COMPETITION COACH COURSE MANUAL

NAME .....

This Manual encompasses the required information for the the AISL COMPETITION COACH MANUAL PART 1 with the discipline specific material being included in AISL COMPETITION COACH MANUAL PART 2.

References and research for PART 1:

Coaching Association of Canada (2002) – *Coaching Theory Level 2*
Andy Maile, National Coaching Foundation, UK (1993) – *Sports Physiology 4*
Paul Hanna (1997) – *You Can Do It*
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G. Buhlmann, H. Reinkemeier, M. Eckhardt, B. Murray (2002) – *Ways of the Rifle*
Launi Meili (2009) – *Rifle Steps To Success*

Australian Sports Commission – *AUSPORT training*
Docstoc - *Methods And Systems For Providing Quantitative Assessment*
Elite Cycling (UK) – *Training For Competition*
Bill Nadraszky (CAN) – *Multiple EZINE articles*
Mentorset (UK) – What is Mentoring

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2013

M1U1 - ROLE OF THE COACH

OUTCOMES On completion of this unit, the coach shall be able:

- Be fully conversant with the role of the coach at State level

ASSESSMENT Workbook Tasks

Playing a Role - but which role?

Much of our behaviour when we take on a service role such as a coach is governed by how we perceive that role. When we accept a role of responsibility, we indicate that we are prepared to act according to traditional expectations. The role of coach can be a perplexing one - society has determined models for coaches. Many would rightly argue that coaches must adopt and develop a coaching style that fits with their own unique personality. Coaches have the potential to exert strong and lasting influences on the people they coach.

In the previous course you would have realised, that as a coach, you have a variety of roles and responsibilities to fulfil. You are a technical expert, a friend, a psychologist, an educator, a counsellor, a leader... all of your roles centre around athletes and their development.

Along with this "role" towards the athlete, realistically, you also have to deal with your own needs for recognition, for achievement, for ego-gratification, satisfaction or whatever other needs you may have.

This module deals further with your roles and responsibilities with respect to your influence as a coach and the communication between you and the athletes. This information should also be seen in conjunction with the Level 1 manual information.

By the time you complete this module, you should be better prepared to:

- identify the types of influence you have on athletes
- assess realistically what your coaching assets are
- examine the athlete-coach relationship from different viewpoints
- recognise the athlete-centred approach to sport

The Coaching styles

There are three broad styles of coach - with their advantages and disadvantages, and each should be considered in line with the experience and skill of the athlete.

DOMINATING COACH
This is the typical coach for many of the larger team sports like football. Characterised by intense energy and lots of loud noise, this coach often lacks composure and is usually severe in the handling of athletes.
Advantages - provides discipline and in a large group/team situation is probably the most effective. The single goal is promoted and athletes have a clear purpose.
Disadvantages - athletes can be prone to dissension and are not engaged in the learning process. Sensitive athletes usually cannot successfully work with this type of coach. There is little discussion of individual needs.

PERSONABLE COACH
This coach is the "nice guy" coach - well liked by members of the team/squad. They are flexible and creative in approach, and deeply concerned about the welfare of the athletes. Athletes feel at ease with this type of coach and appreciate their comments.
Advantages - There is an atmosphere of respect and mutual good feeling which encourages team cohesion and can produce results beyond that expected of them.
Disadvantages - Sometimes the coach's flexibility and openness to suggestions is seen as weakness – and athletes with little self-discipline may take advantage of this.

CASUAL COACH
This coach is "easy-going" to the extreme and is passive, relaxed and rather detached from most situations. Athletes often get the impression of no real involvement or commitment. Often this coach is not well prepared and operates totally "off-the-cuff"
Advantages - Athletes quickly learn independent thinking. A relaxed atmosphere is present as the athlete is often without performance pressures, although this lack of pressure can easily drift to "slackness" by the athlete.
Disadvantages - The coaching style is often inadequate for serious participation and performance. There is no overall direction and athletes are often unsure of what to do.

Obviously there are both advantages and disadvantages for each style of coach, and the ideal coach would have varying degrees or elements of each coaching style. The good coach will have a style that is reflective of their own personality; not an image or copy of somebody else. Most certainly – what suits a beginner shooter, will not be effective with the advanced performer.

The Coach's Influence

Some individuals and groups have a great impact on how we think, act and feel. Parents, teachers and peers are important figures for most people.

> ***Coaches also have the potential to exert strong and lasting influences on the people they coach. Responsibility is an integral part of that influence.***

The personal characteristics of coaches are important in determining the amount of influence they have on athletes. The circumstances surrounding the coach-athlete relationship are equally important.

Research has shown that the coach's influence over the athlete is increased considerably when:

- coach and athlete work together in an engaged manner
- coach and athlete work together over a period of time
- both are involved in intensive training for events and in competitions

The significance of the coach is partly a function of whether an athlete's participation is voluntary or compulsory. If the athlete's participation is voluntary he/she tends to be receptive to the ideas of the coach.

Coaches vary in their knowledge and sport skill, their ability to teach and inspire, their personal qualities and their genuine concern for the athlete.

In short, the more the coach is respected and considered to be knowledgeable, the greater the likelihood he/she will influence the athletes.

Coaches should continually strive to update knowledge of the activity and to find better ways to communicate what they know. Even young children are capable of perceiving whether or not the coach knows their business.

Body Language

Facial expression, use of hands, head and other body parts, tone of voice and overall posture and stance often communicate as much as the words used. Positive words should be accompanied by positive body gestures. Coaches are often unaware of their body language, and neglect it as long as the words are correct. Further work on this area is completed in Module 2 - Communications.

 ***Refer to the workbook Tasks***

Coaching Assets Inventory:

Consider having your athletes respond anonymously to the Coaching Assets Inventory. The sheet could be handed out to all team members.

Characteristics of the respected coach:

Intelligence - This does not infer scores on the high-quotient side of any IQ test, rather the requirement of the coach to be curious, creative, an open-minded adaptable person who appraises situations quickly and clearly. Sporting intelligence is developed as a result of wide reading and knowledge based upon experience.

Drive - The coach should be an achievement based person who tries to make things happen rather than waiting for things to happen by chance. Athletes usually respond very positively to coaches who set realistic goals and then positively assist in their achievement.

Persistence - The coach should have the fortitude to persist in the face of adversity and/or frustrations. Mistakes or the inability to achieve immediate success will be seen as part of the learning process, and not the end of the line.

Patience - Successful coaching involves working methodically and systematically towards improvement in all aspects of performance. "Overnight success" takes time and the coach who sets realistic expectations with logical time frames will ultimately achieve success in their athletes.

Enthusiasm - A spirited, vital approach to coaching showing obvious enjoyment for the task is an essential ingredient for success.

Knowledge - A thorough knowledge of the rules, techniques and tactics of the sport is essential. Coaches have a responsibility to be aware of the correct and most current methods in their sport.

Conscientiousness - The coach must be, and be seen to be meeting the demands of coaching in a honest and earnest fashion.

Confidence - Successful coaching involves having confidence, both in the personal approach and in the work being completed. A consistent approach to the task is indicative of someone who believes in the system being used.

Emotional Stability - The coach must be sufficiently stable to remain in control during the highly charged environment which often surrounds elite competition. A coach who lacks composure will relay stress to the athlete whether intentionally or not.

Decisiveness - The coach must be capable of deciding the best approach to take in the pursuit of excellence. When a decision is made it should be adhered to until sufficient evidence shows that it requires change.

Character - Integrity, sincerity, and a disciplined attitude to the task - these form the character of the successful coach. The courage to try new approaches and to face the consequences of action taken, forms the coach's character.

Organisation - The well informed coach is efficient in time management and has the ability to organise athletes to remain on the path to established objectives. Athletes feel secure in the atmosphere where organisation is evident.

Preparation - the well prepared coach knows the training plan in advance and has invested time, thought and effort in the planning stage.

Sense of Humour - an essential and often overlooked characteristic. Relaxed and confident coaches relate positively to the lighter side of sport. Athletes respond to this by having the sport in perspective as part of their life.

Appropriate Role Model - The coach must be a suitable role model for the athlete to emulate. This involves behaviour patterns, appropriate dress, and attitude to life.

These characteristics are key elements to coach credibility.

The Coach-Athlete Relationship

Highly successful coaches are usually able to develop a lasting relationships with their athletes. The athletes feel that the coach genuinely cares about them and this is part of the reason for success.

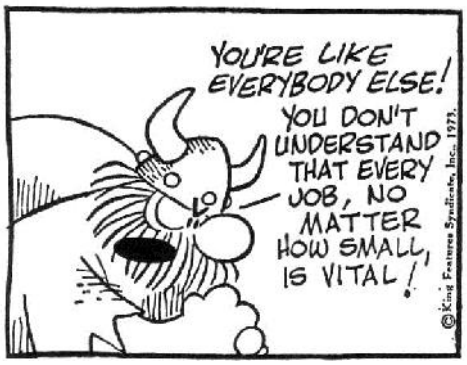
It is important to note that establishing an expressive relationship need not necessarily mean becoming a buddy. An expressive relationship allows some emotion and is a personally satisfying end in itself, thus allowing for broader and deeper levels of communication.

A non-expressive relationship is one which is emotionally neutral. Participants are expected to withhold their feelings. Neither party expects the relationship to be gratifying and it often fulfils that expectation.

When an athlete has a general feeling of attachment for the coach, the athlete may take on values and fundamental ethical outlook, or at least will listen more closely to what is being said.

Attitudes

What you do and how YOU behave is extremely important. Athletes tend to watch their coach carefully. When athletes like and respect their coach, they are more likely to imitate the behaviour they see and accept many attitudes they detect in the coach.



Attitudes are better caught than taught. One of the most important things in transmitting positive attitudes is for the coach's own behaviour to be worthy of imitation by the people being coach. The best way to ensure that the impact is both motivating and beneficial is to demonstrate a genuine concern for each athlete's well-being and engage them as a person and as a sport participant.

📖 ***Refer to the workbook Tasks***

Coach Education

Once knowledge is gained, it stagnates unless used. The coach is in the business of educating athletes within a sport - this also extends to peer education. Whether it be the development of a State based program, at either a lower level, or conducting an endorsed update seminar, knowing one's strengths and how to co-ordinate others to advantage, is the key element.

Where to go to contact appropriate educators, knowing the syllabus areas and utilising available resources - the trick is to be able to see the overview and not necessarily be bound up in the little details by having to conduct every session.

Writing articles for the State Association Newsletter, the NSO magazine/website or members of the State/National Squad is also an excellent way to communicate and practice the skills of this level - especially for those who tend to be more hesitant in the face-to-face situation.

There are excellent course conducted by TAFE that will improve confidence, public speaking skills, multi-media knowledge, computer skills and First Aid, just to name a few.

This course, coupled with the sports specific practical knowledge of shooting will be the spring-board for you to be a more enlightened coach, heading with confidence to the challenges ahead.

Good ideas and values invoke positive self-images, advanced skills take time to develop.

Summary - The Role of the Coach

1. Coaches fall into three types - Dominating, Personable & Casual. The three styles have both advantages and disadvantages, and no one style is perfect.

2. Coaches have the potential to exert strong and lasting influences on the people they coach. Responsibility is an integral part of that influence.

3. Coaches coach for a variety of reasons and all these needs must be met

4. A coach's influence depends upon:
   - coach's ability to communicate effectively
   - frequency of interaction
   - length of interaction
   - intensity of involvement
   - importance of the coach in the athlete's eyes
   - athlete's liking for the coach
   - coach's knowledge of people and the sport
   - how receptive is the athlete
   - the strength of conflicting influences (e.g. family, friends, etc.).

5. Coaches vary in their knowledge and sport skill, their ability to teach and inspire, their personal qualities and their genuine concern for the athlete.

6. Body language communicates as much as the words used by the coach. Positive words should be accompanied by positive body gestures.

7. Respected coaches exhibit intelligence, drive, persistence, patience, enthusiasm, knowledge, conscientiousness, confidence, emotional stability, decisiveness, character, organisation, preparation, sense of humour and are appropriate role models.

8. Good coaching is knowing and capitalising on your strengths, while acknowledging and improving the areas that require attention.

9. Highly successful coaches develop lasting relationships with their athletes. The athletes know that the level of concern is sincere.

10. Athletes imitate the behaviour displayed by the coach, and often adopt their attitude to situations.

11. The coach's role can be motivating and beneficial to both the athlete and the coach, providing opportunities for the athlete to plan or discuss topics of importance stimulate involvement, and commit to decisions.

M1U2 - COMMUNICATION

OUTCOMES Upon completion, the coach should

- be able demonstrate effective communication skils with athletes and other in the shooting community

ASSESSMENT Workbook tasks

By the time you complete this module, you should be better prepared to:

- recognise and understand the principles of effective communication
- implement clarification as a communications skill
- assess your personal communications behaviour

People communicate continuously. Sometimes they communicate what they intend and often they do not. We communicate through a look, a gesture, or a tone of voice. All of these methods can be extremely effective if used appropriately. However, it is vital to check that your intended message has been digested, not just the words or actions used.

The coach's ability to improve performance in the athlete depends to a large degree on the ability to effectively communicate. Regardless of the extent of knowledge or experience of the coach, his or her success is influenced by communication.

Communication involves the ability to provide accurate, positive feedback; to give clear and concise instructions; to encourage and be sensitive to the needs of the athlete; to send clear, consistent and accurate messages, and to be open to the opinions, concerns and needs of others.

Communication can be:

- of a technical nature
- of organisational details
- to promote a positive atmosphere for effective learning and/or performance
- to motivate
- advising principles, strategies and tactics
- values and ethics

Effective communication is a two way process. If it is unidirectional from coach to athlete then there is little chance of effective response and the coach will have little idea of the true needs of his or her charge. This break-down will severely affect the learning level of the performer.

When communicating, humans have three basic modes:

Verbal: the spoken word, instructions or feedback

Visual: physical demonstration or body language (often accompanied by verbal instruction) It is estimated that over 70% of human communication is in this nonverbal mode.

Tactile: through physically moving an athlete into position so that he/she may more "feel" the required technique, or giving moral support via a friendly pat on the shoulder

A coach who communicates well:

- Transmits specific information in a way which gets the intended meaning across
- Knows what message he/she transmits, be it intentional or unintentional
- Listens well and understands the messages others transmit
- Encourages others to communicate clearly and openly
- Draws out feelings on various issues
- Maintains a natural style of communication which is relatively consistent from practice to practice, match to match, situation to situation
- Watches for signs that communication is not effective

Clarification

It is important to encourage your athletes to seek clarification, as this saves time, and clears any misunderstandings about the intended message.

The Coach should also use clarification to fully determine the athlete's intentions.
Eg…… *"Julie, I am not sure what you mean when you say that your arm is feeling funny…can you give me more detail about the feelings"*

At the same time that you ask for clarification, you can remind the shooter that this process of clarification is used in both directions. Coach instruction should be clear and stated in a variety of forms - the repeat version/s can also include the requirement for input from the athlete to enable the coach to confirm accurate understanding.

The sentence "*do you understand*?" is just not enough. Better examples would be:
"can I give you further details?"
"are my descriptions clear in your mind?"
"do you see the way I am looking at this?"
"how will you approach the next task?"

Thinking on your feet

Not all situations have the luxury of a composed prepared response - often a coach must respond with a moment's notice… athletes want answers, and usually immediately.

To think on your feet is to say exactly what you want to say at just the right moment. Thinking on your feet means having credibility when you respond or speak - sounding assertive when appropriate, and creating the best impression possible. A high level of knowledge is required to achieve these seemingly off-the-cuff remarks, and it stands to reason that one should always continue to expand the knowledge base.

This most important communication skill means being in total control - appearing and sounding professional, looking and sounding unflappable. You must be confident both in yourself and in the underlying knowledge, to think and work effectively "on the run".

 ***Refer to the workbook Tasks***

Credibility

No one can know all the answers all the time, even though athletes may expect that you do. A coach's credibility must be tempered with the wisdom of knowing where to find solutions and/or information that surpasses their own.

The impression you leave with people is frequently much more important than the information you give them. Gestures, verbal delivery and body posture combine to relay the impression that the athlete or other coach responds and reacts to.

An effective coach is one who has the motivation to do things well and the persistence to keep trying when things are not going as well. Credibility is gained when the athlete recognises a persistent, enthusiastic and genuine commitment from the coach.

Coaches who can empathise with the athletes can better identify with their joys, successes, frustrations, anxieties and angers. This empathy in turn keeps the coach "human" in the eyes of the athlete.

Non-verbal communication

Verbal messages must be consistent with non-verbal messages to maintain credibility. As successful communication involves an unspoken "contract" between participating parties, it is inferred that both parties will contribute. The result is a layering effect, a building of an information pool. Each listens and then adds to what the other has said. If one party is ready to conclude the communication, then they will cease to offer contribution, and the conversation soon ends.

The role of non-verbal cues in this "contract" of communication is essential. The continuance of the conversation depends on body language. Nodding the head in agreement, or frowning disagreement are but two examples.

Once this communication has commenced, the strength and length is often determined by the accompanying non-verbal signals. The coach is offering information and encouragement, while the athlete offers opinions, concerns, needs and feedback.

While in certain situations, both the coach and athletes may say only what the other wants to hear, rather than speaking their mind, the accuracy of the body actions will support, or even determine the validity of the statements being made.

 ***Refer to the workbook Tasks***

Verbal communication

The basic exchange between two people is as old as speech itself. There can be the equal conversation, the probing conversation, and the lecture. If you respond to a comment or question with five (or more) minutes of your great knowledge, wisdom or opinion, the other person - the other half of the conversation - is left out, often waiting for you to draw breath so that he/she can get back into the conversation, or alternatively - leave.

Well before the other party has made their choice whether to leave or to try to intercept back into the discussion, they have well and truly lost the thread of the exchange and hence turned off the word receptor cells. You have lost them in the conversation and usually a vacant or blank look is returned instead of an animated eager expression.

Communication is about setting the scene, introducing the players, revealing the story and resolving the issues. It needs to be as enchanting as the fairytale golden princess, as technical as the Laws of Physics, as intriguing as the latest James Bond spy film and as comforting as a late night Milo.

Whatever the situation, more success will be forthcoming if you can give a response, with a leading clue, so that the conversation can build. This clue reminds your brain to stop sending words to your mouth after it has uttered the main point, the most essential strategy or key to success. It must be remembered to keep it simple - invite conversation, don't dominate it.

Humans have no better way to express their thoughts and needs. Words assist to clarify, describe and define. Words can make or break a thought, lift the soul up or down in an instant. It is the sharpest knife in the toolkit of the coach.

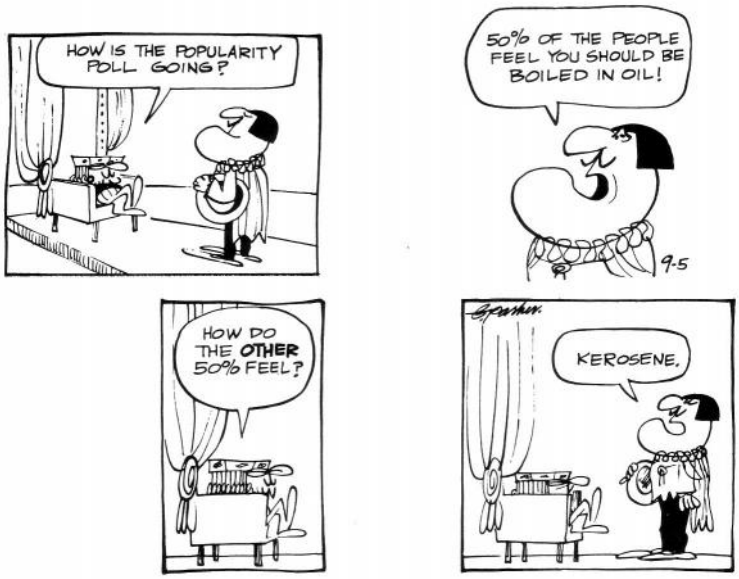
 ***Refer to the workbook Tasks***

Response Steps

1. ***Listen - pay attention to what's been said /asked***
2. ***Pause to organise your thoughts***
3. ***Repeat the question to clarify in your mind***
4. ***Respond with main thoughts - no padding***
5. ***STOP - don't end on an excuse or let the mouth run wild***
6. ***Refer to others if need be, for extended information***

Communication in Coaching

Communication is a process between coach and athlete. Its greatest elements include:



being a two-way process
simplicity
clarity
feedback
positiveness
encouragement
empathy
private criticism
performance
consistency
credibility
sensitivity
sense of humour
avoiding sarcasm

Communication levels will largely determine the rate of improvement in the lesser skilled performer and instil greater confidence in the skilled performer.

