mimic the requirements of the sport, particularly the continuous change of direction that occurs in defence.
- Short intervals should be commenced after long interval training has been carried out.

**EXAMPLES**

**a. TRACK INTERVALS**

- This drill involves the players running over a set distance on a 400 metre track with a set rest period between each interval.
- An example of such a work out is;

1. 3 * 150 metres, 30 sec recovery
2. 2 * 200 metres, 1 min- recovery
3. 2 * 3 00 metres, 2 min. recovery

*Distance: 150 to 400 metres*
*Reps: 6 to 10*
*W:R 1:3*

**b. UPS AND DOWNS**

- The players start by sprinting forward 10 metres and then hitting the ground.
- They then jump up and run backwards to the start.
- This is repeated as many times as possible in the set time.

*Time: 30 to 45 seconds per rep*
*Reps: 3 to 6*
*W:R. The rest should start at a ratio of 1:3 and become less as the player's fitness improves*

**c. UNDERS AND OVERS**

- The players are divided into pairs.
- One player stands with legs apart, elbows resting on knees and legs bent.
- The other player leap frogs over their partner, then turns and crawls back between their legs.
- This is repeated as many times as possible in a set time.

*Time: 30 seconds per rep*
*Reps: 4 to 6*
*W:R: 1:1*

**4. RECOVERY INTERVALS**

- Recovery intervals involve running a series of short efforts at maximum intensity, with very short rest.
- This requires the aerobic system to work very hard to facilitate recovery.
- Recovery intervals are very intense and closely mimic the physical requirements of the game.
- Specific activities such as skills drills, tackling drills and short sprints work very well in Recovery Interval training sessions.
- This form of training is utilised just prior to the beginning of the season.

**EXAMPLES**

**a. SPRINT JOGS.**

- Markers are set out along the edge of the field at 20, then 40 metre intervals.
- The players sprint to the first marker (20 metres), then jog to the next (40 metres).
- This is continued around the field.

*Laps: 2 to 6*
*Rest between laps: 2 minutes.*

**b. SUICIDE SPRINTS**

- A 100 metre track is set out,, with a marker at the 50 metre point.
- The players sprint to this marker and then jog to the end of the track.
- They have 30 seconds to complete the sprint *and* be ready for the next one.

*Reps: 10 to 20*
*Rest: Jog to far end of track*

**c. BAD HANDS**

- The players are divided into groups of four; each group with a ball.
- One player, the passer, stands 10 metres away facing the rest of the group, who are standing in a line.
- The first player in the group runs towards the passer, who throws the ball to the side, above or to the feet.
- The player must catch the ball, throw it back to the passer & then run back to the end of the line before it is their turn to-go again.
- The drill is contacted at a fast pace.

*Time per Rep: 30 to 60 sec*
*No of Reps: 4 Rest: 30 to 60 sec*

**d. Repeat Bumps.**

- The players are divided into groups of four, each group with a ball and a bump pad.
- One player holds the pad. The other players take it in turn to run the ball up, hit the pad and then pass it to the next runner.
- The player must quickly return to the start before it is their turn to run again.

*Time per Rep: 30 to 60*
*sec No of Reps: 4*
*Rest: 30 to 60 sec*

# SPEED & AGILITY TRAINING

- Agility & speed in Rugby League are two very important fitness characteristic
- Decelerating and accelerating, stepping, swerving,, top speed running & getting up off thee grounds are vital characteristics to a well prepared player.
- Speed & agility is required in defence, when moving forward & backwards in the line, chasing down opponents and sliding left or right to cover gaps.
- In attack; a player requires speed & agility to beat an opponent, in support and getting up to play the ball
- Players must also be able to react to an opponents movements.
- Speed and agility must be developed, first by performing speed technique exercises, followed by general speed & agility drills and finally using drills that mimic the movements and reactions that occur during the game.
- Plyometric training may be incorporated into speed & agility training sessions (N.B. Due to their involved nature, a separate chapter has been devoted to plyometric training).
- It is important to carry out these exercises at maximum intensity with adequate rest.
- Some speed and agility training must take place when the players are fatigued, as they will be called on to perform in this state at the end of each half
- At least four weeks of speed & agility training should be undertaken, immediately prior to the season commencing.

