AOTRAUMA

AO Competency-Based Curriculum

Course program

AOTrauma Course—Basic Principles of Fracture Management

March 14-16, 2019, Spa, Belgium

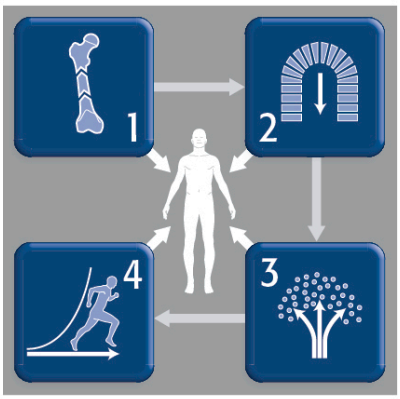
Home to Trauma & Orthopedics

Value statement

AOTrauma is committed to improve patient care outcomes through the highest quality education. We strive to combine the right knowledge and surgical skills that empower the orthopedic and trauma surgeons to put theory into practice and to improve fracture management for the benefit of the patient.

The AO principles of fracture management

Fracture reduction and fixation to restore anatomical relationships.



Fracture fixation providing absolute or relative stability, as required by the "personality" of the fracture, the patient, and the injury.

Early and safe mobilization and rehabilitation of the injured part and the patient as a whole.

Preservation of the blood supply to soft tissues and bone by gentle reduction techniques and careful handling.

Welcome

Dear AOTrauma course participant,

Welcome to the AOTrauma Course—Basic Principles of Fracture Management, which is planned and delivered to meet your needs using a competency-based curriculum approach and the AO's seven principles for high-quality education.

AO Trauma's innovative approach to education has been further strengthened as a result of the successful collaboration with the AO Education Institute in the application of state-of-the-art educational concepts in curriculum planning and all faculty development programs.

This course is one of our many educational activities for providing lifelong learning, from the Residents Education Program through to specialized Continuing Professional Development (CPD) for practicing surgeons and clinicians.

We believe that your active engagement in this course will result in improved care for your patients. Your current level of knowledge and skills will be challenged by the activities and throughout the entire event. We are confident that the combination of education principles and relevant content from our curriculum, as well as your interaction with colleagues and expert faculty will provide an effective learning experience that meets your needs.

This course is part of an overall competency-based educational program that includes many other activities and resources for self-directed learning. The educational activities in each program are developed by an international taskforce of clinical experts and educationalists and made available to you through the Education section of www.aotrauma.org.

We hope you enjoy the course and benefit from the networking opportunities it provides for you to share experiences with your colleagues.

Wa'el Taha
Chairperson AOTrauma
Education Commission

Kodi Kojima
Chairperson AOTrauma
International Board

If you enjoy the experience during your course and would like to stay in touch with the organization and its international network of surgeons, we invite you to become a member of AOTrauma. The benefits of membership, including options to get involved in new opportunities that advance trauma care are described at www.aotrauma.org.

Goal of the course

The AOTrauma Course—Basic Principles of Fracture Management teaches fundamental principles and current concepts in the treatment of injuries, incorporating the latest techniques in operative fracture management. The AOTrauma Basic Principles course is the initial step along the path of lifelong learning in the area of operative fracture management. This course mainly focuses on the basic principles of fracture management.

Target participants

The AOTrauma Course—Basic Principles of Fracture Management is targeted at physicians in surgical training but is also open to anyone else who is interested in furthering their knowledge and skills in operative fracture management.

Learning objectives

At the end of this course, participants will be able to:

- Discuss the concepts of stability, their influence on bone healing, and how to apply implants to achieve appropriate stability
- Plan a treatment based on assessment, imaging, classification, and decision making
- Apply reduction techniques in fracture management with attention to the importance of the soft tissues
- Treat diaphyseal and simple (peri)articular fractures using different application techniques
- Evaluate and recognize the special problems related to fractures in the immature skeleton, pelvic injuries, osteoporotic fractures, postoperative infection, delayed union and/or nonunion
- Plan the initial treatment of the polytraumatized patient

Course description

Online precourse self-assessment prepares participants for the course and allows the faculty to tailor the course to the needs of the participants. Before attending the course, participants are expected to complete online modules on bone healing and classification.

