

AORecon Course—Principles of Total Hip and Knee Arthroplasty

LEARNING OBJECTIVES



AORecon Course – Principles of Total Hip and Knee Arthroplasty

Goal of the event

The AORecon Course—Principles of Total Hip and Knee Arthroplasty teaches fundamental principles and current concepts in the treatment of patients with a need for primary arthroplasty in the hip and knee. This course is the initial step along the path of lifelong learning in the area of joint arthroplasty. Based on a patient-centered approach this course focuses on the key principles of primary arthroplasty.

Target audience

This course is targeted at newly certified orthopedic surgeons and advanced orthopedic surgical trainees

Learning objectives

At the end of the event, the participants will be able to:

- Describe a systematic assessment including clinical evaluation
- Identify patient's reconstructive surgery needs
- Adopt a patient-centered approach
- Anticipate, recognize, and stratify potential complications
- Describe and discuss safe and effective procedures for primary arthroplasty
- Discuss the management of early and late problems or complications
- Communicate and facilitate a multidisciplinary team-based approach
- Apply best practice to optimize and document patient outcomes

Event description

This course is modular in structure and highly interactive. Short, evidence-based lectures cover the key information required. Moderated case discussions in small groups will expand on each topic and help participants to develop decision-making and surgical management skills. Participants will practice templating and have the opportunity to share their experience with peers and international faculty. All factors related to achieving the best possible outcomes in primary arthroplasty will be covered.

Day 1, Morning

Time	AGENDA ITEM	WHO
08:00–08:10	Welcome and introduction to the course	Chairpersons
Module 1	<p>PERIOPERATIVE MANAGEMENT OF TOTAL HIP AND KNEE ARTHROPLASTY</p> <p>At the end of this module, participants will be able to:</p> <ul style="list-style-type: none"> Perform a systematic assessment including clinical, radiographic, and laboratory evaluation to maximize the patient's outcome after THA or TKA 	Moderator
08:10–09:10	<p>Case discussions in small groups:</p> <p>Assessment and decision making</p> <p>Case 1: Imaging for hip and knee replacement</p> <p>Case 2: Optimization of medical issues: BMI, diabetes, smoking, skin condition, cardiac, anticoagulation, and immune suppressants</p> <p>Case 3: Social determinants (living alone), cost, etc</p> <p>Case 4:</p>	All faculty
09:10–09:20	<p>Summary: Optimizing the patient journey</p> <p>Lecture (standard lecture available)</p> <ul style="list-style-type: none"> Patient preoperative education and physiotherapy Pain Patient discharge planning and home optimization Patient expectations 	
09:20–09:30	Questions & answers	All faculty
09:30–09:40	Closing of module: take-home messages	
Module 2	<p>PERFORMING TOTAL HIP ARTHROPLASTY</p> <p>At the end of this module, participants will be able to:</p> <ul style="list-style-type: none"> Describe and prepare safe and effective procedures Recognize, stratify, and manage early and late problems or complications Facilitate a multidisciplinary team-based approach Apply best practice to optimize patient outcomes 	Moderator
09:40–09:50	<p>Preoperative planning to restore hip biomechanics in THA</p> <p>Case-based lecture</p> <ul style="list-style-type: none"> Describe how to position the acetabular component (version, inclination, and medialization) Optimize the hip center Restore femoral offset Equalize leg lengths 	

Time	AGENDA ITEM	WHO
09:50–10:00	<p>Overview of surgical approaches for THA Lecture</p> <p>Describe the indications, advantages, and disadvantages of the following approaches:</p> <ul style="list-style-type: none"> • Anterior • Anterolateral • Lateral • Posterior 	
10:00–10:10	Questions and answers	All faculty
10:10–10:30	BREAK	
10:30–10:45	<p>Cemented fixation Lecture (standard lecture available)</p> <ul style="list-style-type: none"> • Discuss advantages and disadvantages of cemented fixation • Describe operative technique for cemented fixation of stem and cup • Identify pitfalls when using cemented fixation 	
10:45–10:55	<p>Cementless fixation of the cup Lecture</p> <ul style="list-style-type: none"> • Discuss advantages and disadvantages of cementless cup fixation • Describe operative technique for cementless cup fixation • Describe optimal positioning of cup and the influencing factors • Identify pitfalls when inserting a cementless cup 	
10:55–11:05	<p>Cementless fixation of the stem Lecture</p> <ul style="list-style-type: none"> • Discuss advantages and disadvantages of cementless stem fixation • Describe operative technique for cementless stem fixation • Describe optimal positioning of stem and the influencing factors • List pitfalls when inserting a cementless stem (eg, leg length discrepancy, instability, limping) 	
11:05–11:15	Questions and answers	All Faculty
11:15–11:25	<p>Preventing dislocation in THA Lecture</p> <ul style="list-style-type: none"> • Conduct detailed and effective preoperative planning • Explain the importance of biomechanical reconstruction of the hip • Describe techniques for leg-length and offset restoration • Describe intraoperative checks (trailing) to ensure that it reflects preoperative plan 	
11:25–11:35	<p>Bearing choice in THA Lecture</p> <ul style="list-style-type: none"> • Describe types of bearings including: hard-on-hard bearings, hard-on-soft bearings, modularity, head size • Describe advantages and disadvantages of each types 	
11:35–11:45	Questions and answers	All Faculty

