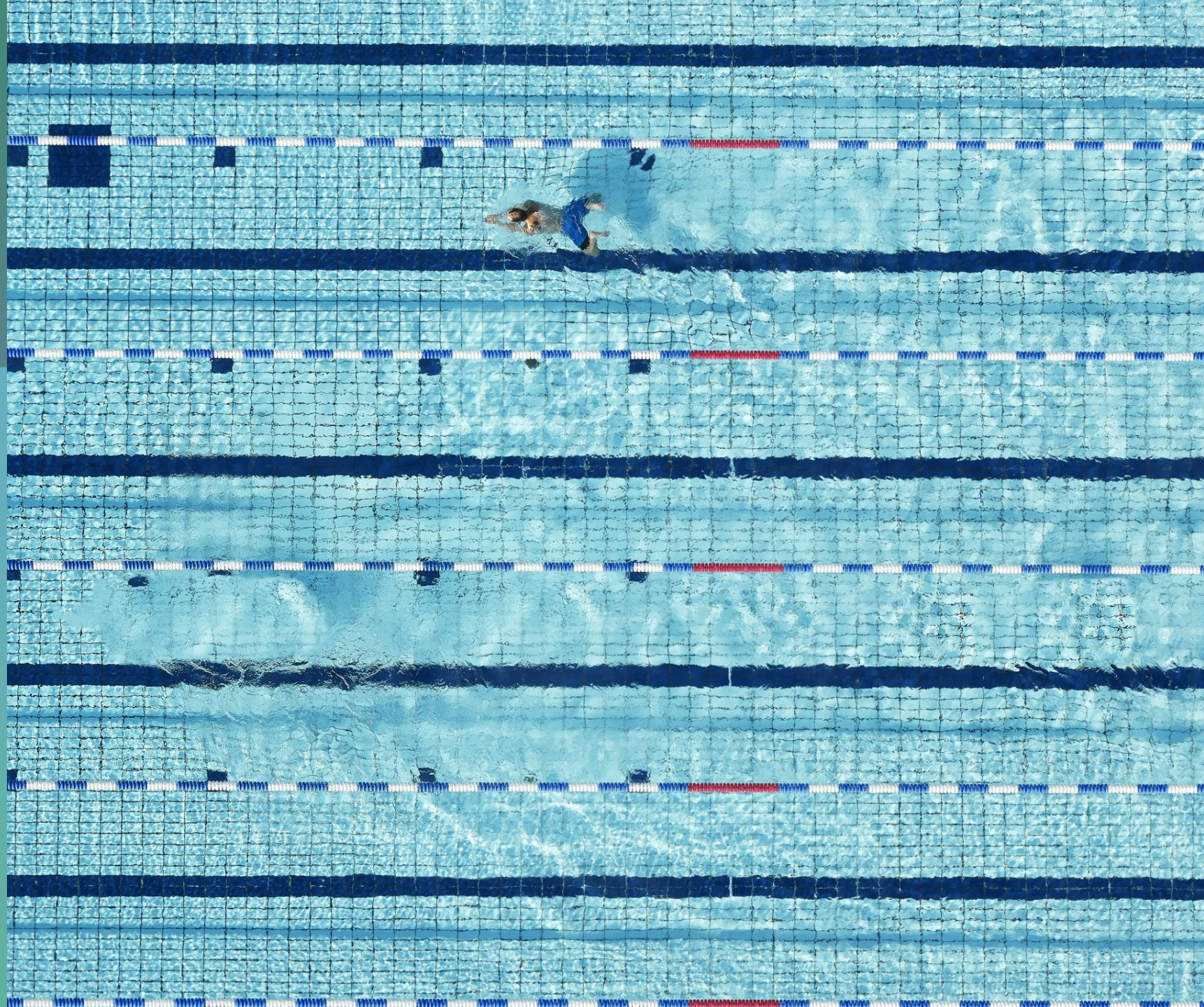


VERONIKA
POPELKOVÁ

STRENGTH TRAINING
AND CONDITIONING

SWIMMING





PHYSICAL DEMANDS

- Swimmers are often tall , big upper body, hands, low number of fat
- swimming athletes require elements of power, speed, and endurance to reach their performance potential
- It is a full-body sport and requires coordinated activation of muscles in legs, the core, and the upper body with virtually every stroke that is taken
- Swimming is a non-weight-bearing sport

SEASON

- We divide the annual training cycle into four periods
- preparation period – rest is followed by a return to preparation. The number of kilometers covered slowly starts to rise, elements of technique repair and training are included, and strength training based on the principle of endurance and strength development (for example, running, circuit training, gym), compensatory exercises is included
- pre-race period – we start to move from volumes to medium distances, in strength training we move more to the development of strength and speed
- racing season - in terms of training, we switch between sprints and starts, turns and exits, the same applies to strength training, where we include lifting the maximum weight, or running sprints and losses on command.
- after the end of the racing season comes the off season
- The weekly training cycle consists of approximately 6 training sessions per week (two-phase three times a week and one-phase training twice a week. We include conditioning training approximately 3 times a week plus compensatory exercises

PREPARATION IN THE OFF-SEASON

- After the peak of the season comes a rest for most swimmers. The peak of the season can be in the winter (around Christmas 2 weeks) after the Czech championship or in the summer after the championship (3-4 weeks)
- Aktiv – running, walking in the mountains, cycling, skating
- Pasiv - lying by the sea

INJURIES

- The most common injury swimmers shoulder's and breaststroker's knee
- torn muscles
- As prevention against injury, we can include dynamic warm-up before training, static stretching after training, compensatory exercises (at least once a week), massages and other regenerative elements.
- Strength training can address strength and flexibility imbalances and reduce the risk of injury.

Z D R O J E

- [ijerph-19-05369.pdf](#)
- [PyneandSharp2014.Physicalandenergyrequirementssofcompetitiveswimmingevents.pdf](#)
- [Physical-and-Energy-Requirements-of-Competitive-Swimming-Events.pdf](#)
[\(researchgate.net\)](#)