While athletes may not always agree with your thoughts, coaches who can communicate their goals and ideas clearly, while fully appreciating the athlete's position, will have a greater overall level of success. Just being a popular person or "one of the boys" is not an indicator of communicative success.

Communication is ongoing and a learning process on two fronts. It is both challenging and rewarding.

Managing conflict

An effective Coach or Official will be one who can successfully deal with conflict. Firstly, Coaches should be able to identify the signs and possible causes of conflict both in on and off range situations. Secondly, Coaches should be able to propose strategies to deal with conflict situations.

Types of Conflict

Dealing with both types of conflict, mental and physical, require similar strategies. Remember 90% of conflict often starts not with *what* was said but the *tone* in which it was said. So the ideal resolution of any conflict is a consensus which is a win-win outcome.

Consensus

Consensus solution is a successful conflict outcome decision that both participants are comfortable with and will support. It may involve compromise to satisfy the needs of both parties.

Advantages of a consensus outcome are:

- Both participants are motivated to carry out the solution
- There is a good chance of finding a high quality solution
- Less hostility = more respect
- Gets to the real source of the problem
- Usually brings about changes in behaviour

A failure to get a consensus solution usually results in a win-loose outcome. Either a participant "loses" and feels resentful and has low motivation to continue, or the coach feels powerless to control the self-centred participant. Neither outcome is good for future dealings between them.

Causes of Conflict

The causes of conflict are usually very complex but the contributing elements can be divided into:

- Lack of information — Information is not shared between both participants.
- Frustration — The aggressor is frustrated with outcomes and seeks to find a "scapegoat"
- Conflicting aims — When participants are trying to achieve conflicting goals using the same resource.
- Provocation — One participant provokes another's aggression use demeaning actions either verbal or non-verbal. Usually the latter.

Signs of Conflict

There are some typical warning signs of pending conflict:

- Verbal — Comments start to become pointed and generally aggressive in nature.
- Non-verbal — Looks and physical gestures demonstrating disapproval and preparing to take matters further to correct the disapproval.
- Positioning — Aggressive movements towards another that enters someone's "personal space"

Strategies for Dealing with Potential Conflict

- **Smooth over the situation:** by employing the right conflict resolution strategy to a particular situation you can smooth over the conflict and work towards a resolution.
- **One or both parties compromise**: if neither participant to the conflict is prepared to compromise then the conflict cannot be resolved. Resolution strategies should provide common ground to negotiate a compromise.
- **Confrontation**: using firm assertive instructions in confronting heated situations may be more appropriate in resolving this type of conflict.

- **Address the problem not the emotions**: by addressing the emotions it will only inflame the situation, increasing the level of conflict. Focus on the task or goal of finding common ground.
- **Focus on the person**: people are not inanimate objects and should not be treated as such. Be moral and ethical with people.

Summary - Communication

1. People communicate continuously. Sometimes they communicate what they intended and often they do not. We communicate through a look, a gesture, or a tone of voice

2. Coaches communicate their attitudes all the time and athletes are likely to be affected one way or the other. The coach's ability to improve performance in the athlete depends to a large degree on the ability to effectively communicate

3. Communication can be:
   - of a technical nature
   - re organisational details
   - to promote a positive atmosphere for effective learning and/or performance
   - to motivate
   - advising principles, strategies and tactics
   - of values and ethics

4. Coaches who communicate well.
   - get their intended messages across
   - listen well
   - encourage others to communicate clearly
   - draw out feelings on various issues
   - stay natural and consistent no matter what the situation

5. Coaches need to be aware of the power of not saying something when a reaction is expected. Clarifying is a useful skill for coaches to use, and a skill that all athletes should be encouraged to use.

6. An effective coach is one who has the motivation to do things well and the persistence to keep trying when things are not going as well. Credibility is gained when the athlete recognises a persistent, enthusiastic and genuine commitment from the coach.

7. Coaches will be required to "think on your feet" - that is, having credibility when you respond - sounding assertive and creating the best impression possible.

8. A good coach develops and fosters credibility. Verbal messages must be consistent with non-verbal messages to maintain credibility

9. Good coaches can deal with, and diffuse potential conflict.

10. Good responses are positive responses.

M1U3 - TALENT IDENTIFICATION

OUTCOMES Upon completion of this unit, the coach shall

- be able to undertake a talent identification process for State level shooters.

ASSESSMENT Workbook Tasks

The Starting Point

Just who is responsible for developing talent, and what is available?
It is reasonable to assume the next generation of winners will come from two ways:

- Waiting and seeing who rises to the surface by luck
- Determining and utilising protocols that will recognise talented shooters (at what ever age) and give them avenues or shortcuts to knowledge that will fast-track their improvement

Talent development is a critical component in the progression of a sport and any athletes identified as having potential.

Any talent development program must be in line with the long-term goals of the National Association (NSO). As a result, program design and overall management must be initiated at the national level with coordination through the State Associations. In reality, however it is the coach in the local area who will be first to recognise potential.

Current national Olympic programs are through AISL with a HP and Development Squad, with Squad members being selected by appointment, with suitability being assessed based on relevant competition performance levels and potential.

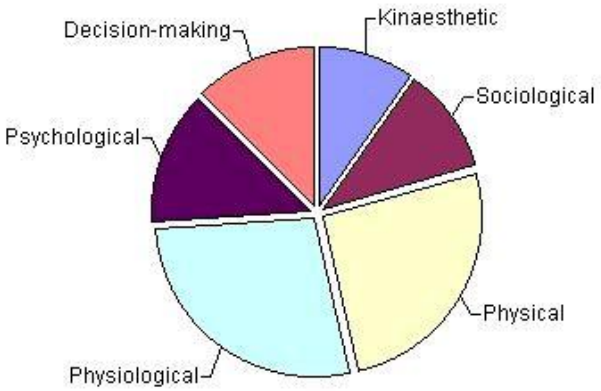
In addition to any AISL squads and NSO Squad/s, most State Associations will have "State Level" training to assist the current members of the Training Squads meet their commitments as well as assist the development of the next crop of potential champions.

Each of the States has an Institute of Sport or equivalent – yet with regret, not all are onside with the sport of shooting. At the very least, it may be possible to access certain facilities or sports scientists, although this will depend on a number of factors.

 ***Refer to the workbook Tasks***

From information that is readily available via the internet, it can be determined that the Sport Institutes and Academies of Sport are promoting and involved in talent search style programs.

What to recognise



How do we identify potential elite athletes and what do we do when we get them?

The pie-chart shown on the left lists a number of general areas that can contribute to sports performance

The key to understanding successful talent identification is trying to determine how much of the performance can be measured and what elements are required as essential for each particular sport.

What key features are required?

It is easier to measure physical attributes than psychological or skill/decision-making abilities…. therefore predictions in sports that have large physical segments can be relatively easy.

Sports such as Archery, Table tennis and shooting do not rely as much on the physical components, but more on the harder to measure psychological and decision making attributes.

In short, the more details that can be monitored in a performance, then the greater chance of being able to recognise these traits in others.

Talent evaluation should be initiated at Club levels, where the local coach may identify an individual based on their performance as a comparison to their experience or even a simple "gut call" for their potential to reach elite levels within the sport.

Current evaluation has often relied on the "chance" of a potential elite athlete rising out of the masses through "natural talents" or the athlete's sheer perseverance to train more often to improve their own levels without assistance.

Ideally coaches would like to "screen" athletes for their potential. However at this stage we do not have sufficient specific protocols that may make identification more expedient and relevant. Having said this, most coaches involved with higher level athletes could identify traits that separate the cream from the crop.

Traits or talents may include elements such as physical abilities, mental abilities, perception and aptitudes towards winning or even in general the availability of an athlete to train.

It should be the goal of every elite level Coach to initially structure their own "Talent Identification Criteria" and help develop this as part of a future national standardised format.

An evaluation kit may contain items such as physical measurement data sheets, similar to measurement charts for clothing, mental test similar to those available in the "Psychological Skills" section of the book "On the training of Shooters" (Heinz Reinkemeir Vol 1 1992). Other simple test for measuring reaction times like to "ruler drop test"

Coaches should be encouraged to “experiment with the concepts” and with the permission of athletes, collect sufficient data to formulate relevant, justifiable outcomes that may well include the future key to TI for shooting.

What is available

After we have the pleasure of a new athlete that has made an upward progression towards "stardom", it must be the deliberate intention of the Coach to assist the athlete in obtaining any of the services that are available to improving their level of performance.

This may be in the form of State or National Training camps or squads or in some cases the availability of Scholarships through National or State sporting academies.

Formal Talent Identification is a relatively new concept to shooting in Australia and we would expect that it will still be some time before the Standardised protocols could be identified and actioned. As a base for talent identification we could look at some programs that may exist for other sports. All of the Sports Academies have Internet sites that cover Talent Identification programs and the relevant contact details.

Talent Identification is only **one** of the tools essential for success, and it must be remembered that….

athletes decide to become elite, not parents or spouses or coaches
talent is not always apparent by observation alone
being a big fish in a small pond is not enough, being a big fish in a big pond is talent

 ***Refer to the workbook Tasks***

Physical Testing

Local State Sport Institutes offer many resources and excellent Sports Science testing facilities. There are tests available for almost any physical attribute in the athlete, however many may be beyond the requirements of the elite shooter.

What should be tested? Usually a simple physical profile is sufficient, including skin-folds, height, weight - energy testing such as the shuttle test may also be included.

At the next level is basic heart rate and maximal oxygen uptake. Further, more invasive screening such as bone density, lactic acid levels, blood sugar levels and other procedures may be useful for certain highly active sports.

Any testing should have relevance to the muscle groups used in the sport - for example, an athlete who is proficient at kyaking and tested on a rowing ergometer may show a pronounced lack of fitness if tested on a distance running treadmill.

Other Testing

This could well include testing of reflexes (assessed by a series of known games), eyesight (assessed by a competent optical specialist) and temperament testing to determine the mental strength of the athlete. This should be completed by a person competent to evaluate the results. A Coach's "gut feeling" is also a good indicator, that the coach has assessed over time.

Summary – Talent Identification

1. Talent development is a critical component in the progression of a sport and any athletes identified as having potential.

2. Any talent development program must be in line with the long-term goals of the National Association.

3. From information that is readily available via the internet, it can be determined that the sport Institutes and Academies of Sport are promoting and involved in talent search style programs.

4. The key to understanding successful talent identification is trying to determine how much of the performance can be measured and what is required as essential for each particular discipline.

5. Sports such as Archery, Table tennis and shooting do not rely as much on the immediate physical components, but more on the harder to measure psychological and decision making attributes.

6. The more details that can be monitored in a performance, then the greater chance of being able to recognise these traits in others.

7. Talent evaluation should be initiated at Club levels, where the local coach may identify an individual based on their performance as a comparison to their experience.

8. Coaches should be encouraged to "experiment with the concepts" and with the permission of athletes, collect sufficient data to formulate relevant, justifiable outcomes.

9. Talent Identification is only **one** of the tools essential for success, and it must be remembered that….
   - athletes decide to become elite, not parents or spouses or coaches
   - talent is not always apparent by observation alone
   - being a big fish in a small pond is OK, being a big fish in a big pond is talent

M1U4 – CLUB COACH SUPPORT

OUTCOMES

Upon completion of this unit, the coach shall

- Be confident to provide support to Club level coaches

ASSESSMENT Workbook tasks

Coaches & Mentoring

Knowledge of the appropriate rules of the sport are essential by both coach and athlete. The coach has a responsibility to work within the rules, and the athlete has the right to a fair and equal competition. Rights and responsibilities are the two most important "R" words - one cannot exist without the other.

In the same light, experienced coaches also have a responsibility to assist and mentor coaches who are learning the skills of coaching. A Club level coach has the right to be introduced to new concepts and best practice as it changes within the sport.

Completing appropriate technical accreditation is desirable for the national or international coach, and a copy of the most recent rule book is essential.

Specifically, Mentoring is a two-way process in which both mentor and coach benefit from the networking, sharing of ideas and interaction that can lead to lifelong friendship and betterment of the sport.

The format of such mentoring support may be varied.

As an example….

- Writing articles for the National e-mag or State Newsletter that outline new ideas
- Visiting a club and offering to run a coaching session or two
- Making time to communicate with Club Coaches in your area – do they need any help

It may also be in the form of….

- Professional Development – engaging coaches to work together and gain new skills
- Accreditation assistance
- Updating skills
- Fast-tracking a former athlete through the coach process

Not every Club Coach may immediately want your assistance, however it is essential that you, as a Competition Coach, keep your mind open to helping those who need and want it.

 ***Refer to the workbook Tasks***

Code of Conduct

The code of ethics attests to respecting talent, assisting in achieving potential, and engaging in ethical personal conduct. It also infers that all athletes are able to participate in the sport of their choice and be safe while conducting that sport.

By signing the Code of Conduct, coaches agree to a number of ethical areas….this should not be restricted to the Coach – Athlete relationship, but extended to read Coach – Coach.

Duty of Care

Just a quick reminder……..Coaches are placed in a special category within society, and consequently have to be mindful of the responsibility that is implied, and could be validated by the legal system. Whatever the age group of the athlete, the duty of care remains constant, and is thought of in two broad areas:

Physical - every athlete within your care has a right to be coached in a physically safe fashion, with the correct procedures and techniques being imparted. They are also correctly expecting that all equipment used is safe and in good working order, so as not to cause physical harm to their person, now or in the future. The coach's role is to be aware of these considerations and to take steps possible to ensure compliance.

This aspect may well have been given too little attention in past years, as many shooting coaches were local club members who were being helpful.

Personal - every athlete within your care has a right to expect to be learning, training and competing in an environment that is free from harassment of any nature - sexual, racial, gender based, verbal etc. The coach's role is to be aware of their duty of personal care, and encourage within themselves and their athletes an environment of tolerance and personal support.

While deviation from these concepts would be not be tolerated in any way by society in respect to working with children, it an issue that has important implications in the coach's work with all age groups.

Duty of Care pointers for coaches

- Provide a safe environment - use safe and proper equipment
- Adequate planning of activities
- Evaluate athletes for injury and capacity
- Equal matching of younger athletes
- Warn athletes of the inherent risks of the sport
- First aid qualification or basic knowledge (yes even in shooting)
- Keep adequate records to show your coaching program

Risk Management in Coaching

The boundaries of liability for sporting injuries have expanded in recent years - while the sport of shooting has been lucky, more than prepared, in not having too much attention drawn to this issue.

More than ever, sport is a reflection of society - it elevates heroes, provides friendships, fun, personal development, team-work, and in some instances unrelated to shooting….an income.

Sport is no longer an activity divorced from the rules that govern society. Risk management, negligence, duty of care, harassment are new words to sport - especially volunteer run sport.

What does this mean for the Coach? An appreciation of the need for a more common sense approach to coaching - taking into account the needs of the participant for a safer environment and satisfying experience.

Basic Risk Management *KEY WORDS*:

- ***Eliminate the risk*** - remove hazards from the field of play
- ***Substitution*** - replace hazardous practices with less hazardous ones
- ***Isolation*** - isolate hazards from those not involved
- ***Engineering controls*** - modify equipment to suit participants
- ***Administrative controls*** - introduce risk reduction practices
- ***Personal protective equipment*** - introduce and use
- ***Record keeping*** - report incidents
- ***Signs*** - use signs to warn of danger / promote safe practices

Summary – Supporting Coaches

1. Rules are an essential part of any sport. It is imperative that the coach is familiar with the rules, and able to assist the athlete with both their rights and responsibilities within the sport.

2. When being supportive of Club Coaches, the Competition Coach is further enhancing their own communication and coaching skills

3. Code of Ethics for Coaches ensures that all coaches act in an appropriate manner both to athletes and each other.

4. Mentoring is about being supportive, engaging and encouraging.

5. Duty of Care involves both physical and personal aspects. Risk management strategies should be considered and implemented for all sports administrators, officials, referees and coaches.

M1U5 – PERFORMANCE IMPROVEMENT

OUTCOMES At the completion of this unit, the coach shall
- Be able to undertake activities to improve coaching performance

ASSESSMENT Workbook tasks

Self Reflection & Evaluation

Athletes are often asked to keep a Diary to note elements of their training and skill performance. It is therefore not unreasonable for the coach to also use self-reflection as a tool to assist them as they learn to be a more effective coach.

This can be in the form of a personal diary, noting areas such as:
a) Goals for the particular training session
b) Elements that went well / and perhaps not so well
c) Strategies for personal improvement
d) Improvements for the next session/competition

Coach can also involve the electronic media and utilize a video camera – record the training session. Again this is a tool that will allow the coach to see themselves from the outside….as the athlete sees the coach.

A video of the coaching session can provide the coach with insights:
a) Did I have the attention of the attending athletes
b) Were they all getting effective coaching
c) Were my comments clear and concise
d) Did I provide sufficient time for athlete practice

Personally evaluating your work provides a clear view as to the coach's strengths and challenges. Watch other coaches – look at what they do well. While it's usually impossible to copy directly, it is wise to consider the concepts and consider those concepts – how can you adapt that idea for yourself.

Coach Evaluation – this is essential for the effective coach. It can take the form of personal evaluation, or with the help of a mentor – someone with whom you can discuss all aspects of your coaching.

Mentoring

"Mentoring is to support and encourage people to manage their own learning in order that they may maximise their potential, develop their skills, improve their performance and become the person they want to be."
Eric Parsloe, The Oxford School of Coaching & Mentoring

Mentoring is a powerful personal development and empowerment tool. It is an effective way of engaging coaches to progress in their skills. It is a partnership between two people (mentor and mentee) normally sharing similar experiences. It is a relationship based upon mutual trust and respect.

A mentor is a guide who can help the mentee to develop skills and solutions to, in this situation, their coaching. Mentors rely upon having similar experiences to gain an empathy with the mentee and an understanding of their issues. Mentoring provides the mentee with an opportunity to think about coaching options and progress.

A mentor should help the mentee to believe in themselves and boost confidence, while at the same time offering suggestions to improve their coaching. A mentor should ask questions and challenge, while providing guidance and encouragement. Mentoring allows the mentee to explore new ideas in confidence. It is a chance to look more closely at yourself, and your own coaching.

Having someone with whom you can chat in a non-threatening manner, is the key to good learning. Coaching & mentoring both of which focus on the individual, can enhance morale, motivation and productivity and reduce coach turnover as individuals feel valued and connected with both small and large changes.

There is also an increasing trend for individuals to take greater responsibility for their personal & professional development and even those who are employed in larger businesses are no longer relying on employers to provide them with all or their career development needs.

There has been an increase in the number of individuals working with coaches and mentors on a private basis, and the scope of offerings on the web are staggering.

