

INTRODUCTION

In the 1990's, for rugby players to achieve goals of competing successfully at representative level and of gaining national selection, it is necessary for these players to be undertaking 12 month structured training programs.

This paper outlines the reasons a twelve month program is necessary and the structure such a program should take based on the principles of periodisation and the match commitments of the players involved. The match commitments are based on representative players with representative matches early in the season (April - May) and playing a club season with finals matches taking place in September. This model would be typical for many players in Australia and refers specifically to the program developed for the Victorian State Squad.

It is not the purpose of this paper to give a detailed training program but to describe the 12 month periodised training format, the reasons for such a format, and to look at the types of training undertaken during each period of training.

A 12 Month Cycle: Why?

It is well documented that to achieve high levels of fitness and skill a solid fitness base must be built up. This base is not built up over a short time. This base takes 3 to 4 years of 12 month periodised cycles of co-ordinated aerobic, anaerobic, strength, power, sprint and skills training to reach optimum levels. Rugby players who are serious about achieving high goals should be looking at these long term programs and, through each twelve month cycle, presenting themselves for each season at a higher level of fitness and skill than the season before.

In discussing these 12 month cycles it should be recognised that rugby is a very complex sport in its fitness requirements. Endurance, speed, strength, power, flexibility and skill are all important factors in team game performance. This variety of factors along with the requirements of individual players and the need to maintain a high level of performance during the season increase the complexity of planning programs when compared to individual sports. (Pyke p. 250)

Modern theory of periodisation was first advanced by L.P. Matveyeu of the USSR in 1965. (Dick p. 230) Periodisation may be described as an organised division of the training year with the objective of preparing the team for the competition of the season and for the optimum preparation for peaks within that season. Matveyeu divided the year into three periods; *Preparation, Competition, and Transition*. For an illustration of the training year refer to Appendix A.

The *Preparation Period* is divided into two phases. The first phase could be described as training to train. The object of this phase is to build a base of endurance and strength to increase the players ability to accept the loading of the 2nd phase of the preparation.

It should be pointed out that players who do not undertake sufficient training in this phase will not only fail to reach a peak as high as those committed to this phase, they will be susceptible to injury as the intensity steps up in the pre-competition phase.

In this first phase of preparation the emphasis is on general training directed at the endurance end of the fitness required for rugby. The volume of training should increase gradually. Players with little or no weight training experience should be on general type weight training programs. Those players with a 12-18 month background in weight training can advance to more specific individualised programs which, at this stage, should be aimed at hypertrophy.

Special individual requirements should be addressed during this phase. This would include individual skill assessment and improvement drills and specialised training techniques, such as plyometrics or hill running for example, to improve individual performance.

Match specific drills should not be neglected during this phase but take a smaller part of the overall training than the general and special fitness components. This component would include drills to improve individual skills and to improve team cohesion and an understanding of tactics for later matches.

These three components, General Training, Special Training, and Match Training must be included throughout the 12 month cycle. It is the part each plays in relation to the other two in the total volume of training that varies depending on the period of training.

The second phase of the preparatory period could be called training for matches. The three components of the training continue with the emphasis on general fitness reducing in relation to the emphasis on special training and match specific training increasing. The practice of basic skills increases and the use of group drills will develop elements of team play. Those players experienced in weight training should move onto programs aimed at increasing strength and power. Those players inexperienced in this type of training should continue on their general strength improvements programs. It takes 18 months for the new weight trainer to build up a sufficient base to get significant gains from power type training. Their general strength improvement and hypertrophy from the general programs will improve their match performance while building this base.

An illustrated guide to preparation period training and a specific example of that prepared for the Victorian State Squad can be found in Appendix 'B'.

The next period of the cycle is the competition period. The match season. The emphasis here changes to skill practice and the development of match strategy while working to maintain conditioning levels. It is important not to neglect the status of basic fitness components such as strength and speed in favour of tactical development.

To maintain levels gained during the Preparation Period a reduced workload is required but gains in strength and aerobic and anaerobic conditioning will be lost without a maintenance program. Strength can be maintained with one session each 7-10 days. Aerobic and anaerobic conditioning can be maintained with one session per week and with the incorporation of skill practices and small games or drills which require intense physical effort during training sessions.

The training load, based on volume and intensity increases during the Pre Season, peaking just before the commencement of the season. This load reduces during the early part of the match season, building up again through the mid season and easing off again through the late season and finals.

This fits in well with a season such as that facing the Victorian Team with representative matches early in the season. With such a program of early season representative commitments it would be a good idea to add a sub phase at the end of the representative season where the match specific training is reduced and the general and special training components increased for 3 to 4 weeks. Coaches must look at the season in its totality rather than being completely concerned about next Saturdays match. This can be a difficult concept for some coaches, especially at club level.

A break down of a typical match season training session can be found in Appendix 'C'.

Immediately following the season comes the Transition Period. During this period there should be a reduction of training load and the emphasis should be on general fitness. On no account should this period be passive as the detraining effect will result in players being unable to undertake the loadings of the Preparation Period training. At the end of the Transition players should be refreshed and have maintained sufficient base fitness to undertake the training loadings of the next Phase.

As so the cycle continues.

SUMMARY

Given that the ultimate aim of any training program for rugby players should be to maximise performance during important matches, that training program should improve skill levels and improve fitness (all components) to such a standard that the skill level can be maintained for the 80 minutes of a game of rugby.

Other sports have used, for a number of years, long term training programs periodised over 12 months to achieve goals in their respective areas of performance. The base fitness required to perform at high levels cannot be built up in a short time. This base required 3-4 years of 12 month cycles to maximise performance.

