AO TRAUMA
Europe and Southern Africa

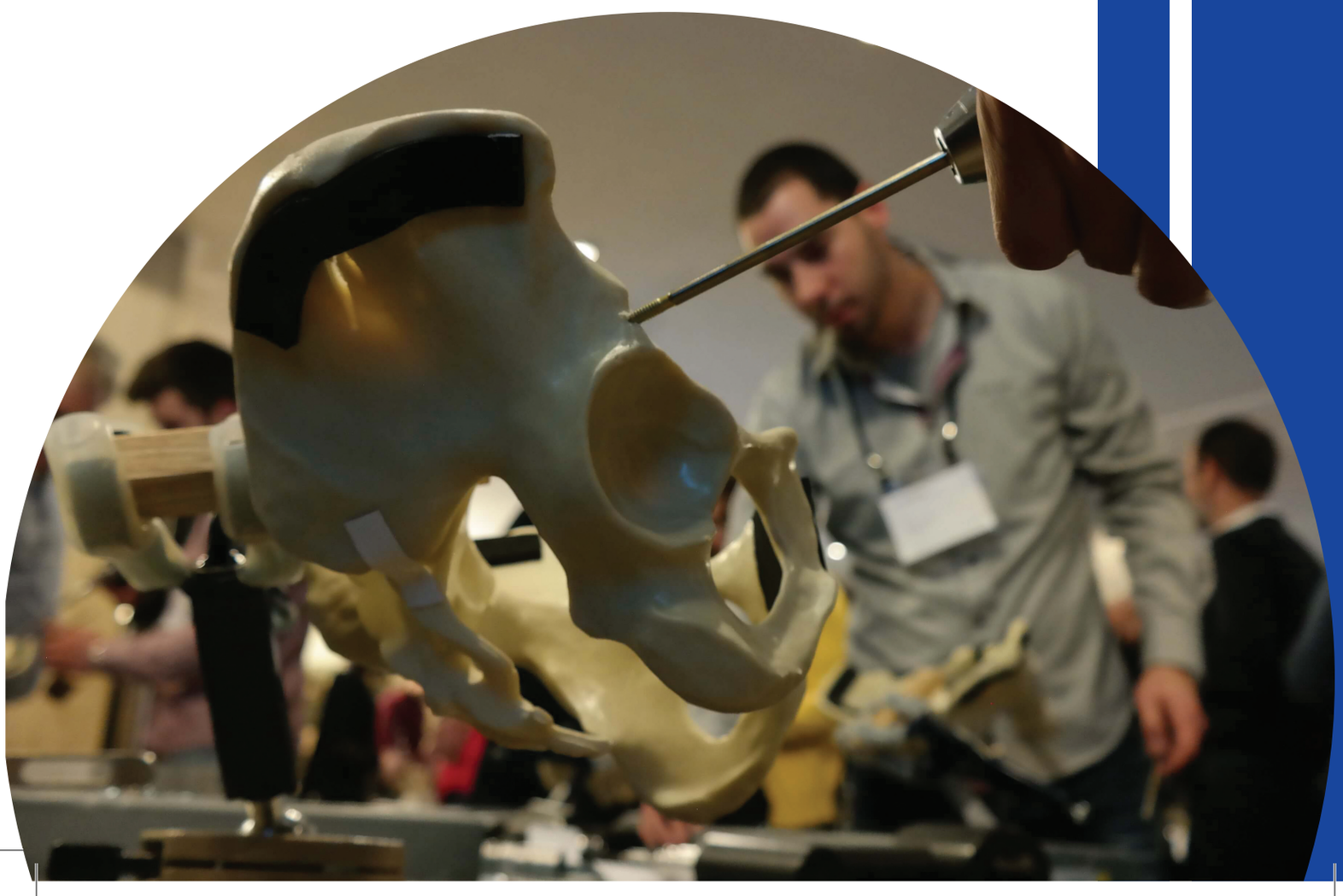
AO Competency-Based Curriculum

PROGRAM

Hybrid Course-Basic Principles of Fracture Management

1-3 July 2021

Domotel Kastri Hotel, Athens



Mission

The AO's mission is promoting excellence in patient care and outcomes in trauma and musculoskeletal disorders.

The AO principles of fracture management

1

Fracture reduction and fixation to restore anatomical relationships.

2

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

3

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

4

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

Content

Welcome
Dear AOTrauma course participant

Welcome to the AO Trauma 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

Mike Baumgaertner
Chairperson AO Trauma 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 AO Trauma. The benefits of membership, including options to get involved in new opportunities that advance trauma care are described at **www.aotrauma.org.**

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.