Whatever the method it is imperative that the new coach keep their eyes open with respect to their skill development….diary, video, mentor, self evaluation….all effective tools for the developing coach.

 ***Refer to the workbook Tasks***

Summary – Performance Improvement

1. Keeping a diary is an effective way for the coach to review their work, and determine the bits to develop and the bits to change

2. Use electronic means ie video for personal reviews and watch other coaches for good ideas.

3. Mentoring – getting together with another coach – talking through the challenges, and finding the solutions

4. Remember the web – articles, sites, Youtube clips….an endless supply

M1U6 - GROUP MANAGEMENT

OUTCOMES At the completion of this unit, the coach shall

- Be able to more confidently manage a group of athletes at State Level

ASSESSMENT Workbook tasks

Principles of Training Programs

It is obvious that good Training programs need thought and planning prior to implementation. In consultation with the athlete, the following should be considered:

- **Goals** - long and short term goals in writing - preferably with a calendar of events noting the priority events, in consideration of the athlete's prime goal/s.
- **Time available for training** - does the athlete have the life skills in place for effective training. What can be successfully arranged – good time management.
- **Financial constraints** - are there restrictions and to what degree.
- **Family support** - is this forthcoming
- **External commitments** - do you have the full attention of the athlete… is the athlete committed to the sport. What other aspects of everyday life must be considered.
- **Physical training** - what is required - are the appropriate facilities available within appropriate distance as there is reduced value if more time is taken in travelling than in the training routine
- **Monitoring** - is there another person/coach who can assist with the monitoring of progress of your athlete/s should you not live close by, or in your absence.

Having determined the base point, it is time to consider the shooting year, and note peak performance, rest, and maintenance periods worked around the competitions available.

The available training time should then be balanced between the three aspects of training - physical, mental and technical.

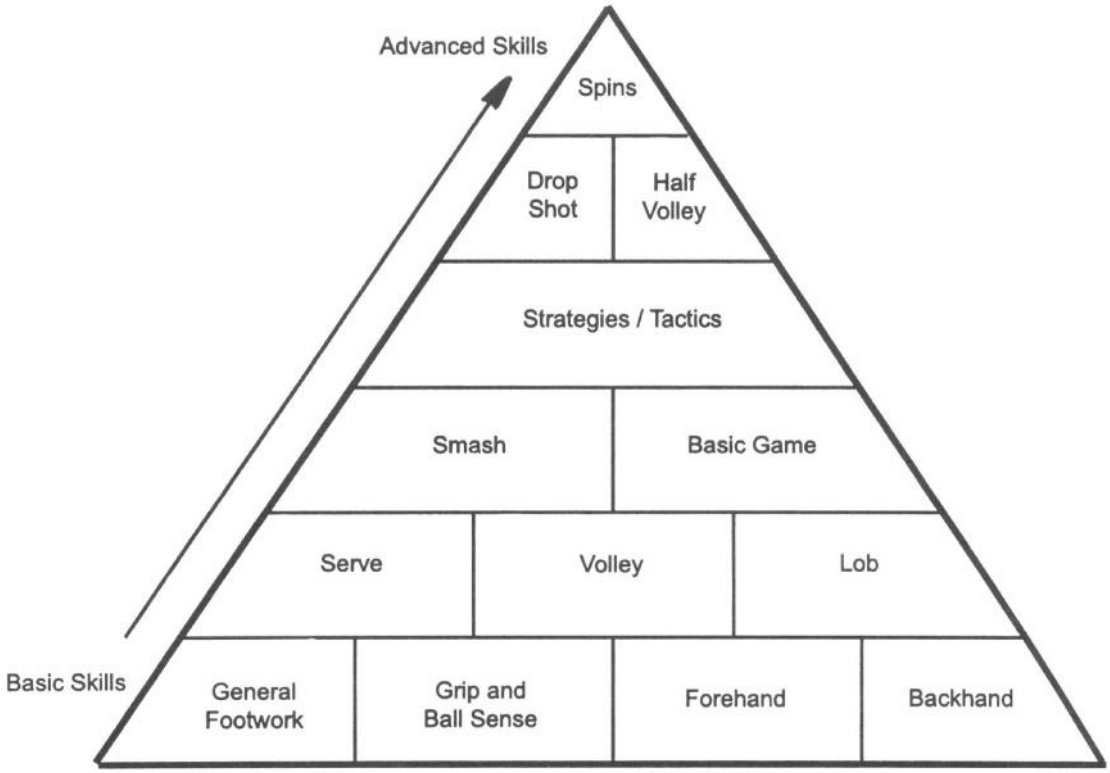
The Coach is then mindful of the following:

a) the training load cannot be at a high level continuously, but must be varied over time – tapered appropriately for peak performance
b) all athletes have an exhaustion thresh-hold. Work beyond this level will produce performances of a lesser quality.
c) recovery phases must be included and planned.
d) it is not necessarily true that if some training is good, then more is better.
e) over-training is a real, yet often ignored threat to improvement.
f) to maximise the effects of training, the coach should encourage athletes to work on both their strength and weakness areas - one should not be ignored at the expense of the other.
g) athletes should be encouraged to develop a positive attitude and a strong adherence to the training schedule. Training should not be a chore, but a clear means to a positive end.

 ***Refer to the workbook Tasks***

Implementing a program

Technical skills training is composed of identified elements that link in order, and carefully work towards the pinnacle of performance. By way of example, the following relates to the gaining of tennis skills from beginner to advanced level.



Any training plan devised should reflect an assessment of the athlete's current technical skills, so that similar, logical progression can be planned.

Although a general plan of action can established for a group of athletes (ie a State Team), individual needs must be considered and managed if there is to be maximum effect for the effort you are putting into the project.

Coaches must remember:

a) **Tolerance to Training** - some athletes respond well to harder training better than others. There is no guarantee that those who train well will perform better than those who are resistant to excessive training.
b) **Responsiveness to training** - this is related to the initial level of fitness, or technical skills of the individual. There is greater room for improvement where the performance baselines are lower.
c) **Recovery from training and competition** - some athletes require a longer period to recover mentally and physically from competition - this is more pronounced in the older athlete.
d) **Training needs** - effective athlete profiles give the coach all the information on the strengths, weakness, likes and dislikes of the athlete in their care.
e) **Training preferences** - athletes should be able to train in a fashion that suits them, not the coach.
f) **Life style variations** - Athletes must able to have a life outside sport, and part of the role of the coach is to include this in any training plan

g) **Physical characteristics** - variations in body shape, composition and age must be considered carefully. Heavily built athletes will have less heat tolerance, and slightly built athletes will often have more trouble in colder weather.

h) **Environmental tolerances** - there are going to be varying athlete responses to the physical environment. Tolerance and response to hot and cold conditions, effects after airline flights, the effects of pollution, altitudinal changes and social interaction within the team group.

Shooter Pathways

Whether the discipline is Olympic or not, there are always goals to be achieved. A team in which selection is desired and the effective coach is aware of the pathway.

As much as the coach would like to think otherwise, most shooters are quite happy being involved purely at the club level. For every 100 shooters, there will be less than 10% who wish to invest the time, money and energy into striving for the higher level.

The balance of the triangle (traditional in all disciplines) is essential –for every medal at Commonwealth Games level, there needs at least 400 club shooters

It is important for coaches to know (in general terms) how a shooter may progress from, as an example, Club team to State team, or what are the State Team options and expectations.

Stay aware of details available from both the State and National Association so that your shooters are well informed as to their options.

For the younger shooter, it is important to emphasise the development of skills, as it is their scores that will be used for selection, not the age or gender of the shooter.

Coach Pathways

Achieving a particular level of coach accreditation takes time, skill and understanding. While we emphasize the necessity to inform athletes of the available options, the coach path is often ignored. The AISL coach program is inclusive of the levels below…

The available options in brief:

INSTRUCTOR	Available in many disciplines
CLUB	All disciplines
COMPETITION	All disciplines
ADVANCED	In development
HIGH PERFORMANCE	Available through QLD uni

📖 ***Refer to the workbook Tasks***

Drug Testing

Athletes are much more likely to acquire a respect for codes of conduct with respect to the use of drugs once they understand the background.

One of the ways that you can develop a drug-free attitude is to provide an opportunity for your athletes to discuss, from the beginning, how their actions will impact upon themselves and the sport, should they partake in illegal drugs to enhance performance.

The Australian Sports Anti-Drugs Agency (ASADA) is based in Canberra, and is the drug-testing agency for sport in Australia. ASADA conducts many tests over a variety of sports, including shooting. These tests can be casual (ASADA determines when and who) or requested (the sport requests testing to be carried out) – usually only the Olympic sports.

At this stage, shooting is part of the casual testing, and this is usually completed during the main event/s of the shooting calendar - AISL events in the leadup to major overseas competitions.

What is being tested? The athlete is asked to provide a urine sample for examination to determine the level of any non-naturally occurring performance enhancing substance/s. There will be times when an athlete may be consuming prescribed medication, and this shows in the report from the laboratory.

It is the responsibility of the athlete and the coach to be fully aware of any medication being taken for whatever reason. Ignorance is not an excuse.

What can be taken? Many medications are most certainly legal, as they do not provide any enhancement to performance but a resolution of a medical condition. To fully understand what is permitted, check the ASADA website. This website advises of both permitted and banned substances in a clear to read way.

Their website address is useful to remember: http://www.asada.gov.au/

What is a banned substance? Any substance which can be proven to be performance enhancing, and does not occur naturally in the body, is suspect. This also refers to illegal methods of enhancing naturally occurring substances.

These include:

- **anabolic agents** (steroids & beta-2 agonists) - used to increase muscle size and strength while reducing recovery time after injury. Athletes using steroids are often able to train at a greater intensity for longer periods. Although Beta-2 agonists are commonly used to treat asthma, most are banned. Check with a Doctor and on the ASADA website for current information

- **diuretics** - increase the amount of urine produced by the body, and as such often have the side-effect of inducing dehydration. Diuretics are also often used to “mask” or rid the body of other illegal substances.

- **narcotics** - these substances dull the effects of pain to produce sensations of euphoria, invincibility and illusions of extended prowess. Some examples include heroin, morphine and pethidine.

- **peptide hormone, mimetics and analogues** - this group includes the more well known "human growth hormone" (hGH) which may be used to promote increased muscle size and quicker growth. Insulin is within this group, and its use can be approved for used by insulin-dependent diabetics, provided appropriate medical clearance has been obtained prior to use.

- **stimulants** - are any substances which act directly on an athlete's central nervous system to speed up parts of the brain or body. Adrenaline is a natural stimulant - synthetic stimulants include caffeine, amphetamines, cocaine, and ephedrine.

- **blood doping** - athletes return "refreshed" blood into their body containing an increased number of red blood cells. As consequence, there is an increased oxygen level in the bloodstream that can be used by the working muscles.

- **alcohol** - although socially acceptable, alcohol is a nervous system depressant which slows down the actions of the brain. Combining alcohol with other drugs can magnify the effects. Alcohol is especially de-hydrating to the athlete and should be avoided.

- **cannabinoids -** these are psycho-active chemicals in the cannabis plant. Marijuana and hashish also come from this group and the group is banned at the Olympic Games level.

- **beta-blockers** - reduce blood pressure and heart rate by suppressing the volume output of blood from the heart. This drug group can help stop the hands and body from shaking while competing, and provide a more consistent heart rate for the athlete.

For shooters and archers, the drugs under the microscope are from the beta-blocker group. While beta-blockers are used for heart conditions, they are banned substances for shooters, and any athlete testing positive will be subject to sanction.

Supplements, herbal preparations and vitamins - these form an increasing part of many athlete's prevention strategies, and great care should be taken to fully determine the precise ingredients of any preparations consumed. While many supplements do not contain banned substances, both coach and athlete should be aware of the risks involved in taking any tablets or potions.

The athletes usually selected for testing include those striving for National Team selection. Through negotiation with ASADA, it is not usual for the average shooter to be approached in their local club for drug testing.

AISL has a Drugs Policy which all the shooting disciplines have endorsed.

 ***Refer to the workbook Tasks***

Summary – Group Management

1. Athletes should be encouraged to develop a drug-free attitude and be instructed as to how their actions will impact upon themselves and the sport should they partake in illegal drugs to enhance performance.

2. The ASADA is responsible for drug-testing athletes in Australia. Drug testing is via a urine sample for examination to determine the level of any non-naturally occurring performance enhancing substance/s within the body.

3. It is the responsibility of the athlete and the coach to be fully aware of any medication being taken for whatever reason.

4. To fully understand what drugs are permitted, viewing the ASADA website is a must.

5. For shooters and archers, the drugs under the microscope are from the beta-blocker group. While beta-blockers are used for heart conditions, they are banned substances for shooters, and any athlete testing positive will be subject to sanction.

6. It is essential that both shooters and coaches understand the options available, including at Club, State, National and International level.

7. Once general trends are obvious, it will be careful training over time that instructs the athlete on how best to work with the information.

M2U1 – TRAINING/COACHING PROGRAMS
M3U1 – THE COMPETITION COACH IN ACTION

OUTCOMES The coach shall

- Be able to develop and conduct an inclusive structured annual training/coaching program to State level athletes using a variety of methods

ASSESSMENT

- Workbook tasks.

All sports require the learning of facts and other knowledge. This knowledge assists the athletes to understand the sport more comprehensively. Training then enhances the skills and helps the athlete to improve.

Any training or coaching program must take into account the following characteristics of the athlete:

- Age
- Sex
- Skill level
- Training background
- Fitness level
- Motivation to participate
- Injuries (present or past)
- Disabilities

Training contains two elements - training and practice.

- ***Training*** is considered to be the splitting of the individual elements of a particular skill, and working on those in isolation.
- ***Practice*** is then putting the elements together in a required sequence to test the various trained elements. The training and practice is then further tested under match conditions.

Principles of Training

All training programs should be designed with the following principles in mind:

Frequency - training should occur regularly and be spread over a period of time.

Overload - a training session should extend, but not defeat the athlete.

Specificity - training effects are specific to the type of training stimulus used in the training session. What you train is what you get.

Reversibility - training effects are reversible, and will diminish over time.

Progressions - the intensity of workout or training should be increased and varied in a logical way, taking into account the improvement of the athlete.

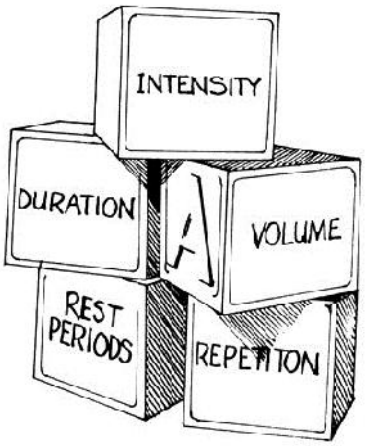
Monitoring - training effects must be periodically and methodically monitored.

Adaptability - planning must be flexible and permit, even encourage adjustment to individual differences and circumstances.

Goal-setting - training programs should set out a series of short-term goals to achieve a long term achievable goal.

Effects - training effects are not gained uniformly over time. There will be a varying degree of improvement - some development is rapid, and other improvements appear to plateau, or even go backwards at times.

Overtraining - overtraining can occur when workouts are too difficult for athletes to handle, or too often to permit sufficient rest. Variety in the training routine will also arrest athlete fatigue due to overtraining.



When designing a training program, the following should be considered in appropriate degrees to suit the level of the athlete concerned.

Intensity - the degree of work being undertaken by the athlete.

Duration - the length of time the athlete works without rest.

Volume - the total time of the training routine - rest period, and coach sessions included.

Repetitions - the number of times a specific exercise is repeated during a fixed part of the training session.

Specificity of Practice

Specificity of practice means what you do in practice, is what you get in the competition. The principle of specificity of practice can be summed up on the following two statements:

- Athletes will compete and react in a match situation directly relative to what and how they have been practicing/training .
- The more closely the athlete simulates match conditions in practice sessions, the better the competition performance will be.

Specificity – When and How to Use It

The principle of specificity of practice is most important at the intermediate and later stages of learning. In the early stages of learning, the coach tends to simplify elements so that the skill can be learned properly. The skilled coach will get the athlete to try and work on one aspect of the skill), or even have him/her perform the skill at a reduced speed until confidence is gained.

Once a skill is learned, in order to prepare for competition, it is important to simulate competitive conditions in practice.

In preparing for situations where the athlete's level of activation or competitive stress is increased, the principle of specificity becomes more important. This is because ***under stress, the response that has been practiced will be even more likely to occur*** (i.e., the performer will revert to trained automatic reactions).

Be sure that the automatic reactions that you instill in your athletes through practice are the reactions that are most desired in the competition situation.

What to Simulate

Some of the specific conditions to simulate in practice sessions in order to have your athletes practice in a more specific manner are:

- **fatigue** (competing when physically tired)
- **competitive stress** (gradually increasing the level of competitive stress)
- **technique** (e.g shooting a jump shot with a hand in your face demands a different approach from that required to shoot a jump shot unchecked)
- **strategy** - (e.g practice hitting a ball to and from those areas of the court that best simulate game conditions).

Practice sessions should use match-like conditions as much as possible, even with spectators watching ... judges' scoring... cameras ... finals … whatever is appropriate to the particular sport.

Negative Transfer

You should always remain aware of the dangers of negative transfer, that is, learning the wrong thing. For example, two competitive basketball players tipping the ball back and forth over the basket may feel that they are developing the touch for tipping in rebounds. In fact, they are simply learning how to miss, and will probably do so in the game situation.

You should isolate any drill habits that may be producing negative transfer and re-structure the practice session in a way that will eliminate them.

High Speed Specificity

Specificity of practice is extremely important in high-speed activities. Drills continuously run at 1/2 speed produce proficiency at 1/2 speed, not at full speed.

In a competitive game of tennis or squash, the reactions of each player must be automatic. Thus the competitive player who has practised moving quickly and hitting his/her volleys to winning areas will probably win over the player who has taken the easy way out in practice by hitting the ball back and forth with his/her partner.

It is fortunate that the static sports have a different approach and reaction speed is of a lesser importance. Having stated this, it is obvious that certain elements within static sports will also rely on reactions ie within shooting the reaction element is contained within the final moment in shot release. The concept of the player hitting "winners" in practice however is also paralleled in shooting - every rehearsal must be a preparation of the match and in “real” time.

For the beginners, specificity applies to making sure the drill or progression emphasizes the skill you want learned.

As an example, in teaching the skill of passing to novice soccer players, a logical progression would be to have two players kicking the ball back and forth, first while stationary and then while moving. Then introduce a person to play defense who tries to intercept the ball.

The problem is that once a defender is introduced with beginner players, the two offensive players no longer get passing practice. The defender gets a lot of practice tackling. To make sure that some passing is still being practiced, then gradually introduce a modified game situation.

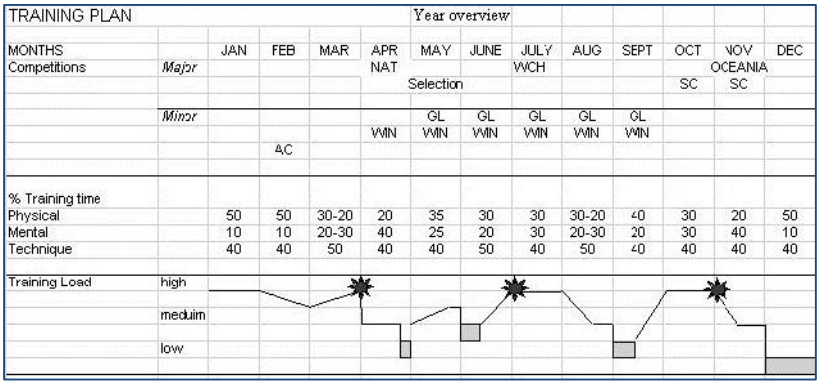
SETTING GOALS (and OBJECTIVES)

Goals are the glue that make success possible. They add aims to energy, focuses effort and for some, structures time. Surveys show that people who plan ahead are much more successful over the long term than those who plunge in without knowing where they're going or how they'll get there. Goal setting is similar to using a satnav when driving in unfamiliar suburbs – it's essential.

