

AO Trauma Blended Course—**Basic Principles of Fracture Management**

May 05–07, 2025

Fredericia, Denmark

PROGRAM



Home to
**trauma and
orthopedics**

Mission

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

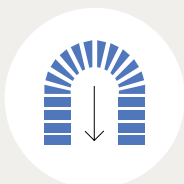
The AO principles of fracture management

1



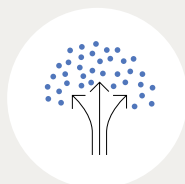
Fracture reduction and fixation to restore anatomical relationships.

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.

Welcome

Dear participant,

Welcome to the AO Trauma Blended 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.

Sincerely yours,



Mark Reilly
Chairperson AO Trauma
Education Commission



Wa'el Taha
Chairperson AO Trauma
International Board

Goal of the event

The AO Trauma blended 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 AO Trauma Basic Principles course is the initial step along the path of lifelong learning in the area of operative fracture management and the main focus of this course lies in the basic principles of fracture management.

Target participants

The AO Trauma Course—Basic Principles of Fracture Management is targeted at doctors in surgical training but is also open to those who are interested in furthering their knowledge and skills in operative fracture management.

Learning objectives

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

- Discuss the concepts of stability, their influence on bone healing, and how to apply implants to achieve appropriate stability
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- 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 tissue
- Use appropriate fixation techniques to treat diaphyseal and simple (peri)articular fractures
- Evaluate and recognize special problems related to fractures in the immature skeleton, pelvic injuries, osteoporotic fractures, postoperative infection, and delayed union and/or nonunion
- Plan the initial treatment of the polytraumatized patient

Event description

This blended course is composed of an online and a face-to-face (F2F) part. The online part starts 4 weeks before the F2F event, and each week consists of learning modules. Online pre-course self-assessment prepares participants for the course and allows the faculty to tailor the course to the needs of the participants. Participants must complete the online component before attending the face-to-face course. While the online component focuses on knowledge and attitudes, skills training will be covered during the F2F part.

The course will be taught in a modular format. Each module consists of several evidence-based lectures, which will cover the key information required. In practical exercises participants will be trained in the application of various techniques. Discussing cases in small groups will help participants to understand decision-making and management skills.

There will be panel discussions involving participants in a number of themes. After the course an online post course self-assessment will provide participants with an opportunity to review the important topics from the course. To support self-directed learning, a range of additional online resources will be offered.



Chairpersons



Lasse Birkelund
Odense University
Hospital, Denmark



**Tobias Kvanner
Aasvang**
Copenhagen University
Hospital, Hvidovre,
Denmark

National faculty

Anders Jordy (AJO)

Sygehus Lillebælt, Kolding

Per Gundtoft (PG)

Aarhus Universitetshospital

Marie Fridberg (MF)

Aalborg Universitetshospital

Juozas Petruskevicius (JP)

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Peter Max Halschou-Jensen (PMH)

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Marianne Lind (ML)

Rigshospitalet

Bjarke Viberg (BV)

Odense University Hospital

Liv Vesterby (LIV)

Slagelse Sygehus

Peter Siesing Mejer (PSM)

Hillerød Hospital

Morten Jon Andersen (MJA)

Copenhagen University Hospital,
Herlev & Gentofte

Participant Instructions

This blended course includes both online and face-to-face (F2F) components, starting with the online portion. Once you receive your login instructions, please access the course promptly and note the dates and times for the online sessions.

Four weeks before the face-to-face event, you will receive a workbook and need to complete specific online lectures as preparation. Each module contains mandatory recorded lectures, requiring 3–4 hours of asynchronous online learning per week.

Completing the online component is required before attending the face-to-face course.

Online content

Online program including quizzes

Surgical Screw Fixation

Plate Fixation

External Fixation

Intramedullary Nailing

Lectures

The biology of bone healing

Relative Stability – intramedullary techniques

Radiation Hazards. C-bue

Radiation Hazards – supplemental educational video

Preoperative Planning

Fractures of the Wrist

Fractures of the Forearm

Introduction to tibial plateau fractures

Open Fractures

Damage Control Orthopaedics vs. Early Total Care

Kindly be advised that the completion of the lectures will be verified and is a mandatory prerequisite for participation in the course.

Face-to-face event

Monday

May 05, 2025

08:00-08:15	Registration with welcome coffee	
08:15-08:30	Welcome, introduction and the AO world	L Birkelund, T Kvanner Aasvang

Module 1

Moderator: A Jordy, P Gundtoft

Injury pattern (soft-tissue and bone) and biology of bone healing

08:30-08:45	Course Content, bone healing and classification	L Birkelund, T Kvanner Aasvang
08:45-08:55	Soft tissue, biology, and effect on bone healing	L Birkelund
08:55-09:05	Introduction to Skills Lab	A Jordy, P Gundtoft
09:05-09:30	Coffee break	
09:30-11:45	AO Skills Lab 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) F. Techniques of reduction, part 2 (10) G. Mechanics of intramedullary fixation (10) H. Mechanics of plate fixation (10) J. Fracture healing and plate fixation (10) K. Damaged implant removal (10)	Moderators: A Jordy, P Gundtoft
11:45-13:00	Lunch break, Participant hotel check-in	