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

Chairperson

George C. Babis MD
Professor and Chairman
2nd Orthopaedic Department,
National and Kapodistrian University of Athens,
School of Medicine
Greece

National faculty

Darmanis Spyridon, Deputy Director, 401 General Military Hospital, Athens, Greece

Kateros Konstantinos, Director, 1st Dept. of Trauma and Orthopedics, General Hospital "G. Gennimatas", Athens, Greece

Kokkalis Zinon, Associate Professor of orthopedic surgery, Patras University Hospital, Patras, Greece

Mavrogenis Andreas, Associate Professor National and Kapodistrian University of Athens, Athens, Greece

Natsioulas Nikolaos Consultant in Trauma and Orthopaedics, Orthopaedic department, Naval Hospital of Athens, Greece

Nikolaou Vasileios, Associate Professor, National and Kapodistrian University of Athens, Athens, Greece

Panagopoulos Andreas, Associate Professor, Patras University Hospital, Patras, Greece

Stamatis Emmanouil, Director, Clinic of Reconstructive Foot and Ankle Surgery, Mediterraneo Hospital, Athens, Greece.

Tosounidis Theodoros, Assistant Professor, University Hospital of Crete, Heraklion, Greece

Tyllianakis Minos, Professor of Orthopedics and Traumatology, University of Patras, Director of the Rehabilitation Clinic for Patients with Spinal Cord Injury of the University of Patras

Thursday, July 1, 2021

TIME	AGENDA	WHO
08:00 – 08:10	Welcome and introduction	George Babis
08:10 – 08:25	The AO world-From history to lifelong learning Lecture	Minos Tyllianakis
08:25 – 08:40	The biology of bone healing Lecture	Vasileios Nikolaou
08:40 – 08:55	The (soft tissue) injury and compartment syndrome Lecture	Zinon Kokkalis
08:55 – 09:15	The AO/OTA fracture and dislocation classification compendium Lecture	Andreas Panagopoulos
09:15 – 09:30	Absolute stability: biomechanics, techniques, and fracture healing Lecture	Spyridon Darmanis
09:30 – 09:45	Relative stability: biomechanics, techniques, and fracture healing Lecture	Andreas Panagopoulos
09:45 – 10:00	Principles of External Fixation Lecture	Konstantinos Kateros
10:00 – 10:15	The use of plates in fracture surgery Lecture	Nikolaos Natsioulas
10:15 – 10:35	COFFEE BREAK	
10:35 – 12:30	**AO Skills Lab**	
	A. Torque measurement of bone screws	Spyridon Darmanis
	B. Soft tissue penetration during drilling	Nikolaos Natsioulas
	C. Heat generation during drilling	George Babis
	D. Mechanics of bone fractures	Vasileios Nikolaou
	E. Techniques of reduction (part 1)	Theodoros Tosounidis
	F. Techniques of reduction (part 2)	Minos Tyllianakis
	G. Mechanics of intramedullary fixation	Konstantinos Kateros
	H. Mechanics of plate fixation	Andreas Panagopoulos
	J. Fracture healing and plate fixation	Emmanouil Stamatis
	K. Damaged implant removal	Zinon Kokkalis
12:30 – 13:30	LUNCH BREAK	

Thursday, July 1, 2021

TIME	AGENDA	WHO
13:30 – 14:30	**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 1:** **Group 2:** **Group 3:** **Group 4:** **Group 5**:	 E. Stamatis – A. Panagopoulos G. Babis – N. Natsioulas S. Darmanis – V. Nikolaou T. Tosounidis- K. Kateros Z. Kokkalis – M. Tyllianakis
14:30 – 14:35	Location change	
14:35 – 15:40	**Practical exercise 1** Internal fixation with screws and plates-absolute stability	 Andreas Panagopoulos
15:40 – 15:45	Location change to lecture hall	
15:45 – 16:05	Principles of diaphyseal fracture management Lecture	 Konstantinos Kateros
16:05 – 16:30	**COFFEE BREAK**	
16:30 – 17:30	**Practical exercise 2** Principle of the internal fixator using the locking compression plate (LCP)	 Vasileios Nikolaou
17:30 – 17:35	Location change	
17:35– 18:45	**Small group discussion 2** Management principles for the treatment of diaphyseal fractures Group 1: Group 2: Group 3: Group 4: Group 5:	 N. Natsioulas – A. Panagopoulos G. Babis - S. Darmanis T. Tosounidis – M. Tyllianakis Z. Kokkalis – K. Kateros V. Nikolaou - E. Stamatis
18.45	End of day 1	