Goals need to be "S.M.A.R.T" with shorter term goals neatly fitting into longer term goals. This process must be approached by both athlete and coach in consultation, and linked in a way to ensure progress. Goals are easily assessed and monitored, and adapted if needed.

CREATING THE PLAN

Before any training is commenced, it is essential for the Coach and the Shooter to discuss and plan the year's program and goals. Note the major competitions, the minor competitions and lock in breaks and experimental time.



A very simple annual block plan gives both the coach and athlete a clear view of intentions and can be coded for simplicity.

There will be the opportunity to review and adapt as necessary.

The annual plan can then be broken into segments and a greater emphasis can be placed on, for example – the lead-up to competition – tempered training to accommodate student exams – modified training due to injury…..the list is long.

COACHING SESSIONS - need to be planned; what are the goals to be achieved in the session, what time is available for the session, what extra equipment or resources are required, and how is this session going to link into the overall plan.

A simple session, (for rifle) by way of example, noting a short time period available.

…. Tuesday 21st – 2hrs
Goal – to improve the trigger process
Warm-up/stretching (up to 10 min)
1st Ex – dry firing (15min)
2nd Ex – shoot without target, or the target turned to the blank side (20min)
Break and discuss the grouping
3rd Ex – 10 shots in competition mode (10min)
4th Ex – repeat #2 and #3 (30min)
Cool down (up to 10min) and discuss outcome – was the goal achieved

Notice that the goal was noted as something specific, achievable, and measureable – that is, did the trigger process improve by the end of the session?

Consider working with a single goal (skill drill) in a single session, as there is time to practice and putting multiple skills at another time prior to competition.

PRESENTATION

As to be expected, it is rare to find two athletes who are the same in their outlook and approach to training, and although challenging, it is the role of the effective coach to consider the various methods of information delivery and be prepared to work and adapt with them as appropriate.

Discussion / demonstration / role play / discovery

Many athletes will respond to a short demonstration combined with a discussion when the coach is introducing a new concept – by remembering the rules of sight, sound and touch and engaging the senses of the athlete.
Coaches can also link into the varied resources on the internet, and with current technology, this can be shown on the range, or a printout of the important points be provided.

Effective Coaching Aids are a bonus for the coach, who can supplement what is being said with a visual demonstration. This is more essential for the newer shooter, but should not be forgotten for the more experienced shooter.

An example in Air Rifle – there was recently a new innovative sighting aid. A number of shooters were talking of it, and had seen the info on the web. When the first one came into Australia, the interest was immense, as shooters could both look at the item, look through the sights to see the effect and talk to the owner about their impression.

Apart from being successful for the selling agents, it was an amazing interaction between coach and shooters – all working towards the same goal.

Coaching aids may be in the form of sighting aids, guides for body position (ie ruler) or simply a sign reminding the shooter about a particular element of their shooting.
For example – “RELAX” ….. “TRIGGER”

Get to know your athletes and know what will probably work best for them.
Be adaptable and ready to try new solutions.

LEARNING ENVIRONMENT
The effective Coach works to engage the athlete – it is this ownership by the athlete that ensures success. Learning however, is only achieved when all the “learning senses” are employed – sound, sight and touch. That is – “saying” must be accompanied by “seeing” (via a demonstrator if necessary) and then “trying” – giving time for the athlete to grasp what you have suggested.

The best learning is achieved when single elements are sequenced into the full skill, and sufficient time is available for the practice of both the single elements and the sequence. Too much information in one burst will generally lead to confusion. The athlete’s mind must be clear on each element before being required to combine those elements.

 ***Refer to the workbook Tasks***

REVIEW – in all situations, the well intentioned coach with a well-planned program, must include the process of review – sooner rather than later.

a) Is the plan meeting expectations
b) Is there a need to modify the training or competition program
c) Is the plan developing the athlete to be an independent thinker
d) Is the plan challenging enough….or too challenging

While an annual plan may be established, it is the small details and goals that progress the skills of the athlete, and a monthly review is not unusual. When the athlete and coach are on the same path, success is more assured.

Summary – Training/Coaching Programs

1. Any training or coaching program must take into account the following characteristics of the athlete:

Age	Sex	Skill level	Training background
Fitness level	Disabilities	Motivation	Injuries (present or past)

2. Training contains both elements - training and practice.

3. The principles of training include: Frequency, Overload, Specificity, Reversibility, Progressions, Monitoring, Adaptability, Goal-setting, Effects, Over-training, Intensity, Duration, Volume, Repetitions

4. The conditions to simulate in practice sessions, in order to have athletes practice in a more specific and effective manner include:
Fatigue Competitive stress Technique Strategy

5. Setting of appropriate goals is essential

6. Training plans should be developed in consultation with the athlete. Plans should be documented, reviewed and updated as appropriate. Clear goals should be represented within the training plan.

7. Training loads should be varied within the training period to both stimulate and activate the athlete.

8. Good learning processes must be considered:
   Sound, sight, touch
   Break the skill to be learned into parts and progress from simple to complex
   Provide sufficient athlete practice time

9. Review the plan, modify if necessary, be flexible in your approach. The plan must ultimately be owned by the athlete, and it is the athlete that will prove the success of the plan.

M3U2 – SKILLS & TECHNIQUE
M3U3 – EQUIPMENT TESTING

OUTCOMES On completion of this unit, the coach shall:

- Be able to teach advanced level shooting skills and techniques for the State level athlete
- Teach advanced equipment testing and readiness

ASSESSMENT Workbook Tasks

First things first – a reminder of the basics

The technical skills of shooting have been well discussed in the Club Coach course, and participants have been given an "industry standard" approach when setting up a shooter.

With that in mind, in this course, the future progression of athletes is more in the exactness of the observation skills of the coach and the deeper understanding and development and refinement of the skills in the athlete. The basic skills of balance, position, sighting, trigger release, and follow-through haven't changed.

Prior Injuries / body condition. It is essential that the coach first establish the physical condition and ability of the shooter to perform the tasks that will be asked. As an example, there is no point in attempting to shoot standing using a full-sized firearm with a very small framed adolescent or an adult with severe back problems who is ultimately incapable of supporting a firearm for any period of time. Solution – modify the firearm and/or use a supported version of the discipline.

Equally to be considered are such factors as

- short term injury or illness
- current social stressors ie examinations, employment hassles
- starting a new position when shooter is training solidly for competition in another

Equipment to suit. Coaches and shooters should both carry current Rule Books and updates. Although the end responsibility lies with the shooter, the coach has a moral responsibility to ensure that his/her shooters are aware of all rules and changes that may impact on their performance.

The coach must always ensure that all equipment and clothing purchased or used by the shooter is legal for competition allowing margins for climatic changes. It is wise to ensure that the equipment is not set too close to the limit.

While it is often unnecessary to completely, and expensively, outfit a new shooter in a full kit just to enable him to begin shooting, it is necessary to ensure that as many factors as possible are considered to enable the mastery of the position with the minimum stress and the maximum satisfaction.

Offer the athlete solutions as to what part of the shooter's kit is most essential and build up from there. There is often good, second hand equipment and kit available.

All required equipment can be viewed on manufacturer's website which often gives a good overall presentation of latest available items.

Firearms & Ammunition. The selection of firearms, and the required modifications that can be made, invite intense discussion between athlete and coach. All firearms manufacturer's websites are a wealth of information and should be viewed periodically to update knowledge of the models currently available.

The athlete requires a firearm that will assist them to achieve their goals, and the coach must feel comfortable with the firearm and its components.

In the Smallbore Rifle, Air Rifle, Pistol and Fullbore it is easy to use a ammunition test rig and test various batches of ammunition. In Shotgun, a Pattern Board may be useful to see the spread of the shot.

Shooting Techniques

Throughout the Club Coach course, the emphasis lay in establishing good basic techniques in all the shooting positions and being able to successful convey these to the athlete.

Within the outcomes for the Competition Coach course, it is presumed that the coach has a greater experience level through increased hand-on work with the athletes and is now requiring more in depth analysis of the position and correction of possible errors.

It is essential that both coach and shooter make as much use as possible of the excellent coaching and learning material that has been produced by top shooters and coaches from all over the world. It is also imperative that the coach remembers that shooting positions will take worthwhile practice before they become automatic (which is the ultimate aim) and vigilance will be needed to ensure that the shooter does not initially skip any of the processes in training.

Changes will also naturally occur and bad habits can set in as time goes by. The coach must be constantly watching for variations which will become smaller and harder to detect as the shooter gains expertise.

Returning to basics to check the process, will always be a necessary routine and sometimes the only way to find out why performance and results diminish. When alterations are made, it is necessary to do them individually - assessing the effect completely and open-mindedly over some time before going on to another change.

Establishing the positions

EACH AISL DISCIPLINE WILL DESCRIBE SPECIFIC TECHNIQUE INFORMATION IN PART 2 OF THIS MANUAL. THE GENERIC TECHNICAL AREAS ARE BELOW

Balance

Balance is both the key to all the shooting positions and common to them all. A stable position is the basis of successful shooting. Work from the ground up and aim for consistency in approach. Balance can be trained as a physical exercise and there are numerous Pilates examples that will help balance.

Technical awareness

Inner / external position – the concept of "feeling" the position from the inside and then relating this to the external, is not new, yet it is crucial to the performance of the elite athlete. It can be achieved by the inclusion of more training time devoted to working without targets and score emphasis.

As an example - the entire position can be set up with the eyes closed, using only the body "feel" to determine where the firearm is aiming. At the point in the routine where the shooter feels that they would fire the shot, then they open their eyes and report the findings.

Too often the eyes are the dominant force in the setting of a position, and the shooter relies too heavily on the visual feedback to determine the quality of the performance. The skilled coach will recognize this dependence and insert varied exercises into the program to break this reliance - the exercise listed above is a good start.

Sighting – the process of looking through/along the sights, lining up the target and taking the shot, seems easy enough – yet it is the often most under-trained component in the shooting skill. The physical features of the eye require that special attention is paid to the process by which the eye records and relays information to the brain.

Ensure that athletes have a two yearly eye check so that they are seeing what they think they're seeing, and remedies can be put into place to correct poor vision.

In a similar fashion to the heart rate monitor, which records, then shows the rate based on averages received over a given period (often set at five second intervals), the eye does likewise and "looks – records – sends". If the performer is continuing to view the same object, then the eye just refreshes the information, not necessarily take in new data.

For general vision this procedure is fine, however in an exacting situation such as target shooting, there may be slight variances that are missed by the performer without their conscious knowledge. Get these checked out with a professional.

Colour blind shooters (more often male) need special consideration. Most are red/green blind and the simple solution is to apply colour filters or glasses that assist in the definition between the objects on the range. Experimentation with the trained professional will determine the precise colour, although a lot of success has been had with variation in the crimson range.

Shooting glasses – Perfect vision is not a requirement for good shooting. However, once the need for glasses has been established via professional testing, then it is appropriate for the athlete to work very hard to set the lens into the correct position for optimum clarity. Many shooters use the commercially available lens frames for shooting ie Champion, Knobloch

Given that the lens will be optically more accurate in the centre (particularly so in the case of those with any form of astigmatism), it is essential for the coach to assist the shooter to angle the lens correctly while in the position.

Trigger / follow-through – the processes of firing the shot and the follow-through are the final links of the chain before the shot is delivered to the target. The mechanics of trigger release in a firearm sound simple – a lever is moved to a point where it releases another lever (under pressure) and away it moves to strike the projectile.

Follow-through is a bio-feedback tool that can be used by the athlete to confirm the performance level….this is not talking about the result on the target – just the mental and physical process of the performance.

Follow-through allows the shooter a moment or two to re-evaluate those final few seconds prior to, and post shot release.

Any drift or change in the firearm's aiming can be noted and remedied in future shots. Accurate follow-through is an excellent indicator of body position and "natural point of aim"

Dry firing – often the most maligned of the shooting exercises, dry firing can be completed in all positions with a fullbore rifle, a .22 smallbore and air rifle or pistol. Working with the "lift and swing" is appropriate in Shotgun as it gives the mind and body a chance to confirm good position that can be translated to the range.

Good practice is modeled without the external disturbances.

Benefits include:

- it is purely technique
- completed at no cost
- may be undertaken away from the range
- new technical aspects can be tried and evaluated

Cautions to note:

- sloppy practice in dry firing will yield no benefit
- dry firing must be completed in "real" time
- exact live-fire process must be used… no short-cuts

Equipment and modifications – the modern equipment is designed to be modified. Manufacturers have established a "base standard" and from there it is up to the shooter to modify the basics to suit their particular needs after discussion with the Coach.

The once unheard of concept, of trimming, sanding or cutting stocks is more common. Many shooters have adapted or replaced cheek pieces and shaped pistol grips to something more shaped to suit personal needs.

With the International and Australian Rules in mind, many changes are possible. It is also essential that all coaches have a rudimentary knowledge of gun-smithing issues, or are in contact with a person who can perform these skills.

What else may need attention:

Body stability & balance – this is the most crucial element of shooting in any of the disciplines. A good physical fitness regime will enhance the body's ability to perform the required skills over a longer period.

Rhythm of performance - another issue that is vital, is the consistency or rhythm of the performance. Once the firearm has been taken up and the shot sequence has been commenced, it should remain constant in time.

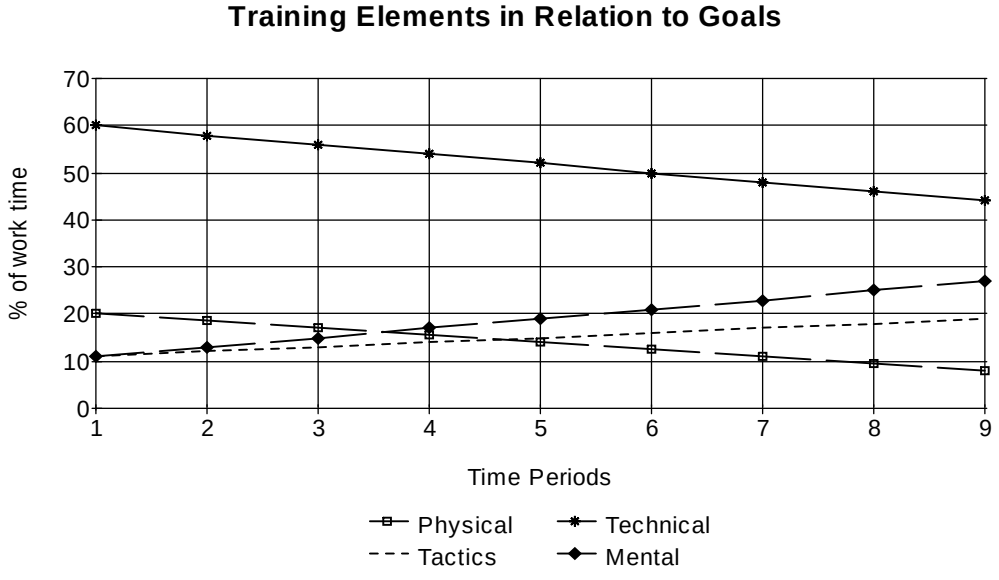
While it can be noted that external conditions may require further attention in the some disciplines, the indoor shooter has no such considerations.

The process involves … BODYREADY …. AIM …. FIRE …. FOLLOW-THOUGH

It is essential that the coach emphasises consistency - getting the shooter to know/feel how long he/she is taking for the shot. This ensures that major variations will noted by the shooter, the firearm put down, and the shot sequence re-commenced.

Of course, this must be altered for the Shotgun disciplines who have no such luxury as to be able to put the firearm down. In those disciplines where the process MUST happen on demand, it is essential that the rhythm of performance is well practiced.

Finding the Right Balance



Initially at the “zero” start point of the plan, the work time may be devoted approx 60% Technical, 20% Physical, 10% Mental and Tactics. This changes over time to approx 45% Technical, 10% Physical, 25% Mental, 20% Tactics in the weeks prior to the big event.

In the final week of the preparation, the balance would change again to a heightened level of Mental/Tactical of some 60%, pure Technical at 35% and maintenance Physical at 5%, although it should be stated that by the week of the Event, the technical and mental will appear to become merged as one unit.

Trouble Shooting

Gone are the days when a coach would emphatically state that shots (or misses) recording in a certain area would be the result of a particular fault.

Coaches are now more astute and concede that just viewing the results on a target may be part of, but not the total answer. The shooter should be viewed whilst firing to fully determine their process and routine. The firearms of this era are also capable of many more adjustments, and it is often the fitting of the firearm that should be considered in the first instance.

Rather than list the multitude of "maybes" the task in the Workbook permits the coaches to brainstorm some of the many considerations to common trouble spots.

 ***Refer to the workbook Tasks***

External Factors

The shooter who wishes to improve will have varied influences affecting his/her performance or level of development over a given time.

As noted in other modules, these factors will be:

- **Technical** - the ability to work with, and master the purely technical aspects of the sport….in this instance, shooting a rifle.
- **Mental** - the ability to harness and enhance the mind’s capabilities to gain the best from each performance.
- **Social** - being able to balance the desires and dreams of the world around, with the realities of a normal life.
- **Physical** - being able to attain and maintain a level of fitness that is in line with the requirements of the sport.

While many of these factors are fully described and discussed in other modules, this module investigates and highlights other important external physical influences that affect the elite rifle shooter. Within the Technical factors that influence shooting, there are external factors that most certainly need attention. These factors are usually beyond the immediate control of the athlete, yet if ignored, will have a devastating effect on the outcome.

These external conditions have the potential to limit a shooter's short and long term development and if not assessed correctly and appropriate action determined and implemented, the shooter will not improve.

In summary……It is important to be clear that the factors mentioned in this module:

- are external influences
- usually outside of the immediate "sphere of control" of the athlete
- will vary from training to match, and at different locations
- have clear solutions that can be achieved

The most obvious external conditions experienced on a range that are most likely to affect the shooter include:

1. Wind / Mirage
2. Rain / Snow
3. Light density
4. Heat / Cold
5. Noise levels

All of the mentioned conditions are dependent to varying degrees, on the geographical location and configuration of the particular range.

This includes

- the direction the range faces
- the direction of incoming rain – will this reach the shooter?
- the area in which the range is located - mountains, outback Australia, beach front, amongst tall trees, or flat windy plain. What is the terrain backdrop?
- the altitude of the range - at sea level or not
- the effect of walls and/or baffles that may be present

Having decided that the range is not perched high in the Alps, facing east/west - but rather, as most ranges in Australia, suitably sited, a good north/south aspect with not too many or too few trees, then it is time to arm your shooters with methods to enhance their performance.

This will obviously vary with the discipline, and that specific information will be included over time, as available.

DISCIPLINE TECHNICAL RULES

Competition coaches should, as a minimum, be qualified as discipline Technical Officers or Referees. This is essential training for the Coach, as it's the coach's responsibility to ensure that the athlete is competing within the rules of the competition.

Please see your NSO for the further information on technical and referee courses.

Finally…

The external factors discussed in this module are by no means a definitive list, and the astute coach will be aware of individual differences of the athlete/s in their care, and respond accordingly. Where a shooter has confidence and competence in their technical and mental skills, the chance of being disrupted by the more obvious external factors mentioned here, is vastly reduced.