The three periods of training, Preparation, Competition and Transition provide an important basis for program planning. It is important to develop aspects of General training, Special training and Match training during each period. The emphasis on each aspect based on volume changes during each period and phases within that period.

With a 12 month cycle gains made in previous years are maintained and a higher level can be achieved in each succeeding Preparation Period.

For many years rugby players, coaches and administrators have considered rugby to be different from other sports and a complete lay off is required at the end of the season. This lay off in many cases stretches into months. This thinking was based on ignorance and is still prevalent in many areas today.

It is clear that rugby does not differ from other sports, although fitness and skill requirements are complex, and to maximise performance 12 months cycles must be followed.

I have in this paper emphasised aspects of fitness and skills development. These are not the only factors which maximise performance. There are other important areas for consideration such as nutrition and sports psychology. Education and development programs in these areas should be run in unison with the physical and skill preparation. These 'other' factors relate importantly to training performance and application just as they do to ultimate team performance.

For Australian Rugby to remain at the top of the World Rugby Ladder it is important that rugby players, coaches and administrators at all levels understand the principles of 12 month training cycles. To maximise the development of young talent, players must start training from a young age so that they can reach their full potential.

BIBLIOGRAPHY

- Dick Frank W. SPORTS TRAINING PRINCIPLES 1989
- Pyke Frank S. (ed) BETTER COACHING: Advanced Coaching Manual 1991.

THE YEARLY PLAN										
Phases of training	Preparatory				Competitive				Transition	
Sub-phases	General preparation		Specific preparation		Pre-competitive		Competitive		Transition	
Macro-cycles										
Micro-cycles										

FIGURE 17-2:
A schematic illustration of the division of an annual plan in its phases and cycles of training.
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TRAINING	WEEKS												Lower grades Higher grades
	1	2	3	4	5	6	7	8	9	10	11	12	
Endurance and sprint running	Continuous	Fartlek	Longer, slower intervals	Shorter, faster intervals. Interval skill drills. Sprint training.									
Muscle endurance, strength, power	General muscle endurance		General muscle strength		Specific muscle strength, power			Circuit training					
	Flexibility work												
Flexibility	Flexibility work												
Skill	Individual skills				Group skills and team play								

FIGURE 17-10:
A guide to preparation phase training for a team game. Coaches can select from the methods available and plan a programme according to the specific requirements of their teams (modified from Pyke, 1980).

TRANSITION & PREPARATORY TRAINING FOR U.S. SUMMER SQUAD 1994-95

PHASE	SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER			JANUARY			FEBRUARY			MARCH											
	4	11	18	25	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	5	12	19	26	5	12		
ANAEROBIC FITNESS																														
AEROBIC FITNESS																														
WEIGHTS																														
SPEED																														
NOTES	START WEEK AFTER LAST MATCH. This is not an inactive period.			At the end of this period you must be ready to commence training for NEXT SEASON			2x any aerobic activity (P.D.) 30 mins (minimum) continuous activity			2x p.w. Preparation Programs			3x p.w. Hypertrophy program			1x p.w.			1x p.w.			3x p.w. strength → p.o. program			1x p.w.			Change of emphasis now.		
							Gradual increase in loadings during this period			Don't be it over			Xmas			Volume with decrease but intensity will be higher.			More emphasis on team work - drills & skills			1st GAMES			VIC. XV. v. TAINVILLE 5/11/94			VIC. BARRENE XV v. TAINVILLE 5/11/94		

Appendix B

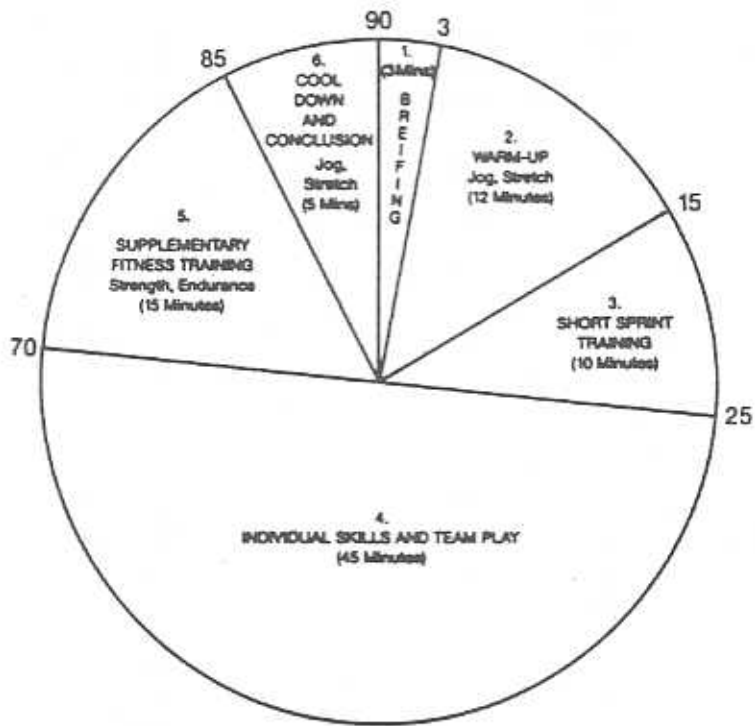


FIGURE 17-11:
Time allocation for parts of a typical 90 minute in-season team game practice session. Coaches may wish to adjust the duration and order of sections 3, 4 and 5, depending on the stage of the session and team requirements (modified from Pyke, 1980).