Friday July 2, 2021

TIME	AGENDA	WHO
08:00 – 09:00	**Practical exercise 3** Reamed IM nailing. Tibial shaft fractures-intramedullary nailing with the expert tibia nail (ETN) (with reaming)	Theodoros Tosounidis
09:00 – 09:05	Location change to lecture hall	
09:05 – 09:25	Management of articular fractures - how do they differ from diaphyseal fractures. Lecture	Vasileios Nikolaou
09:25 – 09:50	COFFEE BREAK	
09:50 – 10:50	**Practical exercise 4** Application of a modular large external fixator	Nikolaos Natsioulas
10:50 – 10:55	Location change to lecture room	
10:55– 11:10	Forearm fractures need understanding of principles for diaphyseal and articular fractures Lecture	Zinon Kokkalis
11:10 – 11:25	Preoperative planning-rationale and how to do it. Lecture	Theodoros Tosounidis
11:25 – 12:25	Preoperative planning-"plan your forearm operation" Templating exercise (in lecture room)	Minos Tyllianakis
12:25 – 13:30	LUNCH BREAK	
13:30 – 14:40	**Practical exercise 5** Operate your plan-fixation of a 22-C1 forearm fracture using the LCP 3.5 (8 and 11 holes)	Zinon Kokkalis
14:40 – 14:45	Location change to lecture hall	
14:45 – 15:00	Distal radial fractures—which to fix? How to fix? Lecture	Zinon Kokkalis
15:00 – 15:15	The tension band principle Lecture	Andreas Mavrogenis
15:15 – 15:30	Ankle fractures—a logical approach for their fixation Lecture	Emmanouil Stamatis
15:30– 15:50	COFFEE BREAK	
15:50 – 16:20	**Practical exercise 6** Tension band wiring of the olecranon	Andreas Mavrogenis
16:20 – 16:25	Location change to lecture hall	
16:25– 16:40	Femoral neck fractures Lecture	George Babis
16:40– 16:55	Trochanteric fractures Lecture	Emmanouil Stamatis
16:55– 17:10	Distal femoral fractures-management principles Lecture	Vasileios Nikolaou
17:10 – 17:15	Location change	
17:15 – 18:15	**Practical exercise 7** Management of a malleolar fracture type 44–B	Emmanouil Stamatis
18:15	End of day 2	

Saturday, July 3, 2021

TIME	AGENDA	WHO
08:00 – 09:10	**Practical exercise 8** Intramedullary nailing of a proximal femur using a proximal femoral nail	Konstantinos Kateros
09:10 – 09:15	Location change to lecture hall	
09:15 – 09:25	Tibial plateau fractures Lecture	Theodoros Tosounidis
09:25 – 09:35	Minimally invasive osteosynthesis (MIO)—when to use it? Lecture	Andreas Panagopoulos
09:35 – 09:45	Radiation hazards Lecture	Konstantinos Kateros
09:45 – 10:05	**COFFEE BREAK**	
10:05 – 11:15	Small group discussion 3 Management principles for the treatment of articular fractures Group 1: Group 2: Group 3: Group 4: Group 5:	 E. Stamatis - A. Mavrogenis A. Panagopoulos - N. Natsioulas S. Darmanis - T. Tosounidis A. Mavrogenis - K. Kateros V. Nikolaou - Z. Kokkalis
11:15 – 11:20	Location change to lecture hall	
11:20 – 11:35	Fractures in the growing skeleton-how are they different? Lecture	Andreas Mavrogenis
11:35 – 11:50	Fixation principles in osteoporotic bone-the geriatric patient Lecture	Andreas Panagopoulos
11:50 – 12:00	Implant removal-Why, when, and how? Lecture	Vasileios Nikolaou
12:00 – 13:00	**LUNCH BREAK**	
13:00 – 13:15	Treatment algorithms for the polytrauma patient Lecture	Spyridon Darmanis
13:15 – 13:30	Emergency management of pelvic fractures-a critical skill can save lives Lecture	Theodoros Tosounidis
13:30 – 13:45	Management of open fractures Lecture	Konstantinos Kateros
13:45 – 13:50	Location change to practical exercises	
13:50 – 15:00	**Practical exercise 9** Stabilization of the pelvic ring using spanning external fixator	Spyridon Darmanis
15:00 – 15:20	**COFFEE BREAK**	
15:20 – 15:35	Infection after osteosynthesis-how to diagnose and manage Lecture	Nikolaos Natsioulas
15:35 – 15:50	Delayed healing-causes and treatment principles Lecture	Theodoros Tosounidis
15:50 – 15:55	Location change to small group discussions	