Summary – Skills & Techniques

1. Assess the shooter's ability to physically perform the position. Always use the best equipment available. Decide which position is the best to start.

2. An infinite variation of positions are possible but the coach needs to be aware of the "industry standard" as a good starting point and the reasons behind them. All positions need to be constantly repeated till they become automatic and the coach must be vigilant to ensure that bad practices do not develop.

3. Body shape, age and gender must be considered when establishing any of the positions within the disciplines.

4. Each position must be built up from a stable balanced base. Considerable effort should be put into this to before adding the firearm.

5. The firearm needs to be supported in such a way that as little extra pressure as possible is placed on the body.

6. Great care needs to be taken to ensure that the sight picture is accurate and that sight aids ie glasses, filters or polarisers are tested regularly for accuracy.

7. Colour-blindness is to be checked and rectified with the use of filters if possible.

8. The trigger process and follow-through is the final link in the chain within the ambit of the shooter. Ensure the machinery of the trigger is reviewed and/or serviced regularly.

9. Equipment is meant to be modified to suit the shooter.

10. Body stability and balance - the basis of all good reliable positions.

11. Ensure consistent rhythm in the process of firing the shot

12. Finding the balance between technical, mental, tactical and physical training is the challenge of the coach.

M3U4 MENTAL PREPARATION

OUTCOMES The coach will be able

- to teach mental preparation and coping strategies for State level athletes.
- Develop problem solving skills in State level athletes

ASSESSMENT Workbook tasks

Introduction

In the Club Course, positive feedback, self-image and simple ways to achieve success were emphasized. Relaxation and motivation techniques were discussed and techniques learned. To extend this knowledge, the broader areas which are essential in any discussion of how the athlete mind works in relation to sports performance must be included:

1. the athlete's reasons for participation in sports
2. drop-out syndrome
3. competitive anxiety
4. personality and motivation
5. arousal levels and shooting performance

 ***Refer to the workbook Task***

Major Reasons Why Athletes Participate

In a 1995 Canadian study, several thousand athletes (at various levels of ability) were asked why they participated in sports. Their responses were a combination of these four reasons:

Achievement - the desire for individual improvement, the mastery of new skills or the pursuit of excellence

Affiliation - the desire for warm and friendly association with others

Sensation - the desire for sensory stimulation surrounding the sport or excitement experienced in the sport itself

Self-direction - the desire to be in control of one's own direction, to be in charge of oneself

1. Achievement

Achievement refers to the desire to improve, to become more efficient, to become more competent, to master new skills, to excel in something.

In an achievement oriented situation:
- the athlete's performance can be evaluated against some standard of excellence
- there is a degree of risk involved as to whether or not the athlete will succeed
- the outcome is primarily dependent upon the individual's skill and not on chance

The achievement motive becomes clear when athletes described their personal performance as: - "I gave it my best effort" - "I felt satisfied with my performance" - "I reached personal goals" - "I worked well"

Most satisfying competition efforts are described as "hard working", "prepared", "fast", "skilled", "challenging" and "disciplined".

An achievement oriented athlete will likely to be consistently trying to accomplish difficult tasks, maintain high standards and practice long and hard to improve skills. The motivation to improve can be enhanced by providing a variety of personal success experiences.

One good way of doing this is to set realistic personal achievement goals based on past performances. In this way, progress becomes more evident as the athlete continues to strive for their personal best.

What should the coach do to make sure the athletes' needs for achievement are fulfilled?

- set realistic goals which are progressively increased
- accent individual improvement
- use self-record progress charts
- schedule training or competitions with suitable opponents

2. Affiliation

Affiliation refers to **warm and friendly relations** with others. Being part of a group and being accepted by the group is probably the strongest and most common motive for continued sports participation.

Working together as a cohesive unit, setting and pursuing goals together, having fun with others, feeling appreciated by the group, sharing with others, and getting along well with team or club mates can all help satisfy the desire for meaningful interaction with friends.

If asked for comments to describe this feeling of affiliation, most club/team members would probably include phrase-words such as:
- good communication and a common effort by all team members
- co-operation and respect for one another
- enthusiastic and good morale in the group
- feeling of closeness and friendly atmosphere
- understanding and encouraging

An affiliation oriented athlete will most likely enjoy being with friends, like to get along well with team or club mates, and feel that it is important to be accepted by the team or club.

What can the coach do to help make sure the athletes' needs for affiliation are fulfilled?

- provide opportunity for social get-togethers after training or competition
- encourage athletes to help one another and to do things together
- have a team gathering/party
- promote the view that each individual is a valued member of the team.

3. Sensation

Sensation refers to the **sensory stimulation** in the sport setting and the **satisfying feeling** of the activity itself.

Experiences that excite the senses can be very enjoyable and rewarding: eg the sights and smells of running (or skiing) along a beautiful country trail; the feel of the body spinning, cutting, turning, flowing smoothly, powerfully; the feeling of being fit; the desire to move and be active; all of these are important motivators.

Athletes often describe their most satisfying sport experience as being:

- exciting and fast moving
- interesting and challenging
- fun
- a satisfying physical activity
- providing a chance to travel

An athlete motivated by the sensation in sport will most likely:

- enjoy the excitement of a close contest
- enjoy the physical sensation, the flowing feeling or personal "highs" in sport
- use any physical activity as an outlet for excess tension and stress and enjoy the feelings of elation after the activity
- seek variety in sensory stimulation
- enjoy the challenge and beauty of outdoor activities
- enjoy the relaxed physical sensation that accompanies the end of a workout
- enjoy the diversion from day-to-day routines and problems in the work world.

What can the coach do to make sure the athletes' needs for sensory stimulation and excitement are fulfilled.

- provide a work out atmosphere which has pleasant sights, sounds, smells and physical feelings
- warm-up to music
- provide enough activity for everyone - not too much - not too little
- break the monotony fairly regularly with fun or novelty events
- vary workouts - change the normal routine
- let athletes work on exciting new moves
- set up close and interesting challenges
- talk to athletes about how they feel when their performances flow well.

4. Self Direction

Self-direction or **independence** is also a major motivational consideration in sport. Athletes (and others) often like to have a **sense of personal control** over outcomes in their own lives.

They like to make some of their own decisions, to successfully master some skills on their own, to be treated in a responsible way and to feel some responsibility for their own actions.

Drop Outs and Motivation

If a youngster has started a sport early (ie at age 8-10) it is not unusual to lose the majority of those actively competing athletes by the time they reach their late-teens/early twenties. Other aspects of their life can influence this decision.

Older athletes are not immune to this drop-out response and obviously athletes find it harder to excel or fully gain from what a sport has to offer if they lack the motivation to stay with it. Athletes will not continue to participate unless the experience is rewarding, no matter what the age.

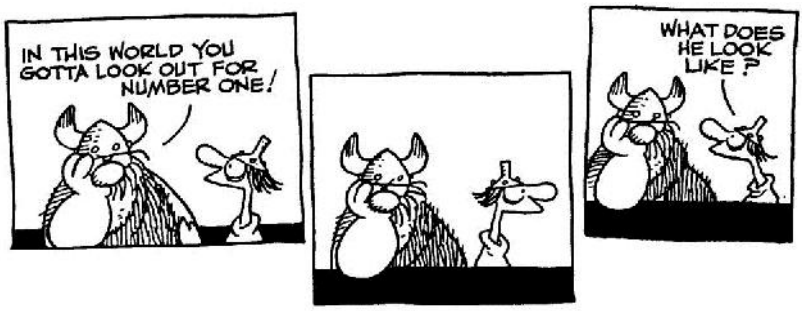
Athletes usually drop out of sport because their main reasons for being there are not being fulfilled. Here are some reasons they may drop out.

1. Achievement needs not met:
- they want the coach to help them improve but he yells at them
- they want someone to say "yes, that's right", but usually hear "no, that's wrong"
- they want to improve rapidly but it seems not rapid enough
- they want to be "the winner" but that is not happening
- they try their hardest but are accused of not trying hard enough

2. Affiliation needs not met:
- they want to feel accepted but feel rejected
- they want to enjoy their friends but they feel pressured
- they want to have fun but it's not fun anymore.

3. Sensation needs not met:
- they want to play but always end up on the sidelines
- they want to have excitement but are bored.

4. Direction needs not met:
- they want to make some of their own decisions but they are always told what to do
- they want to feel in control but they feel they are being controlled.



Keeping Athletes Involved

1. **Recognize the different reasons people have for participating in sports**:
   A situation which is attractive to one individual may have little or no appeal to another. If you begin to satisfy the different reasons for involvement in sport, not only will more people become involved, but more will remain involved.

2. **Different strokes for different folks**:
   No two athletes are the same and, as a result, the means of motivating, instructing, and giving feedback to one might be quite ineffective with another.

   The coach cannot expect all athletes to be motivated by the same things or to respond in the same way. You must make every effort to adjust your approach to keep each one of them independently motivated. This can only be done by knowing each one of them as well as you possibly can.

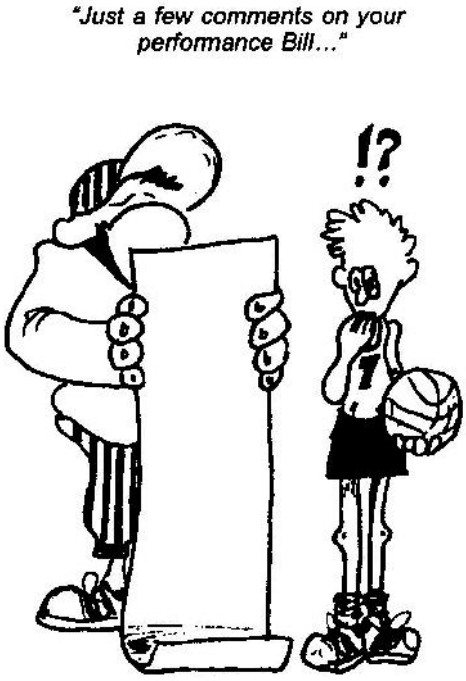
3. **One to one**:
   One of the most effective ways of recognizing individual differences is by spending as much time as possible talking on a one-to-one basis with each of your athletes. This may be difficult if you are responsible for a large team or a group spread over a large geographical area; you may have to rely more heavily on questionnaires or technology ie email. Make the effort - it will pay off in real dividends in terms of your ability to communicate effectively with the individuals.

4. **Keep the communications open**:
   On-going, open communication between coach and athletes is one of the best safeguards against motivational slumps and drop outs.

   This is because the athletes' concerns are brought out and dealt with before insurmountable problems arise.

5. **Show an interest**:
   Let your athletes know you are interested in them as participants and as people.

   Be willing to listen to their requests, comments and suggestions and be prepared to make some changes to keep them involved.



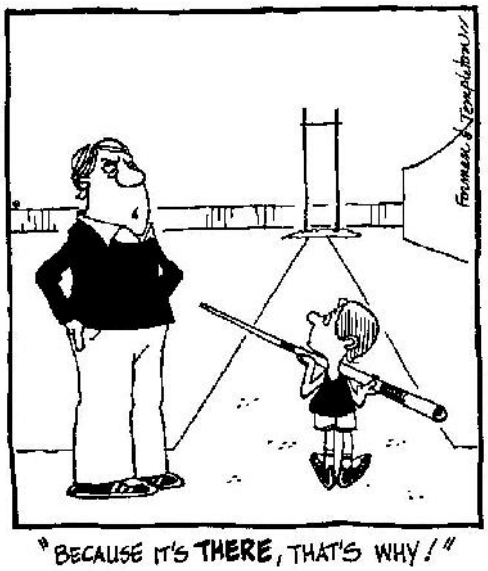
Over emphasis on achievement can also turn athletes away from sport. This emphasis can come from coaches, parents, peers or team mates.

As indicated previously, athletes participate for a variety of reasons and sports should explore all avenues to ensure that any program caters for these differences. A balanced approach which allows for personal achievement and also meets the need for affiliation, sensory stimulation and self-direction is best.

Coaches need to be fully aware of the drop-out problem and the simple fact that they may indeed be compounding the problem by their emphasis on areas not in tune with the participant's needs.

Rejection of sport can stem from:

- the absence of positive feedback from the coach or other players
- the resulting feeling of uselessness
- lack of success
- perceived lack of acceptance among the other players or coach
- absence of fun



As a coach you can:

- set realistic goals which are progressively increased
- use self-record progress charts
- comment on individual improvements
- arrange suitable matches with like standard competitors

Competitive Anxiety

"Activation of competitive anxiety refers to the level of emotional and physiological arousal that an athlete is experiencing in a given situation, which can manifest to feelings of apprehension or tension in the competition arena"

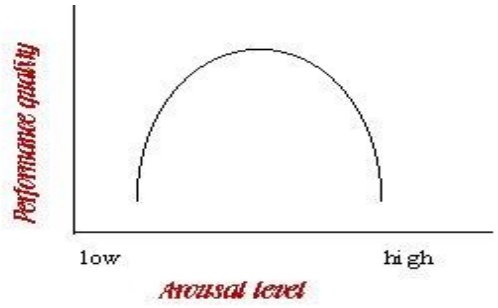
One of the greatest barriers to top performance on demand, is the feeling of anxiety that athletes experience prior and during a competition.

While this anxiety is regarded as a normal part of the human experience, athletes do need practical guidance on how to deal with these feelings, and in fact capitalise on those feelings to improve performance, in order to achieve the standard of which they are capable.

Principles of this arousal include:

- arousal which is too high or too low interferes with performance
- simple tasks require higher arousal while complex tasks require lower arousal
- lower arousal is often required for learning new skills than for performing skills already mastered
- optimal arousal differs from person to person
- arousal levels can be both stimulated and suppressed through appropriate training

Arousal which is too high or too low interferes with performance. If an athlete is not emotionally ready for a competition, and this "readiness" could be graphed, then he/she would lie at the low end of this curve. Alternatively, if the player is too hyped - too tight - they would lie at the upper end…. again performance would not be optimal.



Simple tasks require higher arousal while complex tasks require lower arousal.
The optimal level of arousal for a skill is directly related to the level of difficulty of the task. While high levels will often enhance the completion of simple tasks, the same high arousal will probably inhibit performance of a more difficult skill.

Simple straightforward skills (such as blocking an opposing player in football) can be completed with high arousal levels, while more complex skills (such as complex gymnastic flips, figure skating or shooting) are usually performed better under calm conditions.

Lower arousal is often required for learning new skills than for performing skills already mastered. New skill acquisition is often enhanced with a more relaxed approach. As the skill becomes automatic, the learner can be more aroused to perform better.

Optimal arousal differs from person to person. Arousal levels are very individual for peak performance.

Arousal levels can be both stimulated and suppressed through appropriate training. When levels are too high, anxiety is often the resulting emotion. There are two basic types of anxiety:

a) **TRAIT** anxiety…..how a person feels as a person. How he/she sees themselves….their perception of how others see them*…"I could never climb that tree, I am always afraid of heights"*

b) **STATE** anxiety …how a person reacts and feels at a specific moment within a particular situation…. *"I climbed to the top…how the $%#% will I get down?"*

Anxiety can cause the athlete to panic about aspects of their performance or the outcome, and in the perfect domino effect, the outcome will be affected, as the athlete may "choke" or stumble at the big competitions. The athlete is often quite unaware of his/her actions.

How can this anxiety be traced? Usually an increase in the anxiety level (either emotionally or physiologically) will result in outward signs that are evident to the astute coach……sweaty palms, nervous stomach, faster heart rate, even talking more than usual.

In extreme cases, athletes have been known to collapse due to changes in the breathing patterns and blood flow - although thankfully this is not the norm.

However, when levels of arousal are too low, boredom is the often by-product. The mind does not attend to the precise details of the skill, and comments may be heard such as "this doesn't matter, it's just like training"….."who cares". The performance often suffers as the athlete is not "sharp" and focused.

The pre-competition routine may only get casual attention, and details glossed over. This is not the formula for good performance.

What is the right level of arousal?

How long is a piece of string? In other words, there is no determined and exact scale upon which to assess arousal levels, as they vary so readily with individuals. Discussion and observation over time will be the best formula.

To assess anxiety the coach should

- ask the athlete how he/she is feeling
- observe practices and competitions
- maintain a log book
- encourage self-monitoring

To overcome the "choke"

- practise under game-like conditions
- prepare the athlete well
- put sport in perspective
- train the athlete in self-relaxation and focus techniques

To overcome "staleness"

- maintain variety and novelty in practice
- provide adequate rest opportunities
- be aware of outside personal stresses
- work through "motivating phrases" or actions to stimulate the mind

 ***Refer to the workbook Task***

Helping athletes to control/direct arousal levels

Described below are many ideas that coaches have found to be useful in activating or reducing arousal levels to appropriate levels:

When the arousal is too high:

- Ensure athletes have had appropriate preparation for the competition/practice
- Stimulate good competitive situations in training
- Avoid giving anxious athletes a "general" pep talk - be specific
- Behave as if you truly believe in the athlete
- Exhibit confidence in their ability
- Remind the athlete of good past performances
- Offer support and quiet encouragement
- Remind the athlete that some tension can be good….it's the body's way of saying that you're ready
- Project a calm and secure role model image
- Help your athlete with relaxation exercise before the competition/practice
- Promote the importance of personal goals
- Remind the athlete that process is more important than outcome
- Provide an atmosphere of understanding of their feelings
- Reassure the athletes throughout training sessions or competition that this feeling is not with them alone…..other have the same feeling
- Encourage athletes to focus attention on the task rather than on the feelings
- Be POSITIVE in yourself

High arousal levels can be a distraction, and can leave the athlete "forgetting" to pay attention to those little details that are required for optimal execution of the skills that they know so well.

When the arousal is too low:

- Introduce competition within themselves
- Search for incentives to activate the athlete
- Try a pep talk
- Push the importance of the outcome
- Have athletes warm-up via a brisk walk
- Talk about their strengths and those of the competitors
- Set a personal, challenging goal for the athlete
- Show video of previous performance
- Consider special recognition for best personal performance

Personality and motivation

Quick reminders……
The main reasons athletes participate in sport are:

Achievement ***Affiliation*** ***Sensation*** ***Self-direction***

Achievement oriented athletes seek	They respond best to coaches who:
➢ high standards ➢ difficult challenges ➢ skill improvement through hard practice	➢ set realistic, challenging goals ➢ point out improvements ➢ use self-record progress charts ➢ seek matches with similar skilled opponents

.

Affiliation oriented athletes seek:	They respond best to coaches who:
➢ being with friends ➢ getting along well with others ➢ acceptance by other athletes	➢ provide social get-togethers ➢ have regular talk sessions ➢ promote the value of each individual

Sensation oriented athletes seek..	They respond best to coaches who:
➢ excitement ➢ variety ➢ outdoor activities ➢ a change of pace from the work world	➢ provide a stimulating environment for workouts ➢ use varied and novel techniques ➢ use music for warm-ups

Self-direction is a reason in itself for some people to participate - a chance to control their own direction and development. They need very little else.

As learned in Level 1, motivation can be both encouraging/positive and discouraging/negative. The motivation which drives each athlete needs to be identified, clarified and nurtured.

Arousal levels and shooting performance

Self-relaxation skills can be learned to reduce competitive anxiety for both athlete and coach! These skills can be readily used without dissolving the arousal level below that which is optimal. In much the same way, stimulating physical and mental activities are available, and should be promoted, to assist the athlete to reach his/her correct level if feeling a little "flat".

It would seem at first glance, that shooting requires low arousal levels - it is not as easy as that! The shooter must be "in control" of his/her faculties - both physical and mental for optimal performance. There is a window of opportunity - not too low, not too high. This must be determined individually with each athlete.

