

Training for combat sports

Combat sports consist of a wide variety of skills which, on the face of it, have only one common component in that they are individual- and not team-based. The boxer, for example, will need a slightly different mix of the various components of fitness than will the fencer, wrestler or judo performer. However, in terms of physiological demands, the sports are all quite similar in that the body is involved in a high level of physical activity for a short duration, seldom exceeding three minutes. Bouts of activity are spaced with periods of recovery, hence the intermittent nature of the work is predetermined.

Boxing is quite unique as a sport, in that it is the only sport whereby the primary aim is to make your opponent incapable of continuing in the contest, by forcing a temporary loss of consciousness. In conditioning, the boxer has to rehearse a situation whereby energy is expended in delivering a blow and must also prepare for the energy-sapping mechanisms of receiving a blow.

Training components

The following qualities rate amongst the top five essential training components for the combat sportsman or woman, though they are not listed in rank order:

- 1) local muscular endurance of the arms and legs
- 2) gross strength
- 3) speed of arm and leg movements
- 4) cardio-vascular efficiency
- 5) skill.

The fact that a component such as flexibility is not listed does not mean that it should be excluded from a training regime.

Combat sports, other than during an Olympic Games, do not have the clearly defined seasons of the major team games and participants are not usually required to compete for an extended season of several months. Participants can almost select their competitions and then peak towards those occasions. Hence, for this group of sports it becomes *what* to do rather than *when* to do it.

Local muscular endurance

To develop local muscular endurance the player must perform work tasks of a high extent and a fairly low intensity. The ideal methods available are circuit training and high-repetition weight or resistance training.

A ten- or twelve-item circuit should be selected, similar to the one listed on pages 67-8. Either the repetition system, or the timed system, is appropriate. Ideally the full circuit should be completed two or three times each week, changing the system to permit a degree of variety. In addition to this, the performer is advised to do 100 repetitions of three different exercises every morning, soon after awakening - press-ups, sit ups and squat jumps are appropriate. The time taken to perform such a routine is minimal, in total less than 10 minutes, but the small sacrifice will repay the performer with considerably enhanced local muscular endurance.

High repetition weight training, working at a level of 50 per cent of the one rep maximum and keeping the extent of training high, will help to improve this quality. The timed approach is ideal for combat sports, initially starting with an exercise time of one minute, followed by a recovery period of one minute. An eight-item schedule should prove efficient, using the main muscle groups of the body (arms, trunk and legs) in rotation. Once the athlete is familiar with this type of approach, the extent of training can be improved and made more specific by miming more closely what happens in a contest, e.g. 3 x 3 mins with a one-minute recovery. This is certainly not a schedule for the faint-hearted.

The combat sports take place within the confines of a fairly small, restricted area. The basic leg movements are of a skipping, side-stepping nature rather than the striding action of a runner, hence skipping and side-stepping movements must form part of any systematic training routine. Skipping with a rope is an ideal movement, since it conditions both the arms and the legs. The tempo and the duration can be varied to bring about an adaptive response.

Bar jumps (Rhythmic)

While a bar placed between two gymnasium benches is ideal, a single reversed bench with the balance side upwards, provides an ideal piece of training apparatus. The performer starts with both feet to one side of the bench and jumps across the bench to take up an identical double-foot landing position. This sideways jump is repeated in quick succession at a rate of one per second (see fig. 75).

Side stepping movements AGILITY

Two chalk lines are marked out one metre either side of a central line on a firm, reliable surface. The performer starts with the feet straddling the central line. With a side-stepping movement the bodyweight is shifted quickly to place the right foot over the right side line, then, with a similar side stepping movement, cross the centre line to place the left foot over the left side line. The movement is performed for one minute, a score being made each time the centre line is crossed (see fig. 76).

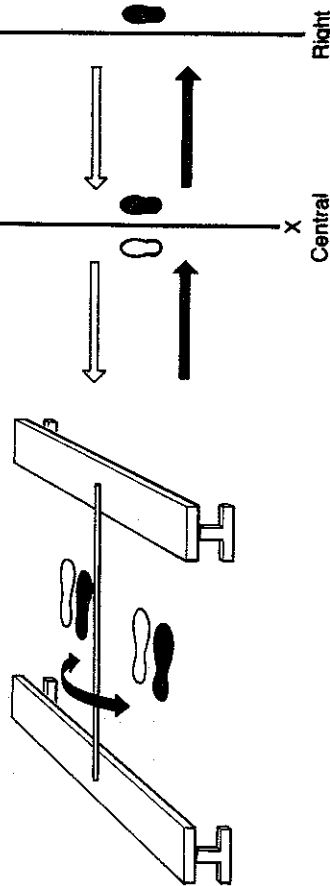


Fig. 75 Bar jumps

Fig. 76 Side stepping

Criss-cross movements AGILITY

Another useful exercise is the criss-cross movement. A square of 1m x 1m is constructed on the floor and divided into four equal parts, numbered 1-4. The performer starts with both feet in square 1 and jumps with both feet together to land wholly in square 2, then to squares 3 and 4 in rotation. The number of complete sequences 1-4, minus the number of mistakes, in one minute is recorded.