The course contains several evidence-based lectures, which cover the key information required. The AO Skills Lab engages participants in hands-on learning of basic principles and practical know-how needed for live surgery. With experiences such as proper tightening of a screw and feeling the difference between drilling with sharp and blunt drill bits, participants gain important surgical skills and learn about basic biomechanical concepts in a safe, instructive environment. In practical exercises participants will be trained in the application of fixation techniques. Discussing cases in small groups helps participants to understand decision-making and management skills.

After the course, an online postcourse self-assessment provides participants an opportunity to review the important topics from the course.

Chairpersons

Dan Putineanu
Brussels, Belgium

Harm Hoekstra
Leuven, Belgium

National Faculty

Ionut Caracudovici, Brussels
François Carlier, Jolimont
Michaël de Foy, Namur
Wim De Weerdt, St. Truiden
Torsten Gerich, Luxemburg
Pierre Maldague, Brussels
Maïke Reul, Brussels
Piet Reynders, Brussels
Wim Vandesande, Geel

Event organization

AOTrauma Belgium-Luxemburg
Kristin Beeckman
Phone +32 2 746 31 83
Email Beeckman.kristin@ao-courses.com

AO funding sources
Unrestricted educational grants from different sources are collected and pooled together centrally by the AO Foundation. All events are planned and scheduled by local and regional AO surgeon groups based on local needs assessments. We rely on industrial/commercial partners for in-kind support to run simulations/skills training if educationally needed.