## METHODS OF SPEED & AGILITY TRAINING

There are three methods of speed &.agility training that should be incorporated into training. They are, in order of development;

1. Speed Technique.
2. General Speed & Agility.
3. Specific Speed & Agility.

### 1. SPEED TECHNIQUE

- There are many different theories on how to develop speed technique. It is important to keep speed technique as simple as possible.
- Remember that Rugby League players do not run in a similar fashion to sprinters.
- Speed technique exercises teach the nervous system to drive muscles sooner and at a faster rate, therefore increasing stride rate.
- Technique drills are best carried out during the warm up.
- The following coaching keys will help to improve speed technique and particularly acceleration.

1. Relax the head, shoulders and hands.
2. Drive the arms vigorously in a foreword, backwards motion.
3. Try to keep foot action quick, trying to "pop" the foot off the ground.
4. Keep low in the first few steps, driving out not up.
5. Always stay low when changing direction.

## EXAMPLES

### a. TAIL KICKS

- The players run slowly forward, bringing their heels up to meet their buttocks as quickly as possible.
- The arms should be driven as quickly as possible, as this will help increase leg speed.

*Distance: 10 to 20 metres per rep*
*Reps: 2 to 4*
*Rest: Walk recovery*

### b. SPEED SPURTS

- A course of 20 to 30 metres is set out, with markers at 5 metre intervals.
- The players jog to the first marker and sprints on the spot for 2 seconds, trying to "pop" the foot off the ground as quickly as possible.
- This is repeated at each of the markers on the course.

*Reps: 4 to 8*
*No of Spurts: 4 to 6 depending on distance*
*Rest: Walk recovery*

### c. STRIDES

- Markers are set out at 1 metre intervals.
- The players take one stride between each marker, as quickly as possible.
- As they perfect this drill, the markers are pulled slightly wider.
- The markers should go no wider than 2.5 metres apart, as this may lead to over-striding.

*Reps: Up to 12*
*Strides: 15 to 20*
*Rest: 60 seconds*

## 2. GENERAL SPEED & AGILITY

- This form of training improves and individuals speed and accelerations and increases the speed at which they can change directions.

- General Agility drills develop better joint control and reduces the risk of injury.

- General. Speed & Agility creates a platform to develop specific speed as the season draws nearer.

- It is important that the coach continue to stress the five technique keys throughout this type of training, and also emphasise the importance of making the first few strides as fast as possible.

- It is important to allow adequate rest between each drill. **EXAMPLES**

**a. WIND SPRINTS**

- In this drill the players perform a series of sprints, with a jog between each sprint
- A player, for example, may run over a 1.00 metre course, with 10 metre sprint and 20 metre jog intervals in between.

*Distances: 40 to 100 metres.*
*Reps: 4 to 6*
*Rest: Walk recovery*
*Sprint Distance: 5 to 20 metres*
*Jog Distance: 15 to 40 metres.*

**b. TRANSITION SPRINTS**

- Three markers are set at pre-determined intervals.
- The players jog from the first to the second marker and then sprint to the third.
- A variation is to have the players change direction as they begin to sprint.

*Reps: 5 to 20*
*Distance of jog: 5 to 15 metres*
*Distance of sprint: 10 to 30 metres*
*Rest: 45 seconds*

**c. BACKWARD-FORWARD SPRINTS**

- The players are positioned 3 metres in front of the starting line.
- They begin by bringing the knees up as high as possible and slowly running backwards to the starting line.
- When they get to the starting line, they immediately change direction and sprint forward for 10 metres.

*Distance: 10 metres*
*Reps: 5 to 15*
*Rest: 30 seconds*

**d. SQUARES**

- A square, five metres by five metres is set out.
- The player sprints forward to the first marker, sideways to the second and backwards to the third.
- When all the players in the group have completed the drill, it is repeated in the opposite direction.
- This drill is performed with the ball carried in both hands.

*Groups of, five are used.*
*Reps: 5 to 10 each way*
*Rest: 10 to 30 seconds.*

***e. ZIGZAGS***

- Five markers are set out in zigzag formation.
- The players run from marker to marker, stepping off the outside foot to change direction.
- The course should not have turns that are too tight.
- This drill can be performed with the ball carried in two hands.

*Reps: 5 to 10*
*Rest: Jog recovery*

## 3. SPECIFIC SPEED & AGILITY

- This form of training requires the player to carry out drills that closely mimic different parts of the game, or require them to react to the actions of another.
- These drills may include running with the ball in hand, sidestepping an opponent, running onto a pass or chasing an opponent down.
- Specific speed and agility drills are carried out just prior to the beginning of the season.
- Specific speed and agility requires maximum effort to be effective.