Mental practice

Mental practice, also referred to as visualisation, is the mental rehearsal of performance skills by the athlete.

What does mental rehearsal achieve?

Helps perfect sports performance by

- Re-inforcing the memory of how to perform the action
- Assists with learning in an efficient way
- Serves as an immediate guide to the action or skill
- Rehearsal can be performed mentally prior to the actual physical skill
- Helps the athlete to concentrate on the skill and focus attention
- Can be performed with minimal distractions
- Competition tactics and strategies can be practised and perfected

What should be rehearsed?

Components of the skill or performance can be broken down, or the performance taken as a whole. Attitudes can be developed to possible distracting situations

It is essential to emphasise that any rehearsal must be conducted in **REAL TIME**, and not speeded or slowed.

Athletes can often gain benefit from repeating **KEY PHRASES** that describe parts or the whole of the action while completing the mental practice. This can be done either prior to, or with the practice. For example a standing shooter may opt for something as simple as "I am strong, I am still".

For trigger release, the keyword may be "smooth and sure - see it go". Added to words about the technique or strategy should be words about the quality of movement. A footballer waiting to kick for goal may describe… "step-step-smooth-watch the leg make contact". The lesser skilled athlete will benefit most from this action/word association.

As skills improve, so can the level and quality of mental rehearsal. With the skilled performer there is often a reduced need for word association, as they are able to visualise the skill better in their minds, and they can just let it happen without the obvious need for cues.

Athletes should be encouraged to engage in some form of mental practice - the better or more vivid the visualisation of the skill, the more likely the mind will accept upward changes to performance levels.

 ***Refer to the workbook Task***

The Coach as the model of competitive readiness

A coach can have a tremendous influence upon an athlete's state of readiness for a competition through the exhibited behaviour.

The behaviour of the coach can upset athletes or can assist them to prepare properly for competition. Be aware of the impact of a competition on your personal levels of arousal and the impact of your behaviour on the athletes.

There are a variety of tactics coaches can use during practice, prior to competition and during the event that can assist individual athletes to hit their own optimal level of activation. Remember if your athlete is facing a challenging competition and they are already anxious or fearful of the outcome, you must ensure that your own outward behaviour is totally reassuring to the athlete.

The coach is in a position to elevate "flat" athletes, but by the same breath, they are also able to "push over the edge" an athlete who is on the verge of anxious behaviour.

Athlete take their cues from the coach and usually act on your example. The coach's actions must accurately reflect what you have considered is needed for any particular situation.

It is not unusual for the coach to require relaxation exercises during close competitions.

Your position requires that you assess what is required of each athlete "on the day" and to act accordingly. Through prior training, your athletes should have an internally based motivation where his/her personal pride and confidence serves to prepare him/her to perform well - couple that with your support and behaviour and you have a winning combination.

Summary – Mental Preparation

1. People participate in sport for Achievement, Affiliation, Sensation, or Self-direction.

2. Any athlete not being fulfilled in any of these four areas will often lose interest and consequently retire or withdraw from the sport.

3. Drop-out rates for any sport will be linked with the motivation to participate.

4. Coach interaction can be cited as a reason for reduced participation, especially if the emphasis from the coach is on the achievement aspect of the sport.

5. Keeping athletes involved requires special action from the coach:
   - Recognise participation reasons
   - Respect individual differences
   - The personal approach is preferred
   - Communication lines must stay open
   - Being genuinely interested promotes positive response
   - Utilise both group and individual goal-setting and talk sessions

6. Appropriate arousal levels in athletes are crucial to good performance. They are a normal part of the sport experience

7. Arousal levels that are too high often result in feelings of anxiety / panic / fear, while the arousal level that is too low often results in feeling "flat" and not in touch with the task ahead.

8. Motivation needs to self-generated, and coach assisted.

9. Mental rehearsal or visualisation is a key part of the psychological toolkit available to the athlete. Visualisation assists the athlete (at whatever skill level) to mentally revisit the good work previously done. The value of quality mental rehearsal cannot be underestimated.

10. The coach's behaviour and demeanour can easily set the standard for the athletes to follow.

M3U5 UTILISATION OF RESOURCES

SYLLABUS OUTCOMES At the completion of this unit, the Coach shall:

- Be able to access and use a range of technical resources to assist with coaching State level athlete.

ASSESSMENT Workbook tasks

Coaching Resources

Coaches are much more likely to enhance the performance level of the athletes in their care if they constantly strive to improve their own knowledge.

Assets to assist the coach:

Magazine Publications -

- the ISSF Journal (for the Olympic disciplines) is an excellent publication that keeps the coach up to date with modern trends and standards.
- the Australian Sports Commission has a range of publications for the coach. These are available in print and online form. A quick check of the ASC website will provide the range of titles available.

Videos –

- these are often harder to find, however an internet search will provide many titles.

Books –

- extend the bounds of the types of books in the library…these can include sports thinking, visualisation, physical fitness, good dietary habits and relaxation.
- apart from those in the reading list, seek out new listings and circulate the titles to other coaches that you know.

The bits –

- every good coach carries a collection of "bits"…. amassed over time, and including butt spacers, sight raiser blocks, coloured filters… in fact anything that may be useful.

The Internet –

- this has become a mine of resources. Many shooting organizations have websites with coaching references, as do a number of individuals. Firearms manufacturer's also provide extensive information on their products.

Shooting Games –

- these are a valuable resource and some are listed on the following pages for your use by either Rifle or Pistol disciplines.

Student coaches are asked to bring in items from their personal coaching kits for review by other coaches in the course

SHOOTING GAMES FOR RIFLE & PISTOL

Stripes - Dry and/or live fire on vertical and on horizontal black strip. Groups of 7 shots or so. What does that do????

For starters, it confirms to you whether are naturally aiming the rifle at the target, with the help of your body..... or whether you are getting onto the target because your eyes force you there.

First to 15 - With a partner, and appropriate to all events with modification. Score a "point" only if your shot is greater than a predetermined level - for example if your shot is greater than than 9.8 or 10.3 or whatever is decided between the partners and coaches. Deduct a "point" for each shot that does not make this level.

The winner is the shooter who gets to 15 points first. The scoring can be varied for greater interest and competition - bonus points can be added for "three in a row" or whatever.

Finals - gather a few club mates together and practice shooting Finals, with the calls and scoring. Great way to put that rhythm work into practice.

Bull. In the least number of shots, shoot a predetermined number of 10's - for example, 25 tens should take 25 shots - how close to that can you go? This can work as a small group or individual exercise.

Up & Down - Fire groups of 7 or 9 shots (so scoring is not the first thought) and then move away from the line... come back again and start firing again. You are a winner when you can put the next shot right into the centre of the previous group. Take your time about the setting up.

Blocks - a "must do" for the standing shooter. Shoot while standing on the blocks. Makes for a lot of work, and amusement at the same time. Your balance is tested.

Anyone who is handy with woodworking implements can create a set. Make them slightly longer and wider than the boot with the curve smooth.

Longest string of centres in a row - establish and then work to break your previous best string. What is your best record and strive to improve on that. This can be modified for all levels and events.

Tennis - a game with a partner, just like the real thing. Server, receiver - similar rules as in tennis. The server must shoot first, and then the receiver. Call shots loudly and win "points". Play one or two games or sets. Equal scores ie both 10's can be easily broken by using decimal scoring....10.4 is better than 10.2 Ask your coach to help score if you are unsure. This can be played as a singles or doubles match. Add the scores together for the doubles. Again both "servers" would shoot first. Easily modified for Fullbore shooting.

Darts - great with a partner or small group. Start with a nominated number....eg 60. For every 10 you shoot - subtract 4, for every 9 - subtract 2, and for any 8's - subtract 1. First person back to 0 wins.

This can be adapted with varying level athletes, by starting them at different scores, or subtracting at different rates.

Drop Shot - Draw up a chart (as below) and assign values to the shots - good competition with another shooter if possible. Change the weightings to suit

SHOOTER 1				SHOOTER 2		
1	…..	x 3 =		…..	x 3 =	
2	…..	x 1 =		…..	x 1 =	
3	…..	x 4 =		…..	x 4 =	
4	…..	x 2 =		…..	x 2 =	
5	…..	x 5 =		…..	x 5 =	
6	…..	x 1 =		…..	x 1 =	
7	…..	x 3 =		…..	x 3 =	
8	…..	x 2 =		…..	x 2 =	
9	…..	x 6 =		…..	x 6 =	
			TOTAL			TOTAL

"100 down" - start with 100 points. Every 10 you shoot, subtract 10 from the total, 9 counts as 0, and 8s are added to the total (these levels can easily be adjusted for standing or kneeling)
To win - reach 0 with the least number of shots (as a solo or partner challenge)

"Kitty" Everyone puts in $1 into the kitty. Shooters get up to two opportunities to shoot a group of 6 shots. The shooter who can completely cover their group with the least amount of Australian currency coins takes the pot. Note: If the shooter elects to shoot the second group, that is the group that they must count!

These are but a few of the available useful games.
The formal task for this module is to workshop with the group, other forms of appropriate "games" to both stimulate the athlete and improve their skills

SNOOKER – for use with Shotgun. This game can be played with 3-5 shooters. The balls in the "snooker" are assigned points – red (1 point), yellow (2), green (3), brown (4), blue (5), pink (6) and black (7).

7 traps, each one designated a colour as snooker balls. Each trap's location is clearly defined on a board in front of the shooters. Hit the easy 'red', and then choose a colour. Obviously the targets get harder as you choose a higher scoring colour.
IE, red = 1, up to black = 7. Miss the red and you only get another red.

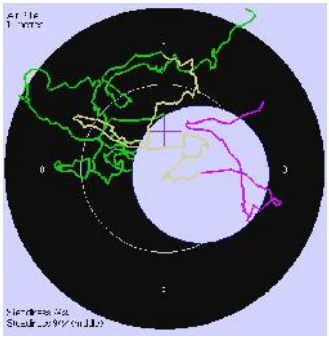
Can easily be played on a '5 stand', each shooter moves along after 4 shots, 20 shots in all. Can also be played with fewer traps, just leave a few colours out.
Maximum score 10 x red, plus 10 x black = 80

Can be easily varied, depending upon trap resources, and can even be shot by one or more shooters, from one or more stands. The biggest difference to 5 stand, is that you get to choose your second bird on every pair., and it's flexible.

OTHER USEFUL BITS & PIECES - the "TOYS"

TRIGGER GAUGE - a number of companies make these implements for both rifle and pistols. Anschutz has a mechanical model (around $300), although there are numerous electronic versions available - Lyman being one (around $160)

While there is no "perfect standard" trigger weight (apart from that dictated within the rules), the benefit of the gauge is measuring for consistency, thereby confirming another of the little things that make the performance.



SCATT – rifle & pistol

The SCATT machine is a most exciting invention. For the first time, a coach can “see” as the shooter sees, without comment or emotion. The sensor will only show where the barrel is pointed, and how it is moving - no more and no less, and is not affected by wind or external conditions.

While the use of the machine is relatively simple, the interpretation of the data gained, requires a greater in-depth study.....as misinformation is worse than no information.

In no way does the SCATT system create perfect competition scores. It is a training aid, not a training replacement. Nothing beats old fashioned hard work on the range.

To obtain a clearer view, a number of sessions are required. Only after extensive work with the SCATT system, and analysis of a number of files, is it possible to reach possible conclusions which may be correct but must be tested both on the SCATT system and on the Range.

During the session it is often possible to pick up differences in the shooter’s technique purely from the traces on the screen, and it is in this area that SCATT or the other electronic trainers are invaluable.

Appropriate interpretation of the SCATT information is dependent on an understanding of the individual shooter, and sometimes discussion with the shooter can be more revealing that the data.

When using the SCATT as a training tool to improve skills, a picture begins to emerge which indicates that coaches should be training their shooters to:

- Improve hold (steadiness in the 10.0 or centre)
- Improve aiming consistency (stability of aiming)
- Reduce group size (diametral dispersion)
- Reduce movement (trace length and speed graph)
- Improve co-ordination of hold and trigger (co-ordination graph)
- Optimise shot release technique (shift graph)
- Ignore the SCATT score

This can be achieved through fitness, position refinement, technique training, and so on. If such training is effective, it will show up in the graphs and data on the SCATT system - so the SCATT system becomes important, not only in diagnosing faults but also in checking progress and confirming the effectiveness of training.

There are numerous electronic trainers available on the market – a quick search on the internet will provide names and details.

APPS – With iPhone/Android phones and tablets readily available, it is not surprising to find a number of applications have been developed.

While many of these relate to rifle and pistol, it is worth noting them here.

(iphone/ipad only) a simple tool that permits accurate decimal scoring of targets. Simply take a picture of the shot and the app does the rest.
The app provides the score of the shot, and keeps a running total.

(iphone/ipad only) Another easy to use plotting app that is useful for the Fullbore shooter.

(iphone/ipad & Android) a plotting app that, like the above, is easy to use and provides an electronic training diary of scores.
It also includes F class (Fullbore)

And for the ISSF shooters - The ISSF Trainer is an app for iphone/ipod/ipad. The application utilizes touch screen features, allowing recording of the position of each shot as it is fired during your practice session or match.

It also keeps track of the time elapsed between shots. You can select from several shooting disciplines, including 10m Air Rifle, 10m Air Pistol, 50m Rifle and Standard pistol 25 and 50m, and 300m Rifle. Each discipline records the shots on the correct target design and shot size in the setup.

You can review your practice on your device, replaying the shots one by one, or showing them in groups of 5,10,20 or all, and you can easily export by email, which includes lists as well as graphic pictures of the shots fired. The application allows you to insert notes and comments mid session, and even change the colour of the shot after a note or equipment change.

Heart Rate Testing

This is an area that has had increased interest over the years. It is logical that the athlete should know their body and respond in a fashion that best capitalises on that knowledge.

Heart rate monitoring gives both the coach and the athlete an insight into the workings of the body which has a direct relation and benefit to the shooting sports. It is non-invasive and relatively easy to gather accurate data for analysis.

By means of a chest strap recorder, and wrist receiver, the athlete can continue his/her technical performance with little disruption. With an observer behind recording the value of the shots, this becomes a very useful combination.

What does it show? Firstly many athletes would not be aware of their heart rate level during their sport - yet it is crucial to their performance.

A few facts that are certain:

- any movement increases the heart rate
- mind control/focus can reduce the heart rate
- heart rate is linked to motivation and "stress"
- the optimal heart rate is individual to the athlete

By working with the HRM during training, the athlete can become more aware of their heart rate level within a pre-determined range and then, through practice, can translate this to the competition scenario.

As with any testing, if the data is to be meaningful, there should be a number of samples collected over time to show the full picture. General trends can then be determined and hypothesis generated.

What can be said as general ideals with respect to heart rate level in shooters:

- the shot should be taken at the lowest or controlled level of the cycle
- all shots should ideally be taken within the similar heart rate range
- competition may increase the heart rate level slightly without detracting from the performance

Shooters benefit greatly by being able to identify their particular "zone"

As with all testing, the data gathered must be obtained in such a way as not to infringe upon the personal rights of the athlete. Although it is appropriate for the coach to know as much as possible about the individual athletes, the coach has a responsibility to ensure that all information gathered is used only to assist in the athlete’s improvement.

General points to remember:

- formal physical testing is generally required only once a year
- physical self-monitoring by the athlete is essential
- heart rate monitoring hypothesis cannot be accurately made until baseline information has been gathered over a number of initial recording sessions
- once general trends are obvious, it will be careful training over time that instructs the athlete on how best to work with the information

VIDEO / CAMERA

Another area where coaches can provide visual feedback to the athlete. Athletes are often too involve in the process, however to fully engage them in the total package it is essential that the athletes knows what he/she looks like to others – what is the “outer picture”

A simple phone camera can prove to be very useful. One step up from that of course is the video camera which will provide the shooter with viewable evidence of their process. Coaches can work through the session after the training is complete and together, the coach and shooter can see and confirm both the positive work, and the areas requiring attention.

A video will confirm good process, but show changes subtle changes, of which the shooter often has little knowledge. Pictures and/or video will provide another valuable tool for the coach in the assessment of the athlete’s process.

Summary – Utilisation of Resources

1. Video and camera equipment will enhance the ability of the coach to assessment performance and process.

2. The athletes requires the “outer picture” to fully complement their inner process.

3. The internet is a valuable resource tool – check manufacturer’s website and website of international federations. There are often wonderful coaching resources available on these sites.

4. Electronic trainers have a valuable place in the training program for the elite athlete. SCATT and RIKA are the two most common for rifle and pistol.

5. Other sports science items such as Heart Rate Monitors have a valuable place in the training program.

6. Check the internet for appropriate apps for your iPhone/iPad or Android tablet.

M4U1 COACH & ATHLETE REVIEW
M5U1 MANAGE ATHLETE PERFORMANCE
M5U3 PREPARE ATHLETES FOR THE NEXT LEVEL OF COMPETITION

SYLLABUS OUTCOMES

The coach shall be able:

- To undertake periodic reviews of the coaching program
- To assess performances of State level athletes and identify actions for improvement
- To prepare a State level athlete for national level competition

ASSESSMENT Workbook tasks

Factors

The shooter who wishes to improve will have varied influences affecting his/her performance or level of development over a given time.

As noted in other modules, these factors may include:

- **Technical** - the ability to work with, and master the purely technical aspects of the sport….in this instance, shooting a firearm.
- **Mental** - the ability to harness and enhance the mind's capabilities to gain the best from each performance.
- **Social** - being able to balance the desires and dreams of the world around, with the realities of a normal life.
- **Physical** - being able to attain and maintain a level of fitness that is in line with the requirements of the sport.

While many of these factors are described and discussed in other modules, this module investigates and highlights the importance of assessment and review as it affects the elite shooter's training and competition program.

In summary……It is important to be clear that any "external conditions" referred to include factors which:

are external influences
often outside of the immediate "sphere of control" of the athlete
will vary from training to match, and at different locations
have clear solutions that can be achieved

These "external conditions" have without doubt, the potential to limit a shooter's short and long term development if not assessed/reviewed correctly, and appropriate action determined and implemented.

Reviewing the process

What is a review process? What is to be reviewed? Who is to be reviewed?

The answer is quite simple – both coach and athlete should undertake a review of the program that they together have established, and then review its success or otherwise. Review the training and competition program, review the progress and effectiveness, review the goals set for this period and review the workload.

When the shooting sports are analysed, the skills learned in the early months are precisely the same as the skills used by the Olympian. That is to say, the sport is all about balance, sighting, trigger release and follow through. The skill set remains the same. What does change is the peripheral information – little adaptions, further knowledge of the surroundings, the mental and physical approach – but the skill remains the same.

Every athlete strives to improve. This can be achieved with careful planning and adherence to the following steps:

ESTABLISH PROCESS CONNECTED OBJECTIVES – It's fine to have a goal eg. to place in the top five at the Nationals, or shoot a particular score, however along with this outcome related objective, both the coach and athlete must set other connected process goals that show the path ie what the shooter has to do, to achieve this objective.

USE IMAGERY TO FOCUS ON, AND ENHANCE TECHNIQUE – athletes often use imagery to prepare for competition by seeing and feeling success. This is good use of a mental skill, but imagery can also be used as an additional form of practice to master, or further enhance a current skill or technique.

KEEP SELF-TALK CENTRED ON THE PROCESS – ensure your athlete utilises effective and positive self-talk. It reminds and bolsters the positive images within the athlete.

ASSESS PERFORMANCE ACCORDING TO PROCESS – athletes and coaches often fall into the trap of assessing a performance purely by the score outcome, rather than the process used in the performance. Evaluate the components of the shoot and draw on the positive aspects. A thorough examination will also let the athlete know what they need to do in order to enhance "the outcome" and it provides the coach with valuable information for upcoming training sessions.