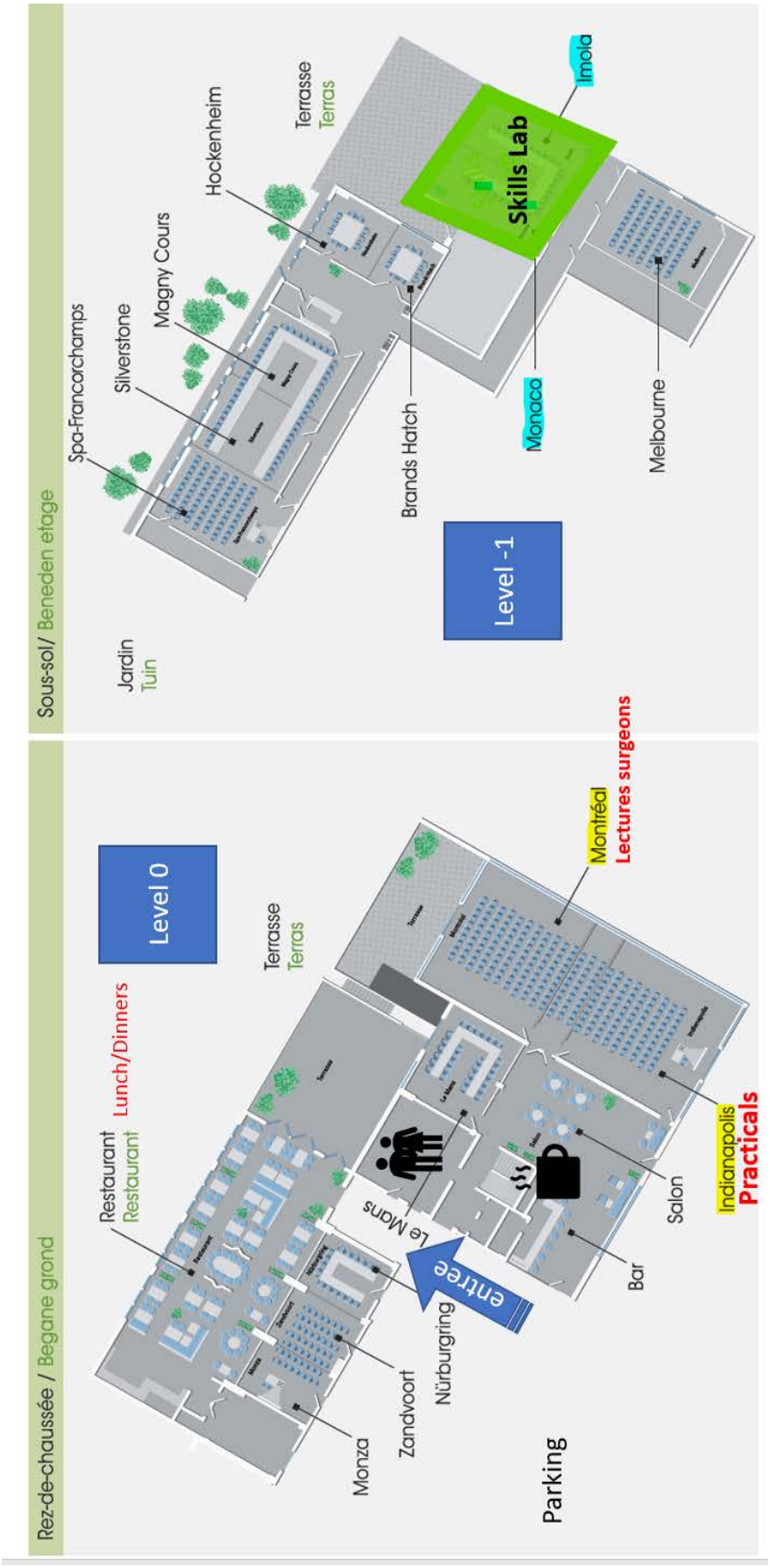
Event information and logistics

Event organization compliance
In certain countries where AO has no office but offers educational events, the AO cooperates with third party companies to conduct local organization and logistics, as well as to communicate with participants in the local language. In these cases the AO has put rules and guidelines in place (Letter of Secondment, AO Foundation—Principles of AO Educational Events) to ensure that this cooperation has no impact on the curricula, scientific program, or faculty selection.

Event venue & Accommodation for participants

Hotel Silva Spa Balmoral
Route de Balmoral 33
4900 Spa
Phone +32 87 79 32 53
www.silvahotelspabalmoral.be

Floorplan


Sous-sol/ Beneden etage
Jardin
Tuin
Spa-Francorchamps
Silverstone
Magny Cours
Hockenheim
Terrasse
Terras
Skills Lab
Imola
Monaco
Melbourne
Brands Hatch
Level -1
Rez-de-chaussée / Begane grond
Level 0
Terrasse
Terras
Restaurant
Restaurant
Lunch/Dinners
Montréal
Lectures surgeons
Indianapolis
Practicals
Salon
Bar
entrée
Le Mans
Nürburgring
Zandvoort
Monza
Parking

Day 1, March 14, 2019

TIME	AGENDA ITEM	WHO	WHERE
08:30-09:00	Registration - participants		Hotellobby
09:00-09:10	Welcome and introduction	D. Putineanu	Montréal
09:10-09:20	The AO World – from history to lifelong learning	G. Putzeys	Montréal
09:20-09:50	Bone healing and the effect of patient factors and injury mechanism on fracture management - The (soft-tissue) injury—a high priority consideration	P. Reynders	Montréal
09:50-10:15	Absolute stability: biomechanics, techniques, and fracture healing - Relative stability: biomechanics, techniques, and fracture healing	F. Carlier	Montréal
10:15-10:30	The 2018 AO/OTA Fracture and Dislocation Classification Compendium	M. Reul	Montréal
10:30-10:40	Summary and Q & A	D. Putineanu	Montréal
10:40-11:00	COFFEE BREAK		Bar
11:00-11:20	Principles of diaphyseal fracture management—what is important in treating these fractures?	W. Vandesande	Montréal
11:20-11:40	Principles of articular fracture management—how do they differ from diaphyseal fractures?	H. Hoekstra	Montréal
11:40-11:55	The use of plates in fracture fixation	I. Caracudovici	Montréal
11:55-12:10	Summary and Q & A	P. Maldague	Montréal
12:10-13:10	LUNCH BREAK		Restaurant
	LOCATION CHANGE TO SKILLS LAB		