**EXAMPLES**

**a. TAG SPRINTS**

- The players are divided into pairs - with one player standing 1 metre behind the other.
- The players sprint over a short distance, with the rear player trying to "tag" the front player, by a two-handed simultaneous tag.
- After each repetition, the players switch roles.
- This drill can be done with the front player carrying the ball.

*Reps: 5 to 20*
*Distance: 5 to 40 metres*
*Rest: Walk recovery*

**b. CHAIN PASSES**

- The players are in groups of three, spread across the field, with the third _player standing further back from the others.
- The players jog forward and the ball is passed from the first to the middle player.
- The third player then sprints "onto the ball" at full pace.
- After each rep the roles are swapped around

*Sets: 1 to 3*
*Rest: 60 seconds between each set*

**c. POWER HITS**

- This drill requires hit, or bump pads.
- One player holds the pad. Another player, standing 2 metres away and holding a ball, sprints into the pad, and continues driving the legs for another three or four strides.
- The player holding the pad applies a heavy resistance onto the player running.

*Distance: 4 to 6 metres*
*Reps: 5 to 15*
*W:R: 1:3*

**d. ONE ON ONE**

- The players are divided into pairs.
- One of the players, the defender, stands at one end. of a 10 metre zone, and the other player, the attacker, stands at the other end of the zone.
- The attacker runs towards the other end of the zone, and tries to step around, i.e. avoid, the defender.
- The roles are then reversed.

*Reps: 5 to 10 reps as both defender and attacker.*
*Rest: Walk recovery*

**e. CUT OFF**

- A rectangle, 10 metres by 8 metres, *is set out*, with the players divided into two groups, standing at opposite corners of the playing area.
- The first player in one group, carrying the ball, runs towards the other end of the playing area and tries to avoid being caught by an opponent from the other group.
- A player is considered caught if their *opponent can* tag them with both hands
- After performing the drill, the two players change roles.

*Reps: 10 to 20*
*Rest: Walk recovery*

# STRENGTH & POWER TRAINING

- Recent rule changes have increased the importance of strength & power to Rugby League.
- Strength & power are required for tackling, breaking tackles, jumping, increasing acceleration & changing direction.
- Increased strength & power also plays a major role in reducing the risk of muscle & joint injuries, as well as increasing the rate of recovery if & when injuries do-occur.
- Strength & power training will lead to some increase in muscle size, but will not result in a player becoming muscle bound.
- Performing this form of training on a broad scale should not be commenced until a player turns 15.

## METHODS OF DEVELOPING STRENGTH & POWER

- There are three main methods of increasing strength & power. They are;

1. Weight Training
2. Manual Resistance
3. Plyometrics

### 1. WEIGHT TRAINING

- Weight training is an effective method of increasing size, strength an power and, reducing the risk of injury.
- This form of strength training uses dumbbells, barbells and various pin loaded exercise machines to develop strength & power.
- Weight training for Rugby League must be specific to the demands of the game; and develop the muscles that are used in the game.
- Players need not commence a comprehensive training program until they are 16 years or over.
- A small number of exercises, that strengthen as many muscles as possible, should be used.
- It is important to strengthen the leg and trunk muscles, with some development of the upper body.
- It is important to develop all muscles in balance. Overtraining one muscle group, such as the chest, at the expense of the back will result in postural problems and almost certainly injury.
- It should be pointed out that weight training does *not* mean body building. Weight training for Rugby League is carried out to improve strength, power size. & reduce injury. The goal of body building is to develop size and shape above all else.
- Players who have never used weights before, should start out slowly, learn the lifts properly and use a light weight.
- The weight that is lifted should increase slightly with each session.

