

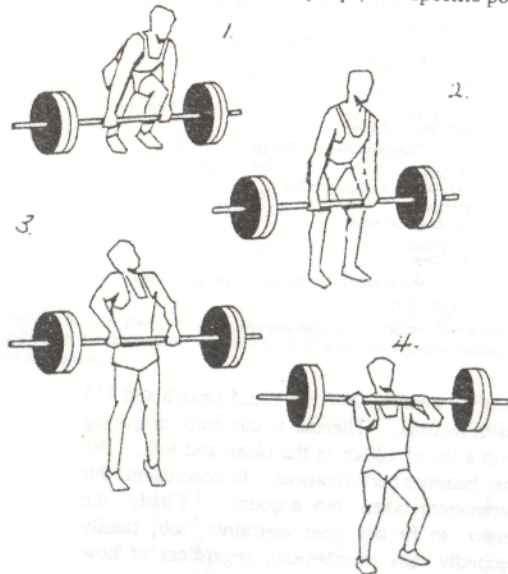
BASIC LIFTING TECHNIQUE

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POWER CLEAN

This is the single most important exercise for athletes across all disciplines. There are movements required for the athlete to learn co-ordination skills and have good mobility/flexibility in joints and muscles.

The benefits are dependent on the repetitions attempted, but have a specific effect on both fitness (many reps) and specific power gains (few reps). See table over.



Power Clean

Fig1: Grasp the bar with a shoulder width grip. Bar positioned over the base of the toes, shins touching the bar. Back flat - shoulders over bar - arms straight - look ahead.

Fig2: Initial lift is slightly backwards and upwards - the movement is predominantly legs - keep the back flat and shoulders over the bar - still straight.

Fig3: Pull straight and high angle the hips to the bar - keep close to the bar. Don't pull back - extend ankles, knees and hips

Fig4: Receive the bar with a dip at the knees. Push the elbow forward and the bar is caught on the shoulders. The bar should be returned to the floor in two movements. First to the thighs, then to the floor (initial starting position).

SAFETY:

The exercise must be taught by a coach with good lifting knowledge. The vulnerable areas for injury are the lower back. A weight lifting belt is also recommended. The skill should be perfected before the athlete attempts lifts which are near maxim effort below five reps.

THE SQUAT

This is the foundation on which all strength based exercises resolve.

The thighs/buttocks generate the POWER from which sprinters generate forward drive, throwers express ground reaction forces which transfer through the implement, and runners express continued cadence over medium, long and ultra distances. Squatting also contributes to isometric strength (static strength) in the lower back, particularly in the erector spine muscles which absorb impact from the ground through the legs.



The Squat

Fig 1. The bar should be placed high on the back nesting in the fleshy trapezius muscle. The feet should be placed shoulder width apart; the body erect and rigid. The eyes should focus slightly upwards.

Fig 2. The bar should be lowered in a controlled manner. The hips should not fall backwards, but the athlete should imagine they are sitting in a chair. The torso must remain rigid, back straight and chest high, chin up. The descent should stop as the thighs are parallel to the ground.

Fig 3. From the bottom position drive the hips forward ensuring that:

- the head is forced upwards;
- the back is kept flat and chest high;
- the hips continue to be forced forward and not allowed to drop back;
- the knees are kept before the next repetition is attempted

SAFETY: This exercise should be performed on flat, level floors. The floor should be strong and must be kept dry at all times. The bar must be placed on strong squat racks firmly anchored to the ground. The weights on the bar must have locking collars on the ends to secure weights.

BENCH PRESS

This is by far the most popular lift in the gymnasium and the best single exercise for increasing upper body strength. The exercise must be adapted, depending on the event ie javelin throwers and shot putters would adopt the exercise by employing a shoulder width grip to get maximum benefit from the triceps, and full range of motion from the pectoral (chest muscles).

The discus thrower might adopt the exercise employing a wider grip which would relate more to the delivery of the discus at release. The hips can be allowed to come off the bench as that would help the athlete accommodate to a power position in throws or take off position in jumps.

Bench Press

Fig1: The athlete should have both feet firmly placed on the floor, toes slightly pointing out. The head should be supported on the bench. A normal grip would be just outside shoulder width apart

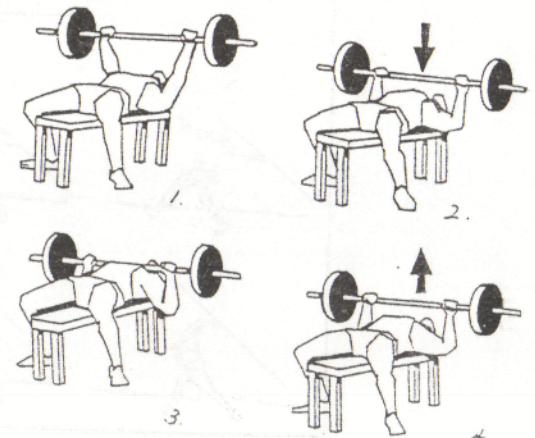


Fig2/3/4: The bar must be lowered down with control, and as the bar touches the chest, the athlete exhibits an explosive thrust upward. (The bar would touch the chest slightly above the sternum). The exercise must be a full range movement finishing in the original start position.