13:10-14:10	**AO Skills Lab (part 1)** A. Torque measurement of bone screws (10) B. Soft-tissue penetration during drilling (10) C. Heat generation during drilling (10) D. Mechanics of bone fractures (10) E. Techniques of reduction – part 1 (10) 10 minutes break F. Techniques of reduction - part 2 (10) G. Mechanics of intramedullary fixation (10) H. Mechanics of plate fixation (10) J. Fracture healing (10) K. Damaged implant removal (10)	H. Hoekstra G. Putzeys P. Reynders F. Carlier M. Reul W. Vandesande I. Caracudovici P. Maldague M. de Foy T. Gerich W. De Weerdt	Imola-Monaco
14:10-14:20	BIO BREAK		
14:20-15:20	**AO Skill Lab (part 2)**		Imola-Monaco
	LOCATION CHANGE TO PRACTICAL EXERCISE		
15:25-16:25	**Practical exercise 1** **Internal fixation with screws and plates—absolute stability**	I. Caracudovici	Indianapolis
16:25-16:45	COFFEE BREAK		Bar
16:45-17:45	**Small group discussion 1** **Discussion on general principles, classification, concepts of stability, their influence on bone healing, and how to apply implants to achieve appropriate stability** Group A (F.Carlier & P. Maldague) Group B (M. de Foy – G. Putzeys) Group C (W. De Weerdt – M. Reul) Group D (T. Gerich – P. Reynders)		Montréal Magny Cours Silverstone Spa/Franc.
	LOCATION CHANGE TO PRACTICAL EXERCISE		
17:50–18:50	**Practical exercise 2** **Principle of the internal fixator using the locking compression plate (LCP)**	M. Reul	Indianapolis
18:50	End of Day 1		
20:00	DINNER		Restaurant

Day 2, March 15, 2019

08:00-09:00	**Practical exercise 3** **Intramedullary Nailing**	T. Gerich	Indianapolis
	LOCATION CHANGE TO LECTURE HALL		
09:05-09:25	Distal radial fractures – which to fix ? How to fix ?	W. Vandesande	Montréal
09:25-09:40	The tension band principle	M. de Foy	Montréal
09:40-10:00	Ankle fractures : a systematic approach to their fixation	P. Maldague	Montréal
10:00-10:10	Summary and Q & A	D. Putineanu	Montréal
10:10-10:30	COFFEE BREAK		Bar
10:30-11.30	**Small group discussion 2** **Management principles for the treatment of diaphyseal fractures** Group A (W. Vandesande- I. Caracudovici) Group B (F. Carlier- T. Gerich) Group C (M. de Foy – P. Maldague) Group D (W. De Weerdt – G. Putzeys)		 Montréal Imola Monaco Le Mans
	LOCATION CHANGE TO PRACTICAL EXERCISES		
11:35-11:45	Principles of external fixation	I. Caracudovici	Indianapolis
11:45-12:35	**Practical exercise 4** **Application of a modular large external fixator**	G. Putzeys	Indianapolis
12:35-13:35	LUNCH BREAK		Restaurant
13:35-13:55	Femoral neck & Trochanteric fractures		W. De Weerdt
13:55-14:15	Introduction to tibial plateau fractures		H. Hoekstra
14:15-14:25	Summary and Q & A		F. Carlier
14:25-15:35	**Small group discussion 3** **Management principles for the treatment of articular fractures** Group A (M. Reul – I. Caracudovici) Group B (P. Maldague – F. Carlier) Group C (W. Vandesande – M. de Foy) Group D (W. De Weerdt – T. Gerich)		 Montréal Imola Monaco Le Mans

15:35-15:55	COFFEE BREAK		Bar
15:55-16:55	**Practical exercise 5** **Fixation of a trochanteric fracture**	D. Putineanu	Indianapolis
	LOCATION CHANGE TO LECTURE HALL		
17:00-17:15	Fixation principles in osteoporotic bone—the geriatric patient	W. De Weerdt	Montréal
17:15-17:30	Management of open fractures	G. Putzeys	Montréal
17:30-17:45	Treatment algorithms for the polytrauma patient	F. Carlier	Montréal
17:45-18:00	Emergency management of pelvic fractures—a critical skill can save lives	T. Gerich	Montréal
18:00-18:15	Summary and Q & A	M. de Foy	Montréal
18:15	End of Day 2		
20:00	DINNER		Restaurant