Saturday, July 3, 2021

TIME	AGENDA	WHO
15:55 – 16:55	**Small group discussion 4** Final case discussion on selected topic: • Polytrauma • Complications • Special fractures. e.g., geriatric fractures, osteoporosis, periprosthetic fractures Group 1: Group 2: Group 3: Group 4: Group 5:	 M. Tyllianakis- K. Kateros V. Nikolaou - A. Panagopoulos S. Darmanis – G. Babis T. Tosounidis – A. Mavrogenis Z. Kokkalis- N. Natsioulas
16:55 – 17:00	Location change to lecture hall	
17:00 – 17:15	Violation of AO Principles Lecture	 Minos Tyllianakis
17:15 – 17:25	Closing remarks	George Babis

Event organization

AO Foundation AO TRAUMA

Anja Sutter
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Participants' contact
Global Event Services
Phone: +41 79 453 60 71
E-mail: **aoges.emea@aofoundation.org**

Registration fee
Standard Ticket EUR 720
Included in the registration fee are conference bag with documentation, coffee breaks, lunch breaks and course certificate

Language
English

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 to ensure that this cooperation has no impact on the curricula, scientific program, or faculty selection.

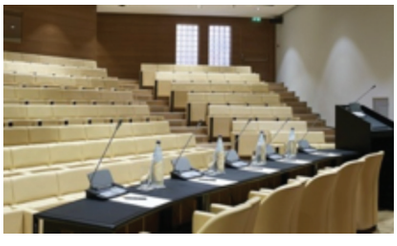
Local organization and logistics

Local Organizing Office and Secretariat: Tina Fragaki - Panagiotis Magoudis

Travelmind by Nikaia Travel
221 P. Ralli, 184 50 Nikaia, Greece
Phone +30 210 425 00 72
Email info@nikaiatravel.gr

AO funding sources
Unrestricted educational grants from different sources are collected and pooled together centrally by the AO.
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.

Venue



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General information

Evaluation guidelines
All AO Trauma events apply the same evaluation process, which includes pre- and post-event online evaluation and on-site written questionnaires. These evaluation tools help ensure that AO Trauma continues 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. For more information, please see: www.aofoundation.org/legal.
Recording, photographing, or copying of lectures, practical exercises, case discussions, or any course 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.

Security
There will be a security check at the entrance of the building. Wearing of a name tag is compulsory during lectures, workshops, and group discussions.

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

Upcoming events

November, 25-27,2021	AO Trauma Course - Advanced Principles of Fracture Management	**Athens, Greece**
November, 25-26,2021	AO Trauma Course - Basic Principles of Fracture Management for ORP	**Athens, Greece**

For more information visit **www.aotrauma.org**

Hygiene·guidelines for AO educational events

General protective measures must be observed throughout the event

- Routine cleaning and disinfection of frequently touched surfaces
- Face masks must be worn through the entire duration of the event
- Frequent hand hygiene (when entering and exiting rooms)
- Hand disinfectants must be provided at each door
- Physical distancing of min. 1.5 m between persons at AO events
- Respiratory etiquette (use masks, proper coughing etiquette, etc.)
- Visual reminders of proper measures and etiquette must be placed at doors

At practical-exercise stations

- Personal Protective Equipment (PPE) FFP2 face masks and non-sterile, latex-free examination gloves must be worn by all participants and faculty
- FFP2 (alt. N95) face masks and gloves must be stocked in sufficient numbers, and made available at the entrance of practical-exercise rooms
- All PPE must be disposed of after the end of the practical-exercise session in a dedicated place. New PPE must be used for subsequent sessions
- All instruments must be disinfected (sprayed) after the practical exercise is completed
- Participants re-use the same station for the full duration of the event
- If necessary, adapt the quantity of workstations per table to meet space requirements

Sponsors

We thank our major industry partner DePuy Synthes for providing an unrestricted educational grant for this event.

DePuy Synthes
THE ORTHOPAEDICS COMPANY OF Johnson & Johnson

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 AO network surgeons.
All education is planned based on needs assessment data, designed and evaluated using concepts and evidence from the most current medical education research, and reflects 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, US (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 (apart from the AO Foundation and its clinical divisions) 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
In case simulations are chosen as an educational method to educate skills, we only use technology approved by the AO Technical Commission—a large independent group of volunteer surgeons developing and peer reviewing new technology.
More information about the AO Technical Commission and its development and approval processes can be found on the AO's website: www.aofoundation.org.

5. Personnel
Industry staff members are not permitted to interfere with the educational content or engage in educational activities during the event.

Notes

AO Trauma membership
Driving excellence and empowering the next generation

Apply
for membership
www.aotrauma.org

Discover the advantages of joining the leading global trauma and orthopedic community, providing its members with education, research, and networking opportunities worldwide. **Join us and share your passion.**

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