



# Canoe slalom

# Slovak canoe slalom paddlers



- Michal Martikán
- Elena Kaliská
- Peter Hochschorner
- Pavol Hochschorner
- Jana Dukátová
- Alexander Slafkovský
- Matej Beňuš

Sport held in natural and artificial rivers

Originated in Switzerland in 1933 as a summer alternative to slalom skiing

Summer Olympics Sport

First appearance at the Olympics in 1972

Slovakia hold the record for most gold medals in Canoe Slalom at the Olympic Games.

The only three people to claim more than three medals in the discipline at the Games are all Slovakian - Michal Martikán (two gold, two silver, one bronze) and twins Pavol and Peter Hochschorner (three gold and one bronze).

The Hochschorners finished on the podium in the MC2 at four consecutive Olympic Games - 2004, 2008, 2012 and 2016.



18-25 gates (6 or 8 must be upstream gates): green (downstream) or red (upstream)

80 to 120 seconds

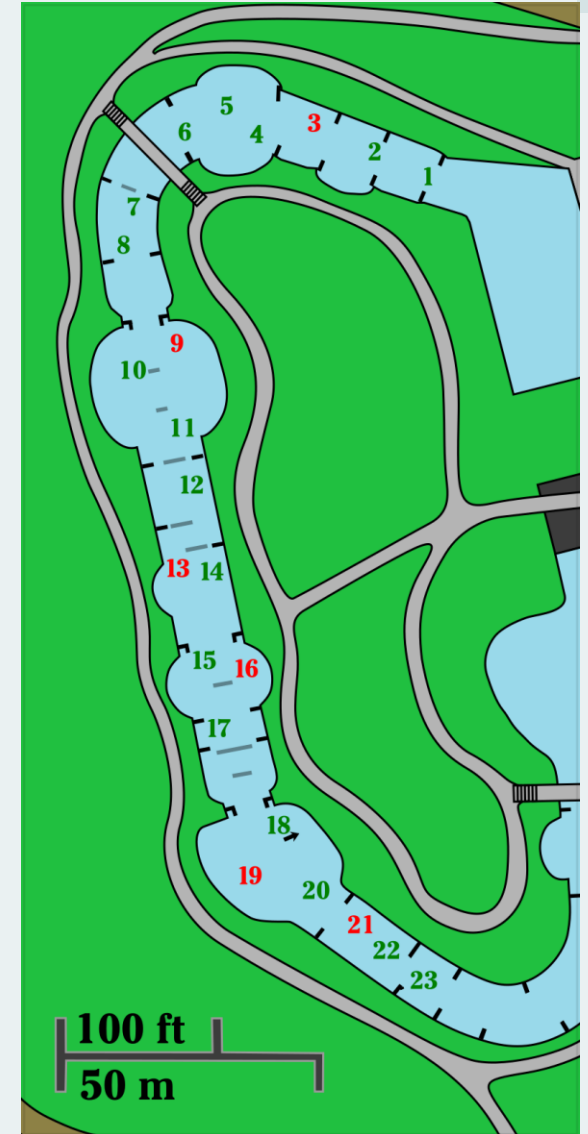
300 m courses

Performance is determined by the time to complete the course plus penalties for touching or missing gates

Two types of boat:

canoe (C): a single-blade paddle, athlete is strapped into the boat with their legs bent at the knees and tucked under their body

kayak (K): double-bladed paddle, athlete is in a seated position in kayak.





There are five events within canoe and kayak programme with both men and women contesting the kayak and canoe singles (WK1, MK1, WC1, MC1); there is also mixed canoe doubles (XC2).

Kayak Cross programme consists of women's kayak (WX1) and men's kayak cros (MX1).

The Olympic programme currently features four classes MK1, WK1, MC1 and WC1.

Kayak Cross will make its debut at the 2024 Olympic Games in Paris.

# Physical demands

## Muscular Strength and Power

- Upper limb muscles and trunk
- Muscular strength to paddle effectively
- Power for explosive movements during gate navigation and rapid acceleration

## Endurance

- Length of races around 90 to 110 seconds: high-intensity effort
- Aerobic and anaerobic endurance for sustaining performance

## Core Stability and Balance

- Dynamic water environment, changing water conditions

## Agility and Coordination

- Navigating through gates - precise movements, quick adjustments

## Anaerobic Capacity

- Short intervals of intense effort
- Acceleration between gates

## Flexibility and ROM

- Paddling techniques, efficient strokes

## Mental Toughness and Focus

- Slalom courses are challenging and unpredictable
- Mental resilience to handle pressure, make quick decisions, stay focused

## Technical Skill

- Gate techniques - upstream & downstream
- Precision and timing

# Year-long training program

Year-long canoe slalom training program is designed to develop the technical skills, confidence and fundamental habits necessary for long-term progression and enjoyment of the sport.

Training programs often include a mix of on-water practice and land-based training to build muscular strength and endurance specific to paddling.



## **Pre-Season (November – February)**

**Strength and Conditioning:** Intensive gym sessions to build power, strength, and endurance.

**Technical Skills:** Indoor pool sessions to refine stroke technique and roll efficiency.

**Planning:** Setting goals and outlining the competition calendar

## **Spring (March – May)**

**Water Time:** Transition to outdoor water as weather permits, focusing on technique and course navigation.

**Conditioning:** Maintaining strength while increasing on-water endurance.

**Competitions:** Start of the competitive season with national selection races.

## **Summer (June – August):**

### **Peak Competition Phase:**

Participation in international competitions, aiming to peak for World Cups and Championships.