Day 3, March 16, 2019

08:30-08:45	Forearm fractures—understanding the principles of diaphyseal and articular fractures	M. Reul	Montréal
08:45-09:45	Preoperative planning – “plan your forearm operation”	P. Reynders	Montréal
	LOCATION CHANGE TO PRACTICAL EXERCISE		
09:50-10:50	**Practical exercise 6** **Operate your plan – fixation of a 22 C1 fore arm fracture**	P. Reynders	Indianapolis
10:50-11.10	COFFEE BREAK		Bar
11:10-11:40	**Practical exercise 7** **Tension band wiring of the olecranon**	M. de Foy	Indianapolis
11:40-12:45	**Small group discussion 4** **Final case discussion on Polytrauma & Complications** Group A (P. Maldague- W. Vandesande) Group B (G. Putzeys – I. Caracudovici) Group C (M. Reul – D. Putineanu) Group D (P. Reynders – H. Hoekstra)		 Montréal Imola Monaco Melbourne
12:45-13:30	LUNCH BREAK		Restaurant
13:30-14:30	**Practical exercise 8** **Management of a type 44C malleolar fracture**	P. Maldague	Indianapolis
14:30-14:45	Perioperative infection—prevention, evaluation and management	T. Gerich	Montréal
14:45-15:05	Delayed healing—causes and treatment principles	D. Putineanu	Montréal
15:05-15:20	Violation of principles	P. Maldague	Montréal
15:20-15:30	Q&A and Summary	D. Putineanu	Montréal
15.30	End of the course		

General information

Course fee
AOTrauma Course—Basic Principles of Fracture Management: - 260 € - Belux participants
Included in the course fee are lectures, practical exercises, lunch, coffee breaks, dinners and course certificate.

Evaluation guidelines
All AOTrauma events apply the same evaluation process, either online (pre- and post-event evaluation) or/and on-site by audience response system (ARS) or paper and pencil questionnaires. This helps AOTrauma to ensure that we continue to meet your training needs.

Intellectual property
Event materials, presentations, and case studies are the intellectual property of the event faculty. All rights are reserved. Check hazards and legal restrictions on www.aofoundation.org/legal.

Recording, photographing, or copying of lectures, practical exercises, case discussions, or any event materials is absolutely forbidden.

The AO Foundation reserves the right to film, photograph, and audio record during their events. Participants must understand that in this context they may appear in these recorded materials. The AO Foundation assumes participants agree that these recorded materials may be used for AO marketing and other purposes, and made available to the public.

No insurance
The event organization does not take out insurance to cover any individual against accidents, theft, or other risks.

Mobile phone use
Mobile phone use is not allowed in the lecture halls and in other rooms during educational activities. Please be considerate of others by turning off your mobile phone.

AO Foundation—Principles of AO Educational Events

1) Academic independence

Development of all curricula, design of scientific event programs, and selection of faculty are the sole responsibilities of volunteer surgeons from the AO network. All education is planned based on needs assessment data, designed and evaluated using concepts and evidence from the most current medical education research, and involving the expertise of the AO Education Institute (www.aofoundation.org).
Industry participation is not allowed during the entire curriculum development and planning process to ensure academic independence and to keep content free from bias.

2) Compliance to accreditation and industry codes

All planning, organization, and execution of educational activities follow existing codes for accreditation of high-quality education:

- Accreditation Criteria of the Accreditation Council for Continuing Medical Education, USA (www.accme.org)
- ACCME Standards for Commercial Support: Standards to Ensure Independence in CME Activities (www.accme.org)
- Criteria for Accreditation of Live Educational Events of the European Accreditation Council for Continuing Medical Education (www.uems.eu)

Events that receive direct or indirect unrestricted educational grants or in-kind support from industry also follow the ethical codes of the medical industry, such as:

- Eucomed Guidelines on Interactions with Healthcare Professionals (www.medtecheurope.org)
- AdvaMed Code of Ethics on Interactions with Health Care Professionals (advamed.org)
- Mecomed Guidelines on Interactions with Healthcare Professionals (www.mecomed.org)

3) Branding and advertising

No industry logos or advertising (with the exception of the AO Foundation and AO Clinical Division) are permitted in the area where educational activities take place.
Sponsors providing financial or in-kind support are allowed to have a promotional booth or run activities outside the educational area with approval from the event chairperson.

4) Use of technologies and products in simulations

If case simulations are chosen as an educational method to educate skills, we only use technology approved by the AOTK System (AOTK)—a large independent group of volunteer surgeons developing and peer-reviewing new technology (more information about AOTK, its development and approval process can be found on the AO Foundation website: www.aofoundation.org).

5) Personnel

Industry staff is not allowed to interfere with the educational content or engage in educational activities during the event.

Notes