



## ANNUAL REPORT 2016 – 2017 of the UIAA Medical Commission corresponding member MUDr. Ivan Rotman, Czech Society for Mountain Medicine

During the year 2016 first aid workshops for mountaineering instructors continued to be organised by the Medical Commission of the Czech Mountaineering Association (CMA) and led by Dr. Jana Kubalová.

In September 2016, the [1st International Mountain Medicine Course](#) in the Czech Republic, approved by the UIAA and ICAR Medical Commission, organized by Dr. Kristina Höschlová was finished (lecturers: Dr. Emmanuel Cauchy, Dr. Dominique Jean, Dr. Lorenzo Introzzi, Dr. Jean Marc Bertrand, Dr. Johan Holmgren, Dr. Pascal Zellner, Mgr. Ivana Sikulová, PhD., Dr. Jana Kubalová and mountain guides UIAGM Karel Kříž, Vojtěch Dvořák and Petr Giacintov). [Sixteen participants](#) received Diploma in Mountain Medicine. In 2017 the [2nd International Mountain Medicine Course](#) in the Czech Republic starts in March and for September Dr. Höschlová proposes [Mountain Medicine Course for Mountaineers](#).

The 27th Pelikán's seminar „Medical Aspects in Mountaineering – Diagnostic and Therapeutic Methods in Mountains” was organized by Dr. Jana Kubalová. Over 60 participants have heard 26 presentations given by 16 lecturers (detailed report by Dr. Lenka Horáková in English attached and [seminar proceedings](#) (1046 pages) on CMA and Czech Society for Mountain Medicine websites are available).

Dr. Jana Kubalová (President of the Medical Commission and Vice-President of Czech Society for Mountain Medicine) organized herself two special sections at two international medical conferences in the Czech Republic: on [accidental hypothermia](#) 28. 1. 2016 and on [wilderness medicine](#) 21.-22. 4. 2016 (guest speakers Dr. Fidel Elsensohn, Dr. Anna Jarosz). Moreover, she gave a lecture [“Lung at high altitude”](#) at the conference of the Czech Society of Sports Medicine and talked about the [avalanche medicine](#) on radio. Ing. Ladislav Sieger, PhD., Dr. Kubalová and Mr. Michal Lollok arranged several workshops and published widely on topics of health and safety problems and first aid in mountain and wilderness medicine.

In 2016, members of our Society attended ICAR MedCom Annual Meeting in Borovets, BExMed (Deutsche Gesellschaft für Berg- und Expeditionsmedizin) Mountain Medicine Conference in [Garmisch-Partenkirchen](#) as well as other medical conferences in the Czech Republic.

I am completing the [homepage](#) of the Czech Society for Mountain Medicine and sorting the seminar materials from the years 1984 to 2016. In summer I was asked to write an article [“Acute Mountain Sickness – Treatment and Prevention”](#) for Vaccination and Travel Medicine Journal.

Dr. Lenka Horáková minutely reviewed the First-aid handbook of Indian Mountaineering Foundation sent for appraisal to UIAA Medical Commission.

I am very sorry that I cannot take part in this year UIAA MedCom Meeting and mountain medicine conference in Kathmandu and I wish you all a nice time, not only during the meeting.

MUDr. Ivan Rotman, President of the Czech Society for Mountain Medicine ([www.horska-medicina.cz](http://www.horska-medicina.cz)).  
Contact: CZ-407 13 Ludvíkovice 71, Czech Republic. E-Mail: [i.rotman@volny.cz](mailto:i.rotman@volny.cz), [www.rotman.cz](http://www.rotman.cz),  
2. 3. 2017

## 27th Pelikán's Seminar 2016 „Medical Aspects in Mountaineering“

The Medical Commission of the Czech Mountaineering Association, The Czech Society for Mountain Medicine and The Medical Commission of the Slovak Mountaineering Association organized together on 29th - 30th October 2016 the “27th Pelikán's Seminar”. This traditional meeting is held in honour of Dr. Jiří Pelikán who lost his life on ascent to Annapurna in 1988. This year it took place in Moravian Karst, in a part of the Czech Republic which is famous for its cave systems.

More than 60 participants and lecturers had an opportunity to enjoy 26 well prepared lectures. The main topics are quite long-established: mountain and travel medicine, wilderness medicine, first aid and rescue techniques in the mountains, climbing trauma and accidents, frostbites and hypothermia, high altitude sickness and avalanche accidents; for the first time Diploma in Mountain Medicine and a point of law had become a hot topic. The last but not least was a report from international congresses and other professional meetings.

Just before the main programme, on Friday 28th October, there was a unique chance for public to participate on two events. First of all, the Czech Mountaineering Association organized a workshop on via ferrata “Na Víru” which was focused on climber's safety and rescue techniques. The second course was first aid for mountaineers organized by the Medical Commission. This course was very popular - at the end 19 participants had an opportunity to learn what to do in case of an accident, especially in a rocky terrain, where still the professional rescue services in the Czech Republic can reach relatively easily.

The official programme commenced on Saturday with a speech held by Dr. Jana Kubalová, the chairman of the Medical Commission and the main organizer of the whole meeting. Apart from welcoming words, she summed up some important moments of the year 2016.