**WEIGHT TRAINING GUIDELINES**

- The following guidelines will help young players to perform a safe, effective and specific weight training program.
- Remember that the most important factor is to learn each exercise thoroughly before commencing heavy training.

| | |
|---|---|
| **No of sets per exercise** | 2 to 3 |
| **No of reps per set** | 6 to 10 |
| **No of exercises *per workout*** | 7 to 10 |
| **No of workouts *per* week** | 2 |
| **Time of each workout** | 60 min. (max.) |

**SAMPLE WORKOUT**

| EXERCISE | SETS | REPS | REST |
|---|---|---|---|
| ROTATOR CUFF | 2 | 20 | 60sec |
| POWER CLEAN or HANG CLEAN | 3 | 6 | 90sec |
| SQUAT or HACK SQUAT | 3 | 6-8 | 90sec |
| BENCH PRESS | 3 | 6-8 | 90sec |
| LAT PULLDOWN | 2 | 10 | 60sec |
| HAMSTRING CURL | 2 | 10 | 60sec |
| SHRUGS | 2 | 10 | 60sec |
| CALF PRESS | 2 | 10 | 60sec |
| STOMACH CRUNCH | 4 | 25 | 60sec |

## PLYOMETRICS

- Plyometrics is a form of resistance training, designed to develop the power of an athlete.
- Plyometrics involves a muscular contraction, known as the "Stretch. Shortening Cycle" (SSC). The SSC occurs when the muscle is eccentrically contracted, followed by a sudden concentric contraction.
- The SSC produces a greater degree of muscular power, than a normal muscular contraction. This is thought to be due to the increase in elastic energy stored during the eccentric contraction. (N.B Similar to an elastic, band.)
- An example of a Plyometric exercise is the Squat Jump. A squat jump involves first bending at the hip and knee, then jumping into the air as high as possible. As soon as the player lands, the repeat the jump.
- The aim of a Plyometric exercise is for the athlete to decrease the time they are in contact with the ground, therefore increasing the power of the movement.
- The elastic energy stored in the eccentric contraction will not be lost when the ground contact time is decreased.
- Improvements through plyometric training only occur after prolonged training.

# SAFETY CONSIDERATIONS

- Plyometrics is a very effective form of training, if the exercises are performed correctly. If Plyometrics are performed incorrectly there is a certain risk of injury, ranging from the general to the very severe.

- The following guidelines will help ensure that the risk of injury from performing Plyometrics is negligible.

- A warm up before stretching should be performed to prepare the muscles. Due to their intensity, there is an inherent risk of tearing a cold muscle when performing Plyometrics.

- Adequate stretching must be performed prior to training to further reduce the risk of injury. Stretching should also be performed during the recovery period.

- Plyometrics should be performed on a relatively soft surface, such as grass or synthetic tracks.

- Correct footwear must be worn at all times. Unstable footwear, or shoes with inadequate cushioning increase the risk of injury.

- The player should have adequate strength levels before attempting Plyometrics.

- All athletes should have correct technique before progressing to a heavier training load or more intense exercise.

- Supplementary training must be performed to prevent muscle imbalances occurring. This includes hamstring and abdominal exercises.

- Allow at least 48 hours between sessions to ensure adequate recovery, beginners should have even longer period of rest. Plyometrics should never be performed if the player is sore.

## TRAINING GUIDELINES

Plyometric training has specific guidelines which must be followed to ensure the best results. The following guidelines should ensure the best development of each athlete, through the most efficient training sessions.

### PROGRAM GUIDELINES

- Take 10 minutes to perform warm up activities, such as light jogging and smaller jumps.

- Stretch *all* major muscle groups before *and* after each session.

- *Do not* train when a muscle is already injured.

- Perform low intensity exercise before attempting any high intensity set. This will ensure the muscle is fully warmed up.

- Keep foot contact time to a minimum. *Training* should be discontinued if contact time has noticeable increased. The player needs to decrease their foot contact time before moving on to more intense exercises.

- Perform five to ten sets per workout, depending on time, experience and level of fatigue.

- Four to eight reps are performed per set, depending on experience, fatigue and overload being used. Lower intensity exercise can be performed with higher reps, performed faster, to achieve an adequate training intensity.

- One to five minutes rest should be allowed between sets. Rest will depend on the intensity of the exercise, higher intensity, longer rest and vice versa.

- The coach should watch their players at all times when performing plyometrics. Things to look for include;
  - Ground contact time.
  - Correct technique.
  - Slow movements due to fatigue.
  - Players physical capability to perform each exercise - Both sides of the body working equally
  - Players landing flat footed to decrease foot contact time.

## MANUAL RESISTANCE

- Manual Resistance (MR) is a relatively simple, yet effective form of applying stress to the muscle that does not require any equipment.

- MR involves training in pairs. One person acts as the lifter and the other as the spotter. The lifter moves a particular body part through a particular movement, against a resistance. The resistance is applied by the spotter.