USE FEED BACK – Effective feedback is a key element to athlete or coach improvement. A level of respect must be established, so that a level of honesty can be achieved. Not all feedback is going to be the 'warm and fuzzy" type, but only a coach with a solid degree of athlete understanding will overcome this.

UNDERSTAND THE PROCESS FACTORS – is the athlete having trouble with their Technique, their Mental skills, their Life skill and/or their Physical level.

Consideration of these factors will be an effective starting point when it comes to a program review.

The effective Coach will also consider their personal performance along with their athlete's. Some of the following questions that need to be asked of the coach:

Are my sessions and/or information given, relevant to the standard of this athlete.
Do I provide sufficient variety and explore new avenues that will assist the athlete
Is there more I could do, with respect to positive and effective feedback
Have I planned effectively, so that I may best assist the athlete

Further Techniques to review personal coaching performance, include self-reflection, viewing video of a session and/or seeking feedback from athletes and other coaches regarding the effectiveness of the coaching session.

This provides the avenue to make modifications to the next coaching session based on a review of previous sessions.

The Analysis Process

Before describing all of the weird and wonderful tools available to the coach, let us first consider the context in which these tools should be used. As a coach it is your role to provide meaningful feedback to your athlete regarding their movement and performance. The analysis should form a continual process between the coach and athlete and can be simplified into a four stage model, as shown below in Figure 1.

The analysis process involves understanding your athlete, and having a goal that you wish to achieve. Then you must observe and evaluate the performance before providing feedback to the athlete.

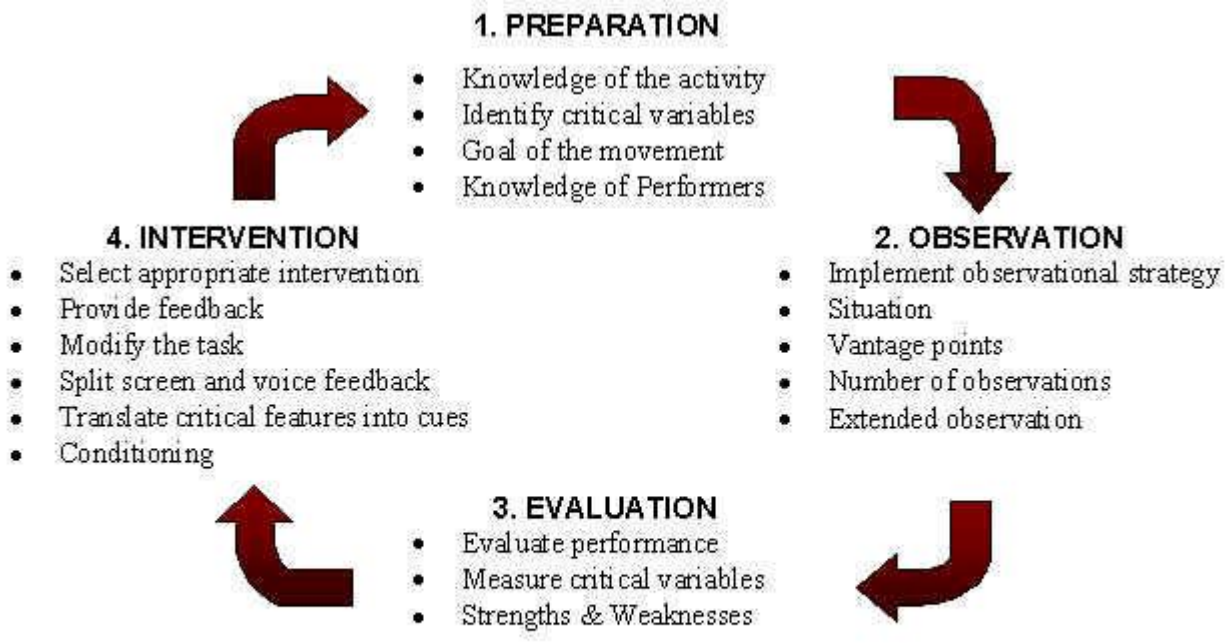


Figure 1. The process of qualitative and quantitative analysis, (modified from Knudson & Morrison (1997)

The Tools of the Trade

The Eyeball

The human eye is still perhaps the most powerful motion analysis tool that we all have at our disposal. A trained coach can often pick up subtle changes and differences in technique and explain these to the athlete, providing instantaneous feedback. And because we have two eyes, we also have the ability to visualise movements in three dimensions (3D)!

However, this skill takes time and practise to develop and is still a subjective measure by the coach. Also, if you are wishing to analyse faster movements such as the position of a shotgun prior to contact with a clay, then you are likely to miss important information with the naked eye.

Video Camera

In Australia we use the 25 frames per second for video (PAL) – hence for higher speed moving activities (ie Shotgun disciplines) it may be of value to play the video in slow motion, rather than normal speed to give the coach and athlete a chance to finely analyse the vision.

Computer Analysis using Video

There are many different software packages available that allow you to capture video onto a computer for further analysis. These packages allow you to manipulate images, draw on the screen and take some simple two-dimensional measures.

You can also use the split screens to display technique changes before and after an intervention, or compare novice and elite performers side by side. The current cost of digital cameras and laptop computers is far more attractive to the average coach, who would previously not have access to such equipment.

IN SUMMARY – what is the coach looking for? Mostly to confirm that the program and work by the athlete is in line with the overall goal/s, and to tweek any areas which has slipped “off the path”, It is essential to focus on the process above all else

 ***Refer to the workbook Task***

Moving to the next level

When speaking with athletes, it becomes clear that there is a “wish for improvement” and often not always the attitude of “how I will make it happen – what further I will need to give”

To prepare the athlete for the “next level”, the coach must take stock of current performance, attitude and work level. To move from the Club to the State competition environment is relatively easy – to successfully move from the State to National competition level requires much more personal effort, by way of various training.

The expectations of the athlete need to be encouraged, but also measured against the willingness of the athlete to extend their work level. This is the most often cause of the "plateau in performance" where an athlete expects to improve, without further work, and hence makes no gain.

The serious competition environment requires understanding and work. Well planned programs provide a clear and concise pathway that the athlete can follow.

What does the athlete expect? Immediate improvements
What does the coach expect? Hard work and attention to detail

The coach must meet the athlete expectations with a logical and honest appraisal.

Encourage the athlete to extend their internet research to such topics as:

- Mental relaxation and competition preparation
- Physical training & recovery
- Training for the elite athlete

There are many internet resources dealing with these concepts, and the research will go hand in hand with the work offered by the coach. Of course, the clever coach will have a few sites in mind already (having already researched themselves)

ATHLETE EXPECTATIONS	**COACH EXPECTATIONS**
That the coach will help their scores to improve	That the athlete will complete the work as outlined together
That the coach can see the long term picture and help them get there	That the athlete will be honest in their approach and work to their limit
To have fun as well	To have fun as well

The athlete can, of course, have expectations far below their capability. What is the coach's role in this situation?

To be brutally honest – if the athlete does not show a willingness to extend both their workload and performance level, then the coach must accept this – encourage and support the athlete, showing that you understand their decision.

THE COMPETITION ENVIRONMENT

Shooting is shooting, whether at Club or the Olympics! There are no new techniques to be used…the process is the same. Firearm steady, align the sighting, release the trigger, follow-through. What does change is the internal expectations of the athlete… "I want to do well" … "I want to win" etc

This can easily drag on the better performer and draw them down to the pack, if this type of "wanting" attitude is allowed to remain without check. From the earliest days in shooting, athletes should be encouraged to compete…local matches, club events, State events, National events. Each being treated as a new opportunity and fun!

This competition provides the opportunity for the coach to work through potential anxiety and focus the athlete's mind on the process at hand. Process before outcome.

Again the coach needs to be two steps ahead and fully aware that greater success will occur when you can work with the athlete and create more of a “self-competition” attitude. That is, the athlete sees only their work as the competition.

Each year, too many shooters find themselves starting the competition season without clear goals and fitness/training strategies, which unfortunately impacts the level of success they enjoy.

If a shooter is targeting a specific competition around April/May then they need to ensure that their training programme is structured in such a way that they are at peak fitness (mental, physical and technical) at the same time – not early or late. Without such a structure, the chances of success are limited.

Fully understanding the capabilities of your athlete will ensure that your work to take them to the next level of performance will have the greatest chance of success.

Understanding your own capabilities will ensure that, when the time is right, you will refer the athlete to a coach more appropriate to their needs.

OFFICIAL’S TRAINING

To effectively compete, the athlete also requires coach support in the form of knowledge of the technical rules of the sport – up to International level if possible, or at least Australian national level.

Competition Coaches should hold the equivalent of the highest Australian technical license, even to the point of an ISSF license (if relevant). It is advisable that coaches become familiar with the other ballistic sports – if you are a shotgun shooter, find out how rifle shooters approach the sport. There is much to be gained from this crossing over and multi-disciplined approach.

Each discipline has elements particular to their event/s and coaches can gain from a visual appraisal of a training session, or perhaps a match. The discovered nuances may assist your athlete to perform better, either in training and/or competition.

 ***Refer to the workbook Tasks***

Summary – Coach & Athlete Reviews

1. The shooter who wishes to improve will have varied influences affecting his/her performance or level of development over a given time.
    a) technical
    b) mental
    c) social
    d) physical
    e) external

2. External and internal conditions have the potential to limit a shooter's development over a long period if these conditions cannot be assessed correctly and appropriate action taken.

3. It is important to be clear that these factors:
    are external influences
    usually outside of the immediate "sphere of control" of the athlete
    will vary from training to match, and at different locations
    have clear solutions that can be achieved

4. Technical Officer's training is essential for the Competition Coach.

5. The most effective athlete (or coach) assessment tools include the eye, mobile phone, video camera and computer analysis software.

6. Competition is a valuable part of the shooter's progress – Club, State and National events.

7. Athlete expectations must be matched with a performance and work ethic.

8. As the performance increases, so do the athlete and coach expectations.

THE PHYSICAL ATHLETE

SYLLABUS OUTCOMES: The successful coach will

- be able to develop and implement physical training programs for State level athlete.

ASSESSMENT Workbook Tasks

The Body Basics

The human body is a complex organism composed of an intricate network of anatomical systems, including the cardiovascular, respiratory, digestive, urinary, reproductive, skeletal, muscular, nervous, endocrine, integumentary (the skin and its derivatives), and lymphatic systems.

Each system consists of a group of organs with related functions, working together in harmony under the control of the body's command centre, the human brain. To analyse and understand how the body can operate more efficiently one must develop a basic working knowledge of the structural components of the body and the relationships which exist among the various parts.

This module is directed towards an 'easy-to-understand' explanation of the structure of the particular systems within the human body that contribute to human motion; the skeletal, the muscular, and the nervous systems.

Joint structure

The bones of the skeletal system are linked by joints which permit varying degrees of movement depending on the their structure. Joints in the body are classified as either *immovable* (such as joints between the bones in the skull), *slightly movable* (anterior point between the two pelvic bones) or *freely movable* (such as shoulder, hip and knee).

Ligaments

The bones of the body are bound together by strong, relatively inelastic structures - ligaments. These consist of parallel bands of tissue composed predominantly of collagen fibres intermixed with elastin fibres. The elastin fibres are "elastic" in nature and can therefore return to their original state after being "stretched" or utilised in movement.

Due to their strength, ligaments can resist recurrent strain, providing stability to the skeletal framework by holding the bones of the joints together. Ligaments also aid in controlling the degree and direction of movement, limiting the potential type and range of motion.

However a ligament stretched past its usual elastic limit, may become permanently elongated and require medical intervention to return the joint to its original length.

The stability of a joint is dependent upon a strong bony arrangement, with bones "fitting together" snugly. For example, the hip is an extremely stable joint as the femur (thigh bone) fits very snugly into the socket within the pelvis.

The ligaments holding this joint are among the strongest in the human body, and therefore the hip joint is rarely dislocated under normal circumstances.

The shoulder as an alternative example, has the humerus (arm bone) which fits casually into the more shallow socket of the scapula (shoulder blade). As the joint is held together more loosely via ligaments and relies more heavily on the surrounding muscles - it is a site more prone to dislocations.

Muscle system

The muscular system constitutes about 40-45% of total body weight. Without muscles, all actions of the body including normal posture, breathing and walking would not be possible.

The fibres within each muscle are arranged in definite patterns, which influence the muscle's function. When producing movement, a muscle can function in several ways.

It can act as an
agonist - contracting to produce the primary force required to achieve the desired action
antagonist - having the opposite action to the agonist. When the agonist muscles of muscles group contracts, movement of the joint is possible only if the antagonist muscle relaxes.
synergist - or helper muscles, contracting to enhance the efficiency of agonist

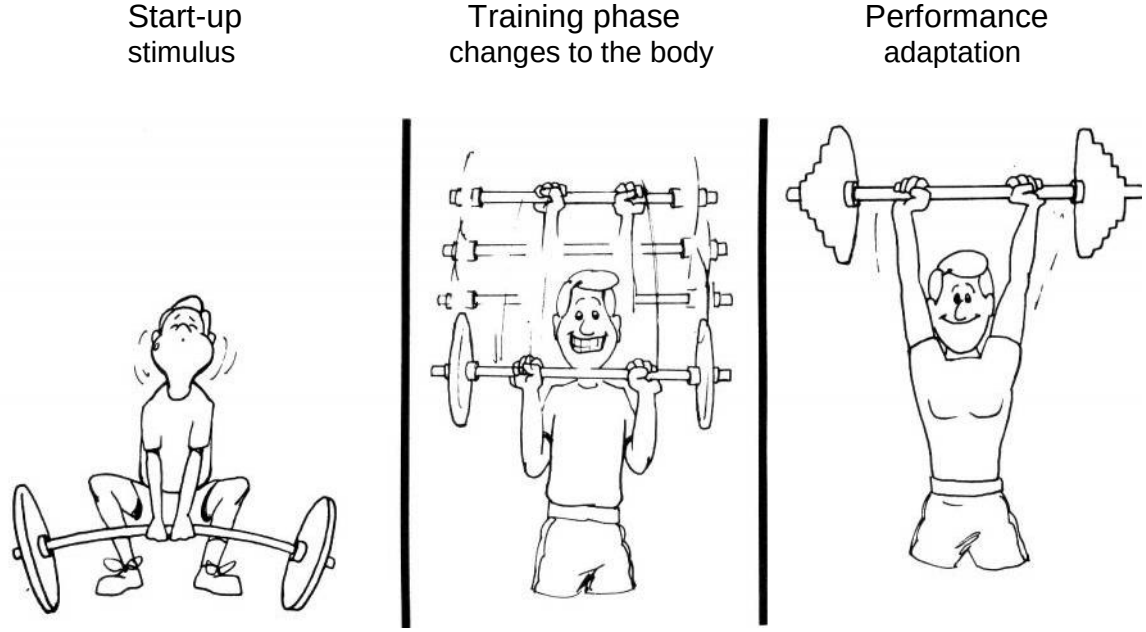
When muscles work together, fluid movement is possible. The novice athlete however may well be struggling to co-ordinate the muscles in the learning stages. Practice of any required skill will most certainly train the muscles to produce the desired effects, while neutralising any unwanted action.

Nervous system

As a voluntary system, skeletal muscles require control by the brain in order to function on demand. The nervous system acts as the communications network for the body. The brain and the spinal cord act as the control centre site for the central nervous system. A complex network of nerves radiate to the peripheral regions of the body and its extremities, to connect the various sensory receptors, muscles and glands of the body.

The Physical Training Model

The physical training week should contain at least three sessions. The frequency is a decision the athlete and coach makes in consideration of time, facilities, equipment, age and stage of development of the athlete.



Firstly there is the need for change - recognised by the athlete and the coach. Although the cartoon infers more to the physical skills, it is an appropriate analogy for any required change. Changes need to be worked very carefully and it is in this stimulus phase that motivation to persist must be initially fostered.

The changes then start to take effect, and the athlete notes the developing ease with which the training is starting to have an effect. The training response is directly in relation to the training stimulus.

Finally the performance level is changed and improved. There is a marked difference to the athlete, and new performance goals need to be determined.

Energy systems

There are two basic energy systems within the human body:

Anaerobic

a) alactic - the "10 second" energy burst, also described as the stored energy system. It is the system used for sports requiring a short energy blitz over a short space of time. This system provides the majority of energy in the form of chemical energy when athletes do bursts of high speed or high resistance movements.

A thorough, vigorous warm-up is essential before starting this type of work. Interval style physical training works best with this athlete … work …rest … work … rest on a work/rest ratio of 1 to 5 or 1 to 6. e.g high speed running with jogging in between.

b) lactic - the "10-120 second" system runs entirely on stored carbohydrate fuel and produces lactic acid. It supplies energy for bursts of activity lasting longer than 10, but less than 120 seconds. Its peak is noted in efforts of approximately 30 seconds. Fast twitch muscle is more specialised in making energy this way than slow twitch muscle.

Interval methods are also useful in training this system. Again rest period are 5-6 times as long as work periods. Rest periods between sets must allow for the removal of lactic acid - this will vary according to the recovery ability of the athlete.

Aerobic

Aerobic training - the endurance energy system. This involves the prolonged endurance system and is very important in recovery. Oxygen is needed and both carbohydrate and fat are used for fuel.

The support of the lungs and heart are important because fuel is brought to the muscles from outside the cell via the blood. Training this system to increase its production of energy requires changes in the muscles and the systems supporting them.

Because this system resists fatigue, it takes longer to overload it than either of the anaerobic systems, and partially for that reason, the time for training must be longer - a minimum of 20 minutes.

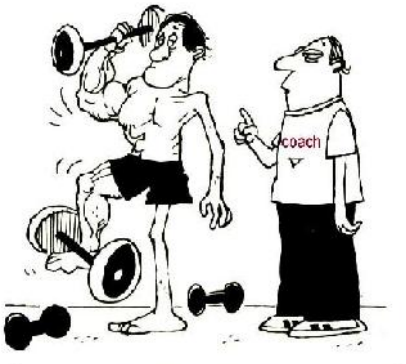
Working this system means both increasing the duration to improve the aerobic energy production capacity and increasing the intensity to improve the support of the oxygen delivery system.

In all the stated times of the three systems noted here, it should be remembered that the coach must be prepared to adjust the programs for individual athlete differences.

Mini Summary on training energy systems

1. **Frequency** - programs or sessions 3-4 times per week.
2. **Overload** - athlete's capacities need to be determined and considered.
3. **Specificity** - work sessions need to be specific to the target energy system.
4. **Progression** - increase work times and volume, or decrease rest times
5. **Periodic testing** - test athletes for progress and adjust accordingly.
6. **Short-term / long-term goals**. Weekly/monthly training is the "short" term with final performance the "long" term goal.
7. **Flexible planning** - sessions may differ in any given week. Athletes may not always be able to complete the work as planned. Additional rest may be required.
8. **Train Aerobic before Anaerobic** - Aerobic training will improve the athletes' ability to recover. Best for shooters.

📖 ***Refer to the workbook Task***



Strength Training

The principles of strength training are similar to those used in training the energy systems, although different in application. Applying general principles of training to strength training requires consideration of the following:

Frequency: 2-3 times a week is a good starting point, noting competition days and technical training.

With respect to shooting, strength training should be undertaken well away from technical training, as together they may be counter-productive, especially for the standing shooter.

Muscle tremors can be often felt if a range training session follows a strenuous strength training session too closely - shooters often need up to 48 hours of recovery time.