There is a list of subsequent lectures:

1. **Dr. Bedřich Kala** is a doctor of a speleological rescue service for Moravia and as a special guest of the meeting he talked about **Speleological rescue service – present facilities for underground rescue**. He described current options and also some challenges rescuers must face. On several practical examples, he could show how speleological rescue team is integrated with other teams.

2. **Dr. Jana Kubalová** presented a paper based on the official guidelines published in the journal High Altitude Medicine and Biology: **Guidelines for prophylaxis and therapy of high altitude sickness - up to date**. She presented the most important groups of drugs, their effects, benefits, and side effects when used in high altitude on principles of EBM.

3. **Dr. Lenka Horáková** focused on an often neglected topic of **Rheumatic diseases in the wilderness** - particularly rheumatoid arthritis, ankylosing spondylitis, and Raynaud's phenomenon. Although there is not much evidence about the way how can high altitude influence the activity of the rheumatoid illness and also the question of increased manifestation of acute mountain sickness and frostbites is unclear. On the other hand, high altitude most likely doesn't activate inflammatory reaction and a positive impact of aerobic and strength exercise, natural for mountaineering, can improve the overall activity of the disease. Moreover, good mental health and positive mood has got a positive influence on immune system. As a conclusion, mountaineering is not contraindicated, contrarily it might be a recommended sport for some groups of patients.

4. **Ing. Juraj Rokfalusy**, a delegate from the Medical Commission of the Slovak Mountaineering Association presented a very interesting case report: **International rescue co-operation in High Tatras**. Several hours long rescue operation was organized to help an injured Polish climber after a fall in Polish Tatras. The whole accident was complicated by severe hypothermia. At the end, not only Mountain Rescue Service from Slovakia and Poland came to help but also a police helicopter and a team from the Severe Accidental Hypothermia Centre in Krakow.

5. **Martin Honzík, DiS.**, a member of the Medical and Methodical Commissions of the Czech Mountaineering Association delivered a speech regarding **Snow profile versus avalanche accidents**. He described a software called "SnoProfiler", where anyone can find illustrated professional snow profiles from many regions all over the world and can extract all sorts of information from it. Using this tool, he analyzed some most important avalanche accidents of this season and concluded, that in all occasions the terrain was very unstable and the avalanche risk was high.

6. **Dr. Ivan Rotman** presented **News in mountain medicine and mountain rescue**, a report on the 24th International Conference for Mountain Rescue Medicine in Innsbruck. His overview covered thoroughly many topics.

7. **Dr. Kristina Höschlová** described a very interesting **Case report from 8000 m peak** and also two other differential diagnostic conundrums in high altitude. This presentation opened very lively discussion.

8. Also **PhDr. Ing. Martin Pospíchal** dealt with topic regarding very high altitudes and focused on Canadian study about **Psychological training of mountaineers** before 8000-meter climb. He also asked two Czech climbers about their opinion. Both elite mountaineer Radek Jaroš and experienced UIAMG guide Karel Kříž agreed with the study conclusions.

9. **RNDr. Jan Pala, PhD.** presented as usual **News in avalanche prevention**. Not only theoretically but also practically he showed the newest avalanche airbag packs, avalanche transceivers (Arwa Axis and PEEPS Micro) and probes (PEEPS iProbe), an electronic ski finder and also a new all-purpose ski, climbing and cycling helmet with a Recco device by UVEX.

10. **Mgr. Marie Lollok Klementová** acquainted the audience with **Statistics regarding accident and injury rates in the Alps**, published annually by Austrian Alpenverein. In the year 2015, there were nearly 8000 injured and almost 300 victims suffered a fatal trauma (only 11 of them came from the former Eastern Bloc). The most hazardous sport is hiking, during which the most often cause of death is a fall or a slip, but sometimes even a heart attack. The reason for a fall is usually a poor decision making, a loss of concentration or an inappropriate equipment. Apart from hiking, there is a significant morbidity and mortality related to glacier mountaineering and via ferrata climbing.

11. **Dr. Kristina Höschlová** introduced **Diploma in Mountain Medicine in the Czech Republic**, which had been organized by Kristina for the first time this year in our country. This course had 3 parts: a winter and a summer part and a practice in a helicopter training centre of Bergwacht in Bad Tölz. In 2017 the second class will be held.

12. The next presentation by **Dr. Kristina Höschlová** described **BASE jumping as a new adrenaline phenomenon**. BASE is an acronym which stands for Buildings, Antennas, Spans, and Earth - the four usual places from where BASE jumpers can jump. Unfortunately, we don't have reliable statistics regarding injuries and deaths associated with this sport because these jumps are illegal and the victims do not report their accidents. These casualties represent quite a challenge for rescue teams as they are often seriously injured and stuck in a difficult terrain.

13. **Dr. Jaroslava Říhová** is a great specialist in **Frostbites** and she gave us an up-date on the new classification published by Dr. E. Cauchy and put emphasis on the fact, that early a commencement of the treatment is crucial.

