Principles of training
Principles of training

- **Progression**: making improvements slowly
- **Reversibility**: if you don’t use it, you lose it
- **Overload**: how the body responds to hard work
- **Variation**: avoid boredom and staleness
- **Individuality**: training to meet the needs of the individual
- **Specificity**: fit for what? to the demands of the game and the player’s style
- **Adaptation**: the effect training has on the body
- **Long-term planning**: it may take years
- **Recovery**: Both during the weekly cycle and the annual cycle
Principles of training Progression

• Too quick an increase in training load:
  • Body has no time to adapt, which may result in injury

• Basis for the progressions:
  • Moving from easy to difficult
  • Gradually increasing the frequency, intensity, time, weight and duration of the exercises, drills or sessions

• Record every training session to measure progress
Principles of training
Reversibility

• Loss of improvements produced from training
• It can be caused by:
  • Reducing the training load
  • Stopping the activity
• Long periods of inactivity should be avoided
• Recuperation is needed before returning to the previous level of training
Principles of training
Reversibility (II)

• It takes a lot longer to improve fitness than it does to lose it
• It can take between 6-8 weeks to develop a significant aerobic base, while a significant decrease can occur in 10 days of inactivity
• The best way to stay fit is never to be unfit!
Principles of training Overload

• Increased the specific demands on the body
• Use overload by adjusting:
  – **Frequency**: Number of training sessions per week/month/year, number of repetitions of a particular stroke within a training session
  – **Intensity**: Level of exercise (high = 80% of maximum level, low = 50%)
  – **Time**: Duration of training, (not the rest intervals!)
  – Type, quality and quantity
Principles of training
Variation

• When training is dull ---> danger:
  • Lack of concentration, poor performance, mental burn out, more possibilities of injury

• Vary activities and training routines:
  • Change the training site
  • Incorporate friendly competition
  • Work on different aspects of performance

• When training becomes dull, change it!
Principles of training Variation (cont.)

- Hard sessions should be followed by easier ones
- Work should be followed by rest and recovery
- Long workouts should be followed by short ones
- An intensive session should be followed by a relaxed one
Principles of training
Individual differences

• Factors which affect individual fitness:
  • Hereditary factors
  • Age and lifestyle
  • Training and fitness level
  • Illness, injury and diet
  • Rest and recovery

• Change the programme as the player grows and develops
Principles of training
Specificity

• The training programme must suit the specific demands of tennis and of the player
• Tennis requires short bursts of intense work interspersed with frequent periods of rest within a long period of intermittent physical effort
• Simply playing tennis will not provide the workloads needed
Principles of training
Adaptation

• Muscles, tendons and ligaments adjust to the stresses caused by the training
• The body adapts slowly
• Start by working within the fitness levels of the players
Principles of training
Adaptation (II)

• Types of adaptation:
  – Improved circulation, respiration and heart function
  – Improvements in strength and muscular endurance
  – Tougher bones, tendons and ligaments
Principles of training
Long-term planning

• Needed to sustain the effort and commitment over a period of years to reach high achievement level
• Plan short-term and mid-term goals that will lead to the long-term objectives
• Discuss and agree a realistic training plan
• Each session should have a value for the player
Principles of training
Recovery

• The effect of training is to destroy tissue, there will be little or no adaptation if training occurs every day

• There are two types of recovery:
  – Active recovery: other sports, etc.
  – Rest recovery: no activity