- The resistance can be applied either by personal contact or an object, such as a towel or wooden stick. Other props such as chairs and benches can be utilised.

- Training requires specific lifting, spotting & movement techniques and guidelines, which must be learnt and adhered to.

- MR exercises require very little effort to be administered.

- MR is a very intense method of strength training that requires maximum effort, concentration & consistent communication to be most effective.

## SAFETY CONSIDERATIONS

- It is important to follow a number of simple safety guidelines. These simple, yet important guidelines ensure that training is risk free & effective.
- The trainer must ensure that all participants are familiar with the technique of every exercise.
- Maximum resistance must not be applied until *both* the lifter and spotter have mastered the exercise technique.
- Ensure an adequate warm up has taken place before each lift. At least one sub maximal warm up set should be performed, before a maximum intensity set is attempted.
- The lifter and spotter must communicate throughout the performance of each set to ensure correct performance.
- Slow, smooth and deliberate performance on every exercise.
- Each exercise must be performed through a full range of motion.
- The lifter must breathe out during the lifting phase and breathe in during the lowering phase.

## TRAINING GUIDELINES

Manual Resistance requires the trainer, lifter and spotter to follow specific guidelines. These guidelines ensure an effective and efficient training session is conducted and each performer gets the most benefit out of every exercise.

### Programming

- Manual Resistance training programs must follow simple training guidelines.
- These guidelines ensure an effective and time efficient training regimen is developed.
- Take 5 to 10 minutes to perform warm up activities. Stretch all major muscle groups before and after each workout.
- Train all major muscle groups in every session.
- Perform one lower intensity set to ensure correct technique is being carried out and the muscle is fully warmed up.
- One or two sets of six to ten reps are performed per set when performing upper body exercises, ten to fifteen when performing lower body exercises and fifteen to twenty reps when performing trunk exercises.
- Allow enough rest to ensure that a maximum effort can be given on every set.
- Two or three training sessions are carried out each week. A maximum of 10 exercises are performed in any workout.

## Spotting

It is the spotter's job to ensure the correct resistance is applied to the correct muscle group. They must also ensure that the lifter is maintaining the correct exercise technique.

- Ask the lifter if the spotting position is comfortable.
- Ensure a smooth, comfortable movement is possible.
- Resistance must be applied in both the lifting and lowering phase.
- Slightly increase the resistance during the lowering phase.
- Apply the maximum amount of resistance that is possible, whilst always maintaining good technique.
- If the lifter says the resistance is too low, the spotter reduces the resistance and vice versa.
- Reduce the resistance as the lifter begins to fatigue.

## Lifting

The lifter performs the exercise against the resistance that is applied by the spotter. They must maintain a high level of concentration to perform each exercise correctly & be prepared to work hard, as this is the nature of Manual Resistance exercise.

- Ensure- a comfortable position to begin each exercise.
- Work through a full range of motion.
- Take approximately 2 seconds to complete the lifting phase and 3 to 4 seconds to complete the recovery phase.
- Perform each exercise with a smooth controlled movement.
- Communicate continually with the spotter throughout each set to ensure that the correct resistance is applied.
- Train to a level of complete fatigue on the final repetition of each work set.
- Concentrate on good exercise technique, as opposed to a heavy resistance.

# FLEXIBILITY

- Flexibility refers to the range of motion that is possible at a joint.
- This range of motion can be restricted by the capsules, ligaments, tendons and the bone structure that surround the joint
- However it is normally the tightness, or inability of the muscle to reach its maximum length.
- Muscle is more supple and performs better when it is warm. Activities such as light jogging, cycling and shuttle runs should be performed before attempting flexibility exercises.

## THE ROLE OF FLEXIBILITY

### Improving Performance

- A supple muscle group allows for a greater range of motion, which in turn will allow skill movements to be carried out without any restriction.
- Tight muscles will restrict movements, reducing the athlete's ability to perform skills effectively.
- Flexibility is most important in explosive and repetitive actions. Powerful movements, such as tackling & sprinting, require the muscles to contract and lengthen many times in succession, very quickly.
- If there is a restriction in range of motion, it will be harder for the athlete to perform the action as quickly as possible.
- Stretching before performing will improve the muscle's ability to perform the skills that the sport requires and stretching after training will speed the recovery process.

