



INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

# SPORTS TRAINING PLANNING

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# The beginnings of planning training

- Greek athlete Milon who implemented the principle of systematic planning as early as in the 6<sup>th</sup> Century BC
- **Hans Selye's model**, known as the **General Adaptation Syndrome** which was first used by the athletic community in the late 1950s.
- ***eustress***, which denotes beneficial muscular strength and growth  
***distress***, which is stress that can lead to damage, disease, and necrosis of tissue.

# Periodization of sport training

- Periodization is a **concept**, not a model. It is a systematic attempt to gain control over training adaptive responses while preparing for a competition.
- **Periodization** is an organized approach to training which involves progressive cycling of various aspects of a training program during a specific period of time.
- In the periodization, the training process is distributed **in time intervals**, the magnitude of which may range from days to weeks, months or even years.
- During each of these time intervals, a particular element of performance is accented (e.g physical fitness, technique etc.)

# Macrocycle

- The most recurrent cycle
- Not tied to a calendar year

Period	Main task of period
Preparatory	Developing fitness and training
Pre-competition	Tapering of performance
Competition	Maintaining high level of performance
Transition	Physical and psychic recovery

A traditional periodization scheme plans for one or few peaks ,,peak,, is the aim of sports training (MS, game, etc.)

- Mono-cycle (World Championship or Olympic Games)
- Bi-cycle (athletics)
- Tri-cycle (tennis)
- Multiple-cycle (competition in sports games)

## Mono - cycle



## Bi - cycle



# Preparatory phase

- During this stage, the athlete gains required level of **fitness and technical quality** for the following periods.
- **Analytic-synthetic character**
- Two periods



The first part is usually analytic, the training of motor abilities and technical and tactical skills is trained separately, the training mode is general and the load varies from low to medium, aiming at continuous development of performance.



In the second part of this period, individual components are trained together, it is necessary to start to apply special training means; load is more intensive.

# Pre-competition phase

- This period is included about **2 or 4 weeks before competitive period (season)** and it should not be very long because it may result in decrease in motivation
- The main task is **increasing performance**
- The main principles of training in first transition period are:



Decrease in training volume



High quality of training process



Sufficient time for rest and recovery



Most training exercises are specific



Check races or competitions



# Competitive phase

- The main aim is to demonstrate the **maximal level of performance**
- During season, the athlete usually competes in top, most important or second-level competitions.
- In individual or endurance sports, this period is usually divided into two parts.
- In sports games only one part.
- Sports shape can be kept for about 2 or 4 weeks, therefore **tapering** for sports shape should be implemented **for the main race** only or twice during a long race season, with some recovery periods included between the periods of sports shape.

# Transition phase

- **relaxation periods**
- This period usually lasts between 2 and 6 weeks, depending on the length of pre-competition and competition phase.
- Transition period is characterized with:
  - ➡ Decrease in training load (intensity, volume, frequency).
  - ➡ Training is based on general training means, however, it should be varied.
  - ➡ Without competition.
  - ➡ Attempt to maintain acquired level of fitness.
  - ➡ Psychological recovery.

# Training cycles

basic components of periodization

- **Macrocycle (2 months - 2 years)**
- **Mesocycle (2 – 6 weeks)**
- **Microcycle (1 week)**

# Microcycle

- Microcycle is probably the most **important tool** in the planning of training.
- MiC is a group of **several training units**.
- **Struktura a obsah** týdenního mikrocyklu je určena hlavním tréninkovým úkolem daného období RTC

## MiC type:

Opening

Developing (intensification)

Stabilization

Checking

Tapering

Racing

Recovery

# Mezocycle

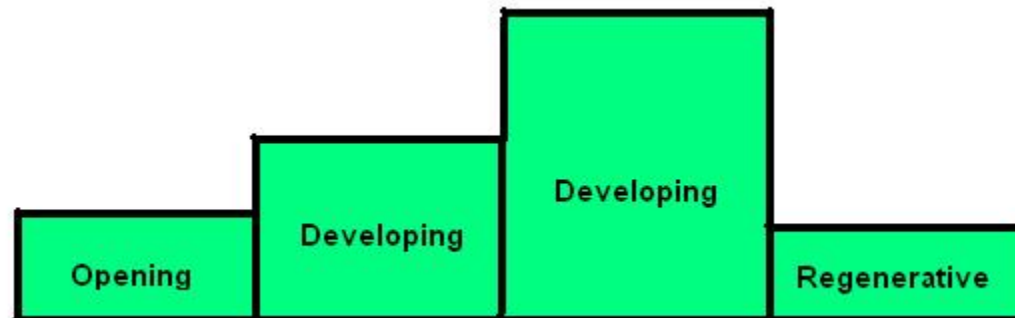
- Partially correspond with parts of the macrocycle
- **Opening mezocycle** is used at the beginning of macrocycle.
- **Basic MeC** is the main type for preseason
- **First transition MeC** lasts for the whole **first transition period**.
- **In-season MeC** is the basic type for in-season.
- **Recovery MeC** contains a higher number of rest MiC.

Experience has shown that **three weeks of increasing training load** represents the usual **limit of positive adaptation** and the human ability to **tolerate graded stress** without signs of overtraining and fatigue accumulation.

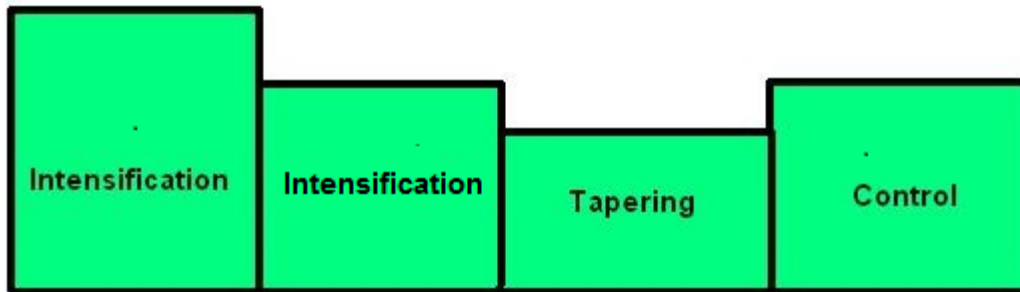
MeC of the opening type for preparatory phase



The basic type of MeC for preparatory phase



## MeC of the pre-competition phase



## MeC type for Season of individual sports



## MeC type for Season of games



# Makrocycle

- Create a system of annual training plan based on competition schedule and set the duration for individual periods.
- The set of objectives for individual periods of annual macrocycle and for shorter time periods.
- Set the proportion of general, special and competition training means (for macrocycle as well as for periods).
- Set the number of training units.
- Set load volume and intensity for annual macrocycle and distributing load into individual periods.





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Thank you for your attention