Time	AGENDA ITEM	WHO
11:45–11:55	Intraoperative challenges and complications Lecture <ul style="list-style-type: none"> • Prevention of nerve injury • Prevention of vascular injury • Dealing with intraoperative fractures • How to extend the exposure in case of complication 	
11:55–12:40	Case discussions in small groups: Total hip arthroplasty—surgical approaches, preventing dislocation, and fixation <ul style="list-style-type: none"> • Case 1: THA in young adult • Case 2: THA in older adult • Case 3: Dislocated THA - what went wrong 	All faculty
12:40–13:40	LUNCH BREAK	

Day 1, Afternoon

Time	AGENDA ITEM	WHO
13:40–13:50	Infection Lecture <ul style="list-style-type: none"> • Recognize the possibility of infection and apply guidelines and a structured approach to diagnosis • Apply best practices and strategies in the OR to reduce the possibility of infection during surgery • Apply guidelines and a structured approach to the management of infection 	
13:50–14:00	Periprosthetic fractures Lecture <ul style="list-style-type: none"> • Apply the UCS or other classification system to periprosthetic fractures • Describe the indications and options for fracture fixation with implant retention • Describe the indications and options for partial and full revision arthroplasty • Describe the factors that may alter the treatment intraoperatively: extensive osteolysis, comminution, etc 	
14:00–14:10	Key steps in planning THA Lecture (standard lecture available) <ul style="list-style-type: none"> • Describe the key steps of planning a THA • Explain the templating process and its relevance with regards to these key steps • Recognize the benefit of a checklist provided in the Skills Lab booklet 	

Time	AGENDA ITEM	WHO
14:10–16:10	<p>Group A:</p> <ul style="list-style-type: none"> - Templating exercise hip (60 min) - Case discussions in small groups (60 min): Total hip arthroplasty— intraoperative challenges and complications <ul style="list-style-type: none"> • Case 1: Calcar fracture • Case 2: Managing a dislocation • Case 3: Sciatic nerve palsy <p>Group B:</p> <p>AOREcon Skills Stations: Hip</p> <ol style="list-style-type: none"> 1. Reaming the acetabulum and inserting a cup (30 min) 2. Preparing the femur and inserting a stem (30 min) 3. Safe zones for screw insertion (30 min) 4. Meet the experts (30 min) 	All faculty
16:10–16:30	BREAK	
16:30–18:30	<p>Group B:</p> <ul style="list-style-type: none"> - Templating exercise hip (60 min) - Case discussions in small groups (60 min): Total hip arthroplasty— intraoperative challenges and complications <ul style="list-style-type: none"> • Case 1: Calcar fracture • Case 2: Managing a dislocation • Case 3: Sciatic nerve palsy <p>Group A:</p> <p>AOREcon Skills Stations: Hip</p> <ol style="list-style-type: none"> 1. Reaming the acetabulum and inserting a cup (30 min) 2. Preparing the femur and inserting a stem (30 min) 3. Safe zones for screw insertion (30 min) 4. Meet the experts (30 min) 	All faculty
18:30–18:40	Closing of module: Take-home messages	

Day 2, Morning

Time	AGENDA ITEM	WHO
Module 3	<p>PERFORMING TOTAL KNEE ARTHROPLASTY</p> <p>At the end of this module, participants will be able to:</p> <ul style="list-style-type: none"> • Describe and prepare safe and effective procedures • Recognize, stratify, and manage early and late problems or complications • Facilitate a multidisciplinary team-based approach • Apply best practice to optimize patient outcomes 	Moderator
08:30–08:40	<p>Surgical approaches for TKA</p> <p>Lecture</p> <ul style="list-style-type: none"> • Describe the indications, advantages, and disadvantages of each of the following approaches: <ul style="list-style-type: none"> ◦ medial parapatellar, subvastus, midvastus, lateral 	
08:40–08:50	<p>Limb alignment and kinematics</p> <p>Lecture</p> <ul style="list-style-type: none"> • Describe the essentials of limb alignment • Describe the anatomic cuts for a knee replacement • Describe rotation of the femoral component • Describe the nuances of femoral component rotation with different degrees of coronal malalignment 	
08:50–09:00	Questions and answers	All Faculty
09:00–09:10	<p>Bone cuts in TKA</p> <p>Lecture</p> <ul style="list-style-type: none"> • Alignment guides in the tibia and femur • Navigation (no details on surgical technique) • Patient-specific instruments (no details on surgical technique) <p>Gap balancing vs measured resection</p>	
09:10–09:20	<p>Balancing the varus knee and fixed flexion contracture</p> <p>Case-based lecture</p> <ul style="list-style-type: none"> • List common causes for FFC and varus deformity • Classify the deformities • Discuss techniques in order of application (removal of osteophytes, ligament releases) 	
09:20–09:30	<p>Balancing the valgus knee</p> <p>Case-based lecture</p> <ul style="list-style-type: none"> • List common causes and affected ligaments in valgus knees • Discuss techniques in order of application (removal of osteophytes, ligament releases) 	
09:30–09:40	<p>The role of the PCL in TKA</p> <p>Lecture</p> <ul style="list-style-type: none"> • Discuss the advantages and disadvantages of preserving the PCL in TKA 	