### Injury Prevention

- When a muscle is supple, there is less chance ˉof the muscle tearing or straining. The muscle is more able to perform the sudden contract/lengthen cycle that occurs in explosive actions.
- Flexibility must be balanced. If one muscle group lacks flexibility in relation to it's opposite, there is an increased risk of postural deviation that can lead to long term or overuse injury.

# TYPES OF FLEXIBILITY

There are three forms of flexibility training that must be included in any conditioning program. These three forms of training are:
Static Stretching
Dynamic Mobility
Proprioceptive Neuromuscular Facilitation

## 1. Static stretching

- Static stretching is the most common form of flexibility training.
- It requires the athlete to move through the range of motion, to the point where the muscle group cannot stretch any further.
- The stretch is then held for ten to thirty seconds
- There should be no bouncing, jerking or pain experienced when performing static stretching exercises.

## 2. Dynamic Mobility

- Dynamic mobility involves moving a muscle slowly through its range of motion in a slow and controlled fashion.
- An example of dynamic mobility is the leg swing. The athlete holds onto a pole or chair with one hand to keep the body still. One leg is slowly moved back and forth though the range of motion

## 3. Proprioceptive Neuromuscular Facilitation.

- Another form of flexibility training that may be incorporated into training is Proprioceptive Neuromuscular Facilitation or PNF stretching.
- This form of stretching involves a partner and the following four steps:
    I. The muscle group is stretched to the pain free limit. The partner holds the limb to ensure it doesn't move.
    II. The person stretching contracts the muscle group against the partner for six seconds. The limb does not move during the contraction.
    III. After six seconds, the muscle group is relaxed.
    IV. The person stretching will now be able to increase the range of motion.
- These steps can then be repeated two or three times for each stretch
- The limb should not be forced through the range of motion. The partner simply stops the limb from moving duration the contraction stage.

## SAFETY GUIDELINES

Incorrect stretching techniques can often lead to injury. It is crucial that the athlete is careful when undertake stretching activities. The following guidelines will help ensure a safe and effective stretching routine is carried out -

- Never stretch a muscle group that has not been warmed up.
- The majority of stretching activities should be completed at the end of a workout.
- Do not overstretch a joint A feeling of slight discomfort will signify an adequate degree of stretch.
- Avoid stretches that involve hyperextension of the spine or unsupported bending at the hip.
- Do not twist a joint out of it's natural line of motion.
- Never bounce or jerk a joint during a stretch. All movements need to be slow and controlled.
- Flexibility training must be performed habitually to be effective.
- The athlete should breathe regularly throughout the performance of every stretch.

# FITNESS FOR KIDS

- A number of factors must be considered in developing a training program for younger players such as maturation, skill level and time.
- Fitness training must be enjoyable as well as effective. Training drills must be specific to the demands of the sport.
- Mini league training should emphasise the basic skills, such as tackling, catching, passing and kicking.
- Practicing skills in small groups, active games and racing games will develop sound fitness levels.
- Young players need to stretch before and after each session. This prevents possible injury and posture problems later in their career. It also develops the habit of stretching.
- Improved skills will further enhance a child's confidence and enjoyment of the game.
- Mod League training will still emphasise skill development, with some fitness training commencing.
- Players are still at the age where superior skills, not superior fitness, win games.
- Active and enjoyable skills training will provide the stimulus for basic fitness levels.
- Some fitness training needs to be included to improve agility, and speed.
- This not only improves performance but also improves self confidence and prevents possible injuries.

- Performing agility and speed exercises in relay fashion will help keep enjoyment levels high.
- Specific speed & agility drills give players a chance to practice and refine the skills they have been learning.
- It is important that the coach keep an eye on players performing skills with correct technique.
- Using a number of different drills will prevent boredom and fatigue.
- Ten minutes per session is sufficient time to spend on these areas.
- Drills should be designed in line with players maturity and physical growth. Keep the distance that drills are performed over and the number of drills small for smaller players.
- When the players in a team have reached the age- of 13 to 15, their training can be very similar to older players. The training load is however not as high.
- A smaller number of reps, shorter distances and shorter time periods would be used for most training drills.
- Longer rest periods should .be allowed for agility, and speed training to ensure that good running technique is practiced.
- Active skills drills should be practiced in small groups, again emphasising correct technique.
- Of a 60 minute training session, up to 20 minutes should be devoted to developing and maintaining fitness.
- Remember, as young players mature, they will become bigger, stronger and faster and can endure an increased training load.
- All training activities should have an element of fun and play.

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