Overload: the overload factor is the weight load with which the athlete works, in proportion to the number of repetitions completed. It is acknowledged that the rule for shooting lies within the phrase "…less weight and more repetitions…"

Specificity: this refers to ensuring that the group of muscles, joints and flexibility levels most required in the sport, are those targeted by the strength training exercises.

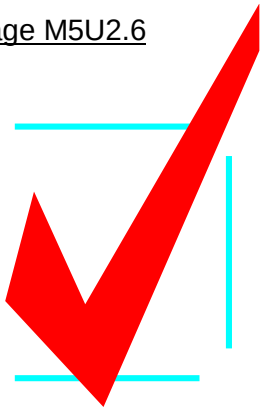
Individual Differences

Athletes vary in many ways. Apart from noting the particular physical attributes of the athlete, testing and observation will assist the coach to note the difference in energy, overall strength and flexibility. Athletes will vary also according to their age and sex.

Younger and older athletes are not so different in how they respond to training, but rather how much they respond over time. While the energy and strength development may be the same, there are points to consider:

- Aerobic, static flexibility and local muscle endurance work are excellent types of training for all age groups.
- Weight training should not be attempted with younger athletes whose bones are not fully mature. Weight training gets progressively safer for most young athletes after the onset of puberty.
- Flexibility does decrease with age, but the decrease can be slowed down with correct training over time. Functional muscle use often decreases with age, but like flexibility, can be improved with training.
- Some females report changes in the menstrual cycle during exhaustive aerobic training - this should be carefully monitored, especially in those under the age of 18 years when body cycles are being established.
- Weight training does not alter female hormones, so it does not lead to the development of muscle bulk as is men. Muscle tone is appropriate to both genders.
- The types and number of fast-twitch and slow-twitch muscles are similar in both men and women.
- Adult males have on average a 10% lower heart rate than females. When using a heart rate monitor, compare each athlete against their rate prior to training. Comparisons made over the whole group often have little valid foundation

Components of Muscular Fitness



An athlete's fitness should be gradually developed with the goal of attaining maximum benefit from the sport and prevent injury either short or long term injury.

Key muscular performance characteristics of athletes include power, speed, flexibility and endurance. Each component will excel in varying degrees relative to the particular sport.

Power is the result of a combination of strength and speed of muscle contraction - it is the rate of doing work. Strength is the maximum muscular force which can be exerted in a single effort.

Speed is noted as the rate of movement. The ability to achieve maximum acceleration and speed depends largely on the development of the large muscular forces. It is therefore an advantage to possess a high proportion of fast twitch fibres in the appropriate muscles and, for this reason is mostly an inherent characteristic. Athletes can however, improve their reaction and movement time with training.

Flexibility is important to enable a full range of the movement required for sport. In some sports it is essential for effective movement (eg fast bowling in cricket) or it contributes to appeal (eg gymnastics, diving). Flexibility is limited by the structure of the joints and the surrounding tissue. As the bony structure of the body cannot be altered, the key to flexibility is the range of motion permitted by the soft tissues (muscles, ligaments).

Endurance is the ability to repeat contractions or movements without loss of performance, many times over. One way of increasing muscle endurance is to increase muscle strength.

BIOMECHNAIS - testing protocols - Skinfolds

From a physical perspective, there are a number of protocols which will yield all manner of physical data on athletes. These can include the obvious height, weight, body fat / skin fold, energy expenditure and blood oxygen levels. Other specialised testing can be developed/adapted to suit individual sports, usually in consultation with the sports scientists from the local or national Sports Institute.

Of all the measuring techniques employed by sports scientists, the estimation of body composition is one of the most popular, especially among those strenuous sports who require athletes to propel the body vertically (running, high jump) or horizontally (running).

The coaches in these sports want to know the proportion of fat to lean body weight, bone densities, total body water composition and the like. Many of the tests to determine these aspects are expensive, invasive and complicated.

However, skin fold testing has emerged as a inexpensive, non-invasive and relatively simple procedure that will yield accurate data. The rationale for measuring body fat from skin-folds is based on the assumption that the thickness of the subcutaneous layer is correlated with the total fat content of the body.

SKIN FOLD MEASUREMENTS are part of the "new look" shooting athlete. This has developed due to the contention that shooters are elite athletes, and as such, it could be argued, should start to measure up against other elite sports-persons with respect to physical attributes.

But by which standard??? Many sports have, due to extensive talent identification, produced models/profiles of desired characteristics in their athletes. Such work is very scarce within shooting. There are few statistics available for non-active sports. From those active sports for which data is readily available, interesting trends appear:

Sport	***Sex / number tested***	***Height Av (cm)***	***Weight Av (kg)***	***Skin fold sum Av (mm)***
Gymnastics	F - 8	158 ± 3.8	47.4 ± 3.8	44.7 ± 7.0
Gymnastics	M - 12	167.3 ± 6.8	63.5 ± 6.7	39.1 ± 8.3
Basketball	F - 36	176.0 ± 7.4	68.7 ± 8.2	83.7 ± 19.7
Basketball	M -12	199.2 ± 8.9	99.2 ± 12.5	67.1 ± 13.5
Track – sprint	F - 5	174.3 ± 7.7	64.5 ± 4.4	66.5 ± 21.5
Track – sprint	M - 22	178.5 ± 6.1	73.9 ± 6.8	41.6 ± 10.0
Swimming	F - 24	172.5 ± 4.5	62.0 ± 5.4	65.5 ± 11.9
Swimming	M - 26	187.0 ± 6.0	79.3 ± 7.0	50.2 ± 7.3

If that is compared to the available data collected by AIS Sport Science staff from members of a rifle Squad over 10 years……

Rifle Shooting Squads	***Sex / number tested***	***Height Av (cm)***	***Weight Av (kg)***	***Skin fold sum Av (mm)***	***Skin-fold Range***	***Average Age (yrs)***
Squad 1992	F - 6	165.1	73.4	127.2	58-175	34.1
Squad 1992	F - 5	162.5	57.5	97.7	78-122	26.6
Squad 1993	F - 7	164.7	66.6	154.1	72-225	32.1
Squad 1994	F - 7	164.5	70.1	168.1	118-242	29.3
Squad 1997	F - 3	164.8	63.1	150.1	129-166	21.2
Squad 2001	F - 7	167.9	64.3	129.5	65-222	22.2
Squad 1992	M - 13	178.8	79.8	96.2	50-156	35.7
Squad 1992	M - 9	174.7	66.3	78.9	45-158	19.5
Squad 1993	M - 6	181.0	86.3	113.3	51-241	32.1
Squad 1994	M - 16	176.5	78.9	117.4	56-268	24.9
Squad 1997	M - 5	174.9	76.6	108.8	44-166	25.5
Squad 2001	M - 8	176.2	80.3	122.1	48-331	19.5

These figures available for shooting indicate that the Squad members tested would, as a comparison against the other sports mentioned, place them within the usual averages for both height and weight, but well outside the scope of what would be regarded as appropriate skin-fold scores for other athletes.

The range has also been noted for the shooters skin-fold measurements, as it is easily noted and should be remembered that there are, and have often been, a small number of individuals in each group who in effect "bias" the figures, by being well outside the average.

And what is average???? Statistics suggest that taking measurements from the average Australian, should yield results of approximately 120-130cm taken over seven sites.

These sites include the triceps, biceps, subscapular, supraspinale, abdominal and calf. In male athletes, there is often an eighth site included. It is standard to presume that female skin-fold measurements would be slightly higher than those for males.

Skin-fold measurements are a non-invasive skill that the coach can utilise to prescribe dietary and training advice and/or modifications. With practice, the coach can become skilled and accurate in utilising this technique.

Nutrition and Sport Performance

A well-balanced approach to diet is an essential part of good training methods.
A training or competition diet must have two basic components

Enough food/fuel to meet the demands of training or competition
The essential nutrients in the right balance for general good health

The nutritional approach to athletic performance involves long-term planning - nutrition during training, nutrition prior to competition, nutrition during competition and nutrition following competition.

A well-balanced diet that provides the necessary nutrients is based on eating a variety of foods from all the major food groups. Food consists of categories of nutrients, each with its own set of functions:

Nutrients	*Use*
Carbohydrates, Fats	ENERGY
Proteins, Vitamins	GROWTH AND REPAIR OF TISSUE
Minerals, Dietary fibre, Water	REGULATION OF BODY PROCESSES

a) **Carbohydrates** - includes sugars and starches, and essential as a source of energy. Carbohydrates come in two forms - simple and complex.

Complex carbohydrates are an excellent form of energy for the athlete. The carbohydrates are broken down by the body's digestive system and offer greater benefits to the body. They are absorbed and utilised slowly resulting in a steady absorption of glucose into the bloodstream.

Although sugars (simple carbohydrates) are a significant source of energy, the problem with a diet high in simple sugars, is that it offers no other benefit to the body by way of vitamins, minerals, or dietary fibre.

Food high in simple sugars tend to be high in fat, and that is counterproductive in most athletes.

Main food sources of Carbohydrates 16kj/g	
COMPLEX (Unrefined)	SIMPLE (Refined)
Breads, rice, cereals, pasta, biscuits, potatoes, peas, sweet corn, parsnip, carrots, fruits, milk, yoghurt.	Sugar, glucose, fructose, honey, jams, marmalade, sweets, cakes, soft drinks, flavoured mineral water, cordial, beer, sweet wines.

Although fruits, milk and yoghurt contain simple sugars, they also provide nutrients and can be included here.

b) Fats - a small amount of dietary fat is necessary for good health. A diet high in fat has been linked to many diseases such as coronary heart disease and some cancers. Fat provides more kilojoules per gram than does carbohydrates, protein or even alcohol.

Main sources of Fats 37kj/g	
Obvious sources	Less obvious sources
Cream, sour cream, butter, margarine, oils (including polyunsaturated varieties), fried foods, potato crisps.	Full cream milk, cheese, yoghurt, fatty meats, chicken (skin-on), nuts, chocolate, cakes, pastries, biscuits.

It should be noted that there are often low fat substitutes available, and the labels should be carefully checked for details.

c) Proteins - essential in the diet for the building and maintenance of the body's tissues. Protein comes from two main sources in the diet - animal foods and plant protein. Vegetarian athletes need to pay attention to the careful selection of foods to obtain all the essential amino acids. For complete protein saturation, athletes should select a food from Group 1 and combine this with a food from Group 2 in the table below

Main sources of Protein 17kj/g			
Group 1	*Group 2*		
Legumes	Wholemeal pasta	Almonds	Sesame seeds
Lentils	Wholemeal bread	Pecans	Pumpkin seeds
Soybeans	Wheat flour	Walnuts	Sunflower seeds
Haricot beans	Brown rice	Cashews	
Baked beans	Corn		
Lima beans	Rye		
Chick peas	Barley		
Split peas			
Peanuts			

At a glance - a basic guide to protein content of foods

FOOD	**SERVE (g)**	**PROTEIN (g)**
Lean red meat - grilled	150	45
Chicken breast - boiled	150	40
Fish - steamed	200	36
Tuna - canned	120	26
Egg - 1 medium	45	6
Skim milk	250 (1 cup)	9
Full cream milk	250 (1 cup)	8
Cottage cheese	100	14
Yoghurt	240 (1 carton)	10
Wholemeal bread	30 (1 slice)	2
Rice - cooked	160 (1 cup)	3
Breakfast cereal (weeties)	30	3
Pasta - cooked	150	5
Potato - boiled	90	2
Baked beans	120	8
Green peas - boiled	60	3
Dried beans - cooked	60	4
Peanuts, almonds	30	6
Walnuts	30	4
Fruit - raw	100	1
Leaf vegetables	60	2
Root vegetables	60	1

d) Vitamins & Minerals - essential for optimal performance. While deficiencies of certain vitamins can result in impaired performance, there is little evidence to suggest that there is a beneficial effect from ingesting additional vitamins over and above those contained within an adequate diet.

Minerals essential for the good health of the athlete are Calcium and Iron. Younger female athletes may be most at risk with respect to minor deficiencies of either or both of these minerals, and advice should be given where appropriate.

e) Water - the body's need for water is undeniable, as it is lost through normal body functions, as well as in the form of sweat through the skin during training or competition.

Rehydration is an important priority in both training and competition. Thirst is not a reliable indicator. Athletes should be encouraged to monitor themselves and maintain a sensible balance of fluid. The best fluid is water or certain "sports drinks", although care should be taken to fully read the label to determine the precise contents.

The noticeable effects of dehydration are

- Fatigue
- Deterioration in performance
- Elevated body temperature
- Reduced urinary volume
- Lowered blood pressure
- Increased pulse rate

Weight loss / weight gain. Dieting, if required at all, should be done very slowly, aiming at a maximum of one kilo a week weight reduction. Certain athletes may be advised to gain weight to enhance performance. Any weight change program should be implemented only in consultation with a medical practitioner.

Alcohol - is not essential for good health, although it is well accepted within society. Alcohol contributes to a high proportion of excess kilojoules in athletes, although the most detrimental effect is its dehydrating effect on the body. Alcohol increases the body's fluid loss, and athletes should be advised to consume plenty of water in balance with any alcohol intake.

What foods? Carbohydrate loading is a dietary strategy to increase the glycogen stored within the muscles. It should be used on special occasions only, for events that require high levels of performance sustained over long periods of time (one hour or more). The pre-competition meal cannot in itself produce performance; although too little to eat is much better than too much.

Simple and effective snack foods include:

bread, peanut butter, dried fruits, raw vegetables, bananas, nuts, cheese, cereals, health bars and milk

During competitions, the following nutritional guidelines are offered:

water is most important
small amounts of sugar is helpful where energy expenditure is great
fruit or chocolate bars and juice or water maybe helpful during short breaks

The Golden Rules for Athletes

INCREASE	***DECREASE***
Carbohydrate Dietary fibre Water Ensure adequate protein	Fat Excessive salt intake Alcohol

 ***Refer to the workbook Task***

Injury & Illness

Every coach should be aware of the state of health of athletes in their care.
Athletes are not superhuman and recovery rates vary from athlete to athlete.
The potential for injury and illness needs to be considered and contingency plans established.

Injury in sport can be of two basic types:

Acute refers to those injuries resulting suddenly from trauma through training or competition stress - for example, a sudden swelling or the appearance of pain as a result of twisting an ankle.

Thankfully, within shooting, there is a greatly reduced chance of acute injury while on the firing line or during training due to the nature of the sport.

Chronic injury on the other hand, develops more gradually and may well have greater long term impact, as it is often not noticed as readily (as it builds up over time) and is resolved at a much slower rate.

For the shooter, the most common "at risk" areas include the neck and the back (both upper and lower).

As the shooting position in itself varies from everyday posture and requires the muscles to be trained to maintain this position, great care should be exercised when coaching any athlete to ensure that adequate and appropriate warm-up and stretching forms part of the training and competition process from day 1.

Injury Management & Prevention

Sport by its nature often invites injury - there are the body contact sports, fast action sports, sports played on uneven surfaces, interactive sports relying on the standard of play of an opponent and sports open to the environmental elements.

In these situations the coach must consider

- The athlete's fitness for the sport - is the athlete's physical development sufficient to operate the equipment required for the sport, and to contest the rigors of the competition.
- The clothing and equipment being used - has the equipment been appropriately modified to suit the athlete - eg (for shooting) shorter stocks, lighter weighted rifles - for smaller, younger athletes. Are protective shooting glasses being worn?
- Warm-up, stretch & cool-down procedures - is the athlete committed to the performance of an appropriate stretch protocol - no exceptions.
- Referees/officials match control procedures - are the officials ensuring a safe environment and high standard of play.
- Immediate management of injury on the field - who takes responsibility for the
- implementation of an injury action plan at a moments notice.
- Treatment procedures - does the athlete and coach have a known plan of action for treatment of injury, both short and long term, with suitable contingencies. Has the athlete a trusted medical practitioner in whom they will confide.
- When to return "after injury" - who consults and to what depth.
- Long term injury management - when is it time to recommend a change of event, discipline, or even retire from the sport.

In consideration of the types of sports listed in the first paragraph, at first glance, rifle shooting appears very protected and safe. However, as stated previously, it is the chronic type of injury that is the hardest to detect and more often that which will injure shooters and manifest in an unusual downturn in performance.

Special consideration that may affect the shooter include:

Muscle injury - not usual, but can occur. Acute injuries will take at least 4-6 weeks (and sometimes up to 3 months) to heal if a blood clot has formed over the injury site. The accompanying swelling can be reduced by the early treatment of ice, compression, elevation and therapy if appropriate.

There is a potential for the more likely chronic muscle pain in shooting, that may be as a result of poor technique or adopting a position which is inappropriate to the size and/or shape of the athlete.

This chronic pain can often be reduced by strengthening the muscles first, through a correct strength training program and ensuring that the athlete learns, and uses, an appropriate stretching routine prior to training and competition.

Tendons & Ligaments - with the lower blood supply, acute or chronic injury to tendons and ligaments can take longer to repair. Again stretching and strengthening is important as a preventative measure, and the coach must be aware of the capacity of the individual athlete.

Bones & Joints - although normal full bone break injury is rare in shooting, not enough attention is given to the more subtle, yet just as important, stress fracture (a hairline fracture across the surface of the bone usually as a result of overuse). These stress fractures do not usually require a plaster cast, and often the athlete is unaware of their existence. A coach should have the athlete investigate any persistent and lingering "bones aches" as stress fractures will not heal if weight bearing training or competition is continued.

Where joint injury has occurred (and again this is unlikely in shooting) the emphasis should be to re-establish both balance and co-ordination. Exercises to enhance both of these aspects will assist in the recovery process. It is also important to rehabilitate the muscles associated with the affected joints.

Assessment of Recovery - the coach should work with the medical practitioner to ensure that the athlete is gradually re-introduced into an appropriate training regime after an injury. The load should be lighter and perhaps selecting different aspects of the performance rather than those immediately affected by the injury.

Only in consultation with the athlete and doctor, can the coach resume a full training program with the confidence and best long-term interest of the athlete.

While a management injury and recovery plan is an essential part of the coach's planning, it is more productive to put greater effort into the prevention program and ensure that the athletes are given correct instruction and information to reduce their likelihood of injury.

Refer to the workbook Task

Summary – Physical Training Programs

1. The human body is a complex organism composed of an intricate network of anatomical systems, including the cardiovascular, respiratory, digestive, urinary, reproductive, skeletal, muscular, nervous, endocrine, integumentary (the skin and its derivatives), and lymphatic systems

2. The bones' main function is to support the body's soft tissue and to protect the more delicate structures such as the brain and the heart.

3. The bones of the skeletal system are linked by joints which permit varying degrees of movement depending on their structure. Joints in the body are classified as either immovable, slightly movable or freely movable.

4. The muscular system constitutes about 40-45% of total body weight. Without muscles, all actions of the body including normal posture, breathing and walking would not be possible.

5. Skeletal muscles require control by the brain in order to function. The nervous system acts as the communications network for the body. The brain and the spinal cord act as the control centre site for the central nervous system.

6. There are two basic energy systems within the human body: anaerobic (quick burst) and aerobic (endurance).

7. Applying general principles of training to strength training requires consideration of FREQUENCY, SPECIFICITY & OVERLOAD.

8. Athletes vary in many ways. Apart from noting the particular physical attributes of the athlete, testing and observation will assist the coach to note the difference in energy, overall strength and flexibility. Athletes will vary also according to their age and sex.

9. Key muscular performance characteristics of athletes include power, speed, flexibility and endurance. Each component will excel in varying degrees relative to the particular sport

10. Testing protocols can be used to determine physical levels. Skin fold testing to determine body fat levels is useful as it is inexpensive, non-invasive and can be performed both in the laboratory and in the field by experienced personnel.

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