The above movements can all be performed for five sets of one minute each, spaced with a one-minute recovery.

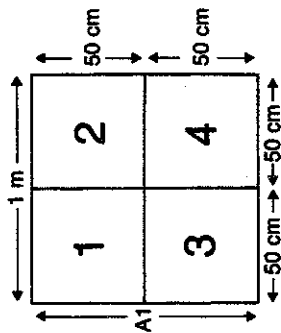


Fig. 77 Criss-cross movements

SYSTEM
SIMPLE - MAT
COMBINATION - TUE
TRIP - SET - TUE

Gross strength

While gross strength might not appear to be a prerequisite for a fencer, it is instantly recognised as a most important quality for the boxer, wrestler, or martial art practitioner. However, a scientific approach must be taken to the development of strength with a careful eye kept on strength-weight ratio. With high-intensity, or even high-extent weight training, there is likely to be an increase in muscle bulk, with an associated weight increase, that could push the competitor into a higher weight category. This might not be a desirable effect.

The performer should adopt a variety of strength training techniques. The elite performer might be a novice to weight training, hence advice must be sought as to developing an efficient lifting technique. Once this has been developed the information in chapter 3 should be used. The combat sportsman or woman should firstly consider the simple approach, then progress towards the combination or tri-set system. The boxer or wrestler, who will almost certainly require greater strength levels, must consider one of the more advanced systems using very heavy weights, in the region of 90 per cent of the one repetition maximum.

When specific peaking is required, the performer should firstly develop a level of strength endurance using a more extensive system of training, before progressing on to the intensive method for maximum strength gain.

In contests such as wrestling, it will certainly mean sustaining an almost isometric contraction for a period of time, until submission is gained, or a skill advantage position is secured. This situation must be mirrored in strength training for these sports.

Speed of limb movements

This quality, like sprinting, is an endowed one. A person is born with muscle fibres, nerve supply and blood supply, all of which help to facilitate fast movements. As an endowed quality there exists a maximum speed potential, and it is towards achieving this potential that all speed training must be directed. As speed can be affected by other components of fitness, such as strength, flexibility and skill, it must not be considered in isolation. It follows, therefore, that some of the movements described for speed endurance, such as skipping and side stepping, could also have a transfer of training effect upon the quality of speed.

In training, the combat sportsman or woman can use punch bags, shadow boxing/fencing movements, and other traditional techniques that enhance speed of movement. Probably the most rewarding avenue to explore is to work with speed balls, or over-inflated basketballs or soccer balls.

The speed ball should be familiar to all boxers. Its basic principle can be experienced by pushing a hard basketball or soccer ball against a wall. The performer should stand just slightly further away from the wall than the length of the arms, and then perform a rebound pushing movement at maximum speed. Indeed, once the performer has mastered the technique, the ball moves so quickly that it appears to be static against the wall. The level of the arms, relative to the shoulders, can be varied to bring about a desired effect.

Plyometrics should be used to develop the speed of leg movement. The bounding activities, depth jumping and medicine ball work described on pages 39-48, are ideal.

Cardio-vascular efficiency

As always, sustained running is the activity most likely to bring about the best adaptive response. The exercise period should last at least 30 minutes and those who wish to aspire to high levels of fitness should do a minimum of three sessions each week. While an early morning session is common within this group of sports, and ideal for those who wish to shed weight, it can be done effectively at any time of the day. The pace of the sustained run will vary considerably from person to person. However, good, fit, young men should aim for a sustained speed of 6-7 minutes per mile while women will, in most cases, be about one minute per mile slower.

Skill training

Skill training must be specific and related to the individual sport. Time must be spent in the organisation of the practice to make sure that it is purposeful, and sessions should be devoted to skill endurance, skill speed/power and tactics. A coach should always be present to make sure that the objectives of the practice are achieved. Full use should be made of coaching aids such as videos, instant analysis and the correction of faults. (See chapter 7.)

Training diary

The individual combat performer should be encouraged to keep a training diary, which should include both a forecast of work and the actual work performed. By documentation it is possible, at the end of a training cycle, to analyse and correct any mistakes.