**Tactical Training:** Focus on race strategy and mental preparation.

**Recovery:** Implementation of active recovery protocols post-competitions.

## **Autumn (September – October):**

**Reflection:** Analysis of performance from the competitive season.

**Technique Tuning:** Addressing any technical weaknesses identified during competitions.

**Cross-Training:** Performing other sports to maintain fitness and prevent burnout.

# Off-Season (November – December):



- **Rest and Recovery:** Take time off from intense training to allow the body to recover.
- **Cross-Training:** Stay active with low-impact activities like cycling or swimming.
- **Mental Preparation:** Work with sports psychologists to prepare mentally for the upcoming season.

Throughout the year, elite athletes also focus on:



**Nutrition:** Tailoring their diet to training demands to optimize performance and recovery.



**Equipment:** Regularly testing and adjusting equipment for optimal comfort and performance.



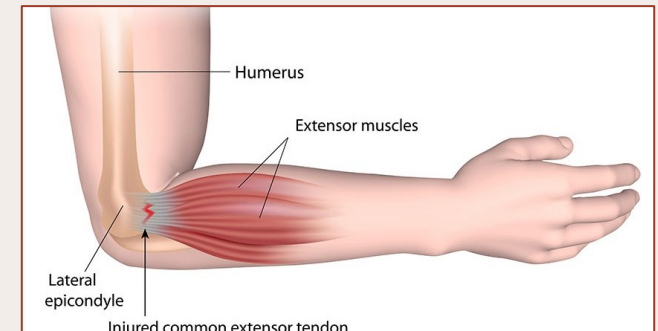
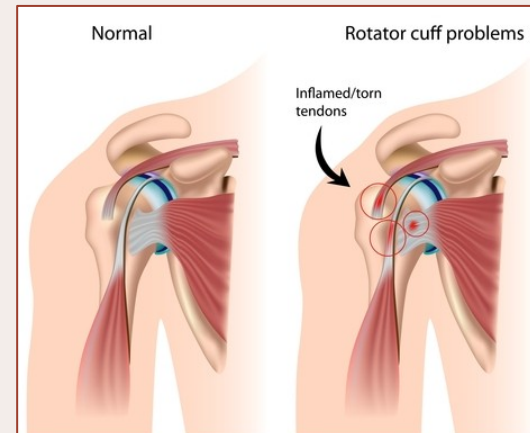
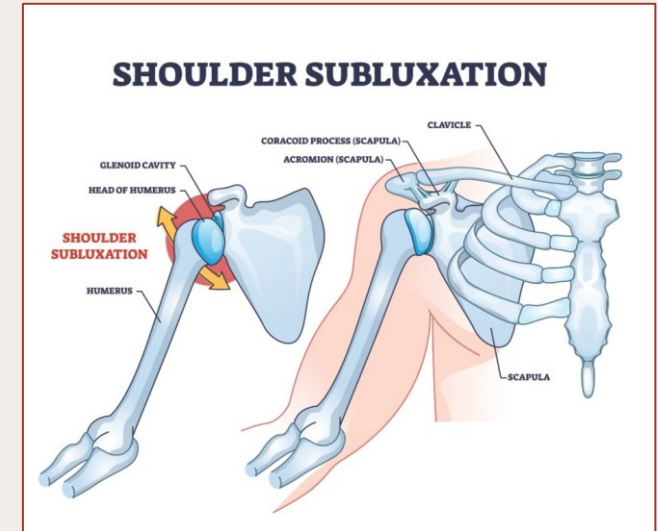
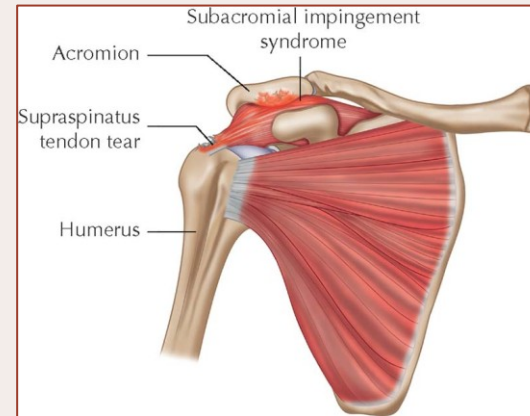
**Video Analysis:** Using video footage to analyze technique and identify areas for improvement.

# Strength Training and Conditioning

- Pre-competition season
- Upper body - shoulders, arms, trunk, back
- Direct Improvement → helping the muscles generate more force while kayaking
- Indirect Improvement → providing better resiliency to injury during kayaking

# Injury and prevention

- Shoulder
  - Subacromial Impingement
  - Rotator Cuff Tendinopathy
  - Humeral Subluxation
- Elbow
  - Lateral Epicondylitis (Tennis Elbow)
  - Insertional Tendinopathies
- Forearm and Wrist
  - Tenosynovitis
  - Distal Triceps and Biceps Injuries
- Back problems
- Acute Trauma



# References

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- [Slalom Technical Progression Guide: A Video Resource Tool | Access or download here \(britishcanoeingawarding.org.uk\)](http://britishcanoeingawarding.org.uk)

Thank  
you