Module 2

Moderator: A Jordy

Stability and biomechanics of bone healing

13:00-13:15	Reduction technique and introduction absolute / relative stability	T Kvanner Aasvang
13:15-13:30	Absolute stability: biomechanics, techniques, and fracture healing	A Jordy

Monday

May 05, 2025

13:30-14:30	Practical exercise 1 Internal fixation with screws and plates— absolute stability	Moderator: A Jordy All faculty
14:30-14:45	Relative stability: biomechanics, techniques, and fracture healing	T Kvanner Aasvang
14:45-15:45	Practical exercise 2 Application of a modular large external fixator	Moderator: T Kvanner Aasvang, All faculty
15:45-16:15	Coffee break	
16:15-16:30	Relative stability with plate. Philosophy and development. External fixation techniques	M Fridberg
16:30-17:30	Practical exercise 3 Principle of the internal fixator using the locking compression plate (LCP)	Moderator: M Fridberg, All faculty
17:30-17:50	Principles of diaphyseal fracture management—what is important in treating these fractures? Relative stability in diaphyseal fractures.	T Kvanner Aasvang
17:50-18:10	Management principles for articular fractures— how do they differ from diaphyseal fractures?	P Gundtoft
18:10-18:20	Summary of the day, Q&A	A Jordy
19:30-21:15	Dinner	
21:15-22:30	Fireside Discussion— Den uheldige kirurg (Not mandatory)	J Petruskevicius

Tuesday

May 06, 2025

07:30–08:00

Registration day 2

Module 3

Moderator: P M Halschou-Jensen

Principles and management of diaphyseal fractures

08:00–08:15	Good morning—Recap yesterday—intro today	P M Halschou-Jensen
08:15–08:30	Preoperative planning—rationale and how to do it	M Fridberg
08:30–08:45	Principles of diaphyseal fracture management Relative stability with IM nails	P M Halschou-Jensen
08:45–09:30	Practical exercise 4 Reamed intramedullary (IM) nailing of a tibial shaft fracture	Moderator: P M Halschou-Jensen, All faculty
09:30–10:00	Coffee break	
10:00–10:15	Forearm fractures—understanding the principles of diaphyseal and articular fractures	M Lind
10:15–11:15	Practical exercise 5.1 Preoperative planning— “plan your forearm operation	Moderator: M Lind
11:15–12:30	Practical exercise 5.2 Operate your plan—fixation of a 22C1 forearm fracture using the LCP 3.5 (8 and 11 holes)	Moderator: M Lind, All faculty
12:30–13:30	Lunch break	
13:30–15:15	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: BV, MF Group 2: ML, JP Group 3: PG, PMH Group 4: LIV, AJO

Tuesday

May 06, 2025

Module 4

Moderator: B Viberg

Principles and management of articular fractures

15:15–15:30	Olecranon fracture–types and treatment	L Vesterby
15:30–16:20	Practical exercise 6 Tension band wiring of the olecranon	Moderator: L Vesterby, All faculty
16:20–16:45	Coffee break	
16:45–17:00	Ankle fractures—a systematic approach for their fixation	P Siesing Mejer
17:00–18:00	Practical exercise 7 Management of a type 44C malleolar fracture	Moderator: P Siesing Mejer, All Faculty
18:00–18:15	Summary of the day Q&A	B Viberg
19:00	Course dinner	

Wednesday

May 07, 2025

07:45–08:15	Registration day 3	
08:15–08:30	Good morning—Recap yesterday—intro today	J Petruskevicius

Module 5

Moderator: J Petruskevicius

Hip fractures

08:30–08:45	Geriatric patients—optimizing for surgery and choice of implant. Impact of osteoporosis.	B Viberg
08:45–09:00	Femoral neck fractures	B Viberg
09:00–09:30	Practical exercise 8 Femoral neck fracture fixation	Moderator: B Viberg, All faculty
09:30–09:45	Coffee break	
09:45–10:00	Trochanteric fractures	M J Andersen
10:00–11:00	Practical exercise 9 Management of a trochanteric fracture using a DHS	Moderator: M J Andersen, All faculty
11:00–11:15	Subtrochanteric fractures	M J Andersen
11:15–11:30	Patella fractures	P M Halschou-Jensen
11:30–12:30	Lunch break	
12:30–13:30	Small group discussion 2 Management principles for the treatment of articular fractures	Group 1: MJA, ML Group 2: PG, PMH Group 3: PSM, TKA Group 4: BV, JP

Module 6

Moderator: L Birkelund

Emergency management, complications, and special fractures

13:30–13:45	Management of open fractures	P Gundtoft
13:45–14:00	Treatment algorithms for the polytrauma patient	P Gundtoft