Time	AGENDA ITEM	WHO
09:40–09:50	Questions and answers	All Faculty
09:50–10:10	COFFEE BREAK	
10:10–10:20	TKA after previous high tibial osteotomy (HTO) Case-based lecture <ul style="list-style-type: none"> • Define extraarticular vs intraarticular deformity • Describe the importance of long-leg x-rays • Describe the surgical technique and outcomes 	
10:20–10:30	TKA after previous trauma Case-based lecture <ul style="list-style-type: none"> • Discuss the challenges of previous fracture and associated deformities from the trauma • Describe the complications in TKA following previous trauma 	
10:30–10:40	TKA after previous unicompartmental arthroplasty Case-based lecture <ul style="list-style-type: none"> • Preoperative evaluation and planning • Discuss the techniques of implant removal • Describe how to manage bone deficiency 	
10:40–10:50	Questions and answers	All faculty
10:50–11:00	Patellofemoral resurfacing and tracking <ul style="list-style-type: none"> • Discuss the advantages and disadvantages of resurfacing • Describe the patellofemoral biomechanics • Describe the importance of femoral and tibial component positioning 	
11:00–11:10	Diagnosis and treatment of infection in TKA <ul style="list-style-type: none"> • Describe the diagnostic tests • Describe the diagnostic criteria and red flags • Describe the treatment algorithm (acute, chronic) 	
11:10–11:20	Questions and answers	All faculty
11:20–11:30	Key steps in planning TKA Lecture (standard lecture available) <ul style="list-style-type: none"> • Describe the key steps of planning a THA • Explain the templating process and its relevance with regards to these key steps • Recognize the benefit of a checklist provided in the Skills Lab booklet 	

Day 2, Afternoon

Time	AGENDA ITEM	WHO
11:30–12:30	LUNCH BREAK	
12:30–14:30	<p>Group A:</p> <ul style="list-style-type: none"> - Meet the Experts (60 min) - Case discussions in small groups (60 min): Total knee arthroplasty— intraoperative challenges and complications <ul style="list-style-type: none"> • Case 1: Varus knee • Case 2: Postraumatic knee • Case 3: Valgus knee • Case 4: TKA after unicompartmental arthroplasty <p>Group B:</p> <p>AORecon Skills Stations: Knee</p> <ol style="list-style-type: none"> 1. Alignment for a tibial cut (30 min) 2. Performing a tibial cut (30 min) 3. Cementing (30 min) 4. Templating exercise knee (30 min) 	All faculty
14:30–14:50	BREAK	
14:50–16:50	<p>Group A:</p> <p>AORecon Skills Stations: Knee</p> <ol style="list-style-type: none"> 1. Alignment for a tibial cut (30 min) 2. Performing a tibial cut (30 min) 3. Cementing (30 min) 4. Templating exercise knee (30 min) <p>Group B:</p> <ul style="list-style-type: none"> - Meet the Experts (60 min) - Case discussions in small groups (60 min): Total knee arthroplasty— intraoperative challenges and complications <ul style="list-style-type: none"> • Case 1: Varus knee • Case 2: Postraumatic knee • Case 3: Valgus knee • Case 4: TKA after unicompartmental arthroplasty 	
16:50–17:10	Q&A - questions not covered by the course	All faculty
17:10–17:20	Closing of module and course: Take-home messages	Chairpersons

Event Organization

AORecon

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 logistics

AO Courses

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

General Information

Event fee

The course fee is CHF/USD/EUR ... and includes admission to the course as well as documentation, coffee breaks, lunches and course certificate.

European CME Accreditation

An application has been made to the UEMS–EACCME® in Brussels for CME accreditation of this event.

Evaluation guidelines

All AORecon courses apply the same evaluation process, either the audience response system (ARS), paper and pencil questionnaires, or online survey. This will help AORecon to ensure that we continue to meet your training needs. In some regions, CME accreditation is dependent on the participant's evaluation results.

Intellectual property

Course materials, presentations, and case studies are the intellectual property of the course faculty. All rights are reserved. Check hazards and legal restrictions on www.aorecon.org/disclaimer.

Recording, photographing, or copying of lectures, practical exercises, case discussions, or any course materials is strictly forbidden. Participants violating intellectual property will be dismissed.

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

Security checks may be conducted at the entrance of the building. Wearing of a name tag is compulsory during lectures, practical exercises, and group discussions.

No insurance

The course organization does not take out insurance to cover any individual against accidents, thefts or other risks.

Use of mobile phones

Use of mobile phones 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.

Conflicts of Interest (COI)

All disclosure information can be viewed on <https://aorecon.aofoundation.org/disclosure.html>

AO Foundation—Principles of AO Educational Events

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.

1) 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)

2) 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.

3) 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).

4) Personnel

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