14. **Dr. Jan Pala, PhD.** is a chairman of the Commission of the Traditional Alpinism and he presented a **Guide how to teach children skiing in backcountry terrain safely**. According to his opinion, a good start for children is cross-country skiing, that can help them to gain a balance and get used to “feeling the skies”. The next step is down-hill skiing, but before they can try skiing off-piste, they should be able to move around on red and even black pistes confidently. It is essential to teach children how to use avalanche transceiver, shovel, and probe, and also how to read the terrain. All little skiers should wear goggles, a helmet, a back protector, and their ski poles shouldn't have straps.

15. **Dr. Martin Czinner** is a trauma surgeon and he assessed **Mountaineering accidents in Liberec region in 2015-2016**. Overall there were 14 injured recorded, 4 of them were under direct threat to the life and 3 accidents happened in a climbing gym! If a victim falls on lower extremities, predominantly we can see lesions of lumbar spine and heel bones. Martin gave more details of 4 mishaps and their causes: a fall during abseil, an injury because of a fall after an incorrect tying up to the rope, a failure of a “Partner check” and an accident because of snapping off a hold.

16. Another analysis of a climbing mishap presented **Martin Honzík, DiS.**, namely **An accident during abseil**. The cause of this accident was improper closing of a buckle on a new type of a harness.

17. **Avalanche accidents in the winter season 2015/2016 in Slovakia** were summed up by **Mgr. Ivana Sikulová, PhD.** This particular season had precipitation amount under average with big temperature fluctuations. Most of the avalanche accidents happened when the risk level was on a grade 2. In Slovakia, there were 13 victims of avalanches, just two of them were completely buried and none of these two survived. Iva described all these accidents and mentioned risk factors, which they had in common: underestimation of the moderate avalanche risk level (grade 2) and uneven distribution of the snow thanks to strong wind, inadequate avalanche equipment, solo skier and ignoring warnings issued by Mountain Rescue Service.

18. **Dr. Kristina Höschlová** gave an attractive description of the **Helicopter Rescue Service in Europe and in the Czech Republic**. Kristina herself has got a great experience in helicopter rescue at home but also in France and Switzerland. On the 1st January 2017 the structure of helicopter rescue service changed and that puts in front of us many questions regarding organization and patients' safety during rescue operations not only in the mountains and at the rock faces.

19. **JUDr. Jiří Žák** opened on Sunday a very relevant theme of a **Doctor and the Mountains: The Legal Issues**. He addressed 3 main questions: 1/ a drug prescription for travelers for potential future usage, 2/ a liability of a non-medic for administering drugs to other members of an expedition, 3/ the legal status of a doctor on an expedition. In the laws of the Czech Republic, this legal issues are not very clear and it is governed by various acts. In the future, Dr. Žák will co-operate with the Czech Society for Mountain Medicine in preparation of some important legal guidelines.

20. A lecture and a workshop on **Kinesiotaping in the mountains** was prepared by **Dr. Lenka Horáková**. She presented some basic techniques and also several practical applications of this method which can be used in acute injuries as well as in chronic musculoskeletal problems.

21. **Dr. Jana Kubalová** presented **Innovated AVRC - literature up-date** on the base of the ERC GL 2015. The aim of the Avalanche Victim Resuscitation Checklist is to help the professional and voluntary rescuers in decision making in victims, in whom there is a chance to save their life. The key concept is not to underestimate the situation. The decision of starting CPR and transporting the victim to appropriate hospital is crucial and the resolution of termination of any further rescue attempts should be done accordingly. She also mentioned important recent articles regarding hypothermia.

22. As every year, **Dr. Jan Pala** took us virtually to another attractive **Ski mountaineering region - British Columbia**. He gave some interesting details not only about the area itself, but also about its safety measures and avalanche prevention.

23. **Mgr. Dita Podhadská** introduced a course **“ZDrSEM Horal” - how to teach a laic first aid outdoors using a direct experience**. This course is for non-medical mountaineers, who want to learn first aid they can provide anywhere, in the middle of civilization or in the middle of nowhere. Dita described the course content, a feedback from attendants and even some opportunities for future development. The main themes are resuscitation, basic first aid and several problems distinctive for mountain and wilderness environment, as AMS, avalanches, frostbites, wound care or improvised transport of a victim. Everything is very practical with many simulations outdoors.

24. The last presentation was on **Mobile application “Záchranka” (Ambulance) - how to call for help on time** by **Dr. Jana Kubalová**. With a smart phone and this application anyone can call the ambulance easily and the operator can locate the victim accurately. This application provides all sorts of other information - guidelines for resuscitation and first aid, information about nearest hospital, dental surgery or the nearest AED. This app already works in the whole country, but in the future, they would like to expand its use beyond the borders of the Czech Republic.

Supporting programme:

In the evening, we had a unique opportunity to see some travellers' stories: Dr. Igor Herrmann told us about his journey in Pyrenees and Mgr. Ivana Sikulová gave us a sense of ski alpinism on Etna Mountain.

Dr. Lenka Horáková (26.2.2017), based partially on the [Report of Dr. Jana Kubalová \(pp.7-10\)](#)