Wednesday

May 07, 2025

14:00–14:15	Emergency management of pelvic fractures— a critical skill can save lives	L Birkelund
14:15–14:30	Compartment syndrome—diagnose and treatment	P Siesing Mejer
14:30–14:45	Coffee break	
14:45–15:45	Small group discussion 3 Final case discussion (polytrauma, complications, special fractures, e.g. geriatric fractures, osteoporosis, periprosthetic fractures)	Group 1: PSM, LBI Group 2: JP, MJA Group 3: ML, BV Group 4: TKA, PMH
15:45–16:00	Violation of principles, delayed union, malunion, nonunion	J Petruskevicius
16:00–16:15	Fracture-related infection—how to prevent, diagnose, and manage infections	J Petruskevicius
16:15–16:30	Closing remarks, Evaluation, Feed Back	L Birkelund, T Kvanner Aasvang
16:30	End of the course	

Event information

Organization

AO Foundation

Elisabeth Hummler
Event owner
Zizers, Switzerland
Phone: +41 79 451 02 68
E-mail: elisabeth.hummler@aofoundation.org

Participants' contact

Sonia Lotf
Project Coordinator North ESA
Phone: +41 798 48 57 86
E-mail: sonia.lotf@aofoundation.org

Registration fee

EUR 1'550

Included in the registration fee are course materials, coffee and lunch breaks, a course dinner on 6th May 2025, at Trinity Hotel & Conference Center and a course certificate.

Cancellation policy

50% until 30 days before the event.
No refund thereafter.

Online registration

[Link](#)



Language

Danish

Venue

Trinity Hotel & Konference

Gl. Færgevej 30, Snoghøj
7000 Fredericia

Phone: +45 82 27 17 17
E-mail: rec@trinity.dk
Website: [Trinity Hotel & Konference](https://trinity.dk/konference)

Participant information

A limited number of hotel rooms have been reserved for course participants. These can be booked directly through the hotel through this link: <https://trinity.nemtilmeld.dk/303/>. Please note that only the course dinner on May 6 is included in the course fee. Accommodation and any additional dinners must be paid for separately and are not included in the fee.

General information

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.

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.

Evaluation guidelines

All AO 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 continues to meet your training needs.

Disclosures and conflicts of interest

Disclosure information and potential conflicts of interest (COI) can be viewed at the event webpage:
<https://aofnd.my.site.com/evt/s/evt-event-aioTG000004LylM/e23000251-ao-trauma-blended-coursebasic-principles-of-fracture-management>.

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.

Use of mobile phone

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.

Sponsor

We thank our major industry partner Johnson & Johnson MedTech for contributing key in-kind support (materials and logistics), without which this event would not be possible, as well as an unrestricted educational grant.

**Johnson & Johnson
MedTech**

Notes

Notes

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:

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

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 practical sessions

In case practical sessions are chosen as an educational method to educate skills, the technologies and products used have been approved or reviewed by the AO Technical Commission—a large independent group of volunteer surgeons developing and peer-reviewing new technology on behalf of the AO Foundation.

Any technology and/or products used in the practical sessions of this event have been found suitable to serve the defined educational purposes.

This does not imply any statement about its use and performance in actual clinical scenarios.

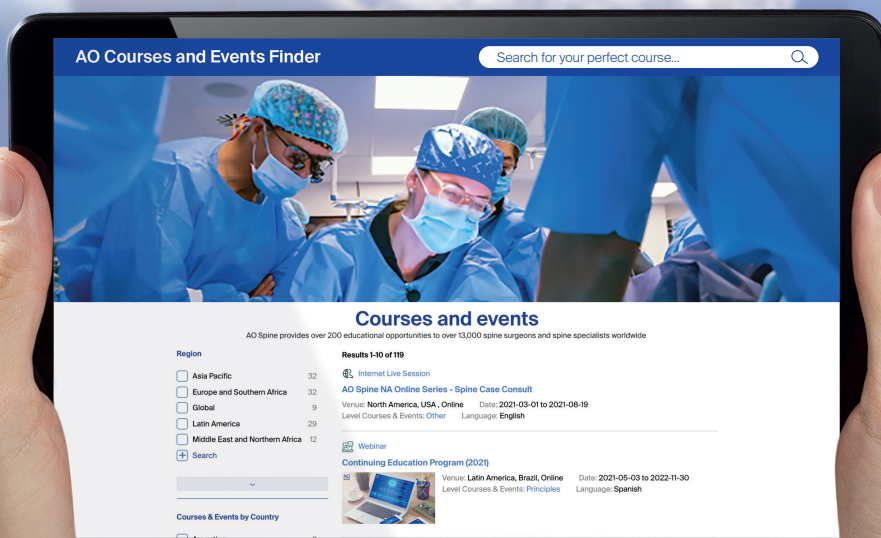
More information on the AO Technical Commission can be found on the AO's website: www.aofoundation.org/tc.

5. Personnel

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



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www.aofoundation.org/our-courses-and-events/course-finder

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More information at
www.aofoundation.org

Share your passion and join the **AO Trauma community**



Belong to a
unique orthopedic
trauma network



Get involved
and shape the
future of AO Trauma



Discover the
exclusive AO Trauma
content



Develop
your personal and
professional career



Share and exchange
your knowledge

AO Trauma is the **leading global orthopedic trauma network** with a unique culture of surgeon leadership, camaraderie, volunteerism, and mutual respect.



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