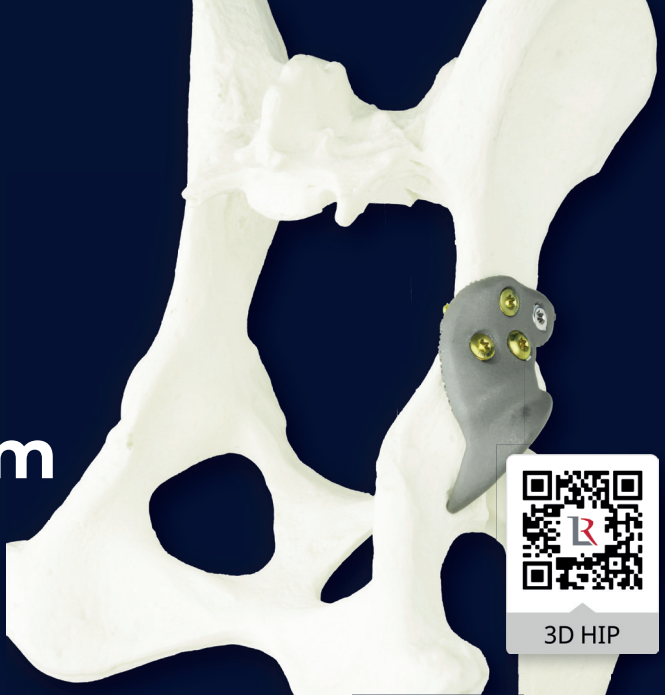
RITA LEIBINGER MEDICAL

3D HIP WORKSHOP

Shelf Arthroplasty of Dorsal Acetabular Rim

with 3D-printed personalized Titanium Implant (3D HIP) for young dogs with Hip Dysplasia



We are delighted to introduce the **3D HIP Intensive Course**, an event dedicated to advancing veterinary orthopedic care for young dogs with hip dysplasia.

During this comprehensive workshop, you will gain invaluable insights and hands-on experience in:

- Understanding the principles of shelf arthroplasty for treating hip dysplasia.
- Defining inclusion criteria for recommending acetabular rim extension in young dogs with hip laxity.
- Mastering the surgical anatomy and performing acetabular rim extension with personalized 3D printed titanium implants.
- Learning the imaging aspects and workflow for 3D HIP, from patient inclusion to implant fabrication and surgery.

This unique event offers an exceptional opportunity to enhance your skills, interact with leading experts, and contribute to the future of veterinary orthopedic care.

3D HIP
Titanium Implants

For more Info and Registration: **www.leibinger.vet/3D-HIP**

The **3D HIP Titanium Implant** is a first-of-its-kind patient-specific 3D-printed shelf implant for the treatment of naturally occuring and residual hip dysplasia in dogs.

Developed to become the most effective but least invasive and least traumatic treatment for Canine Hip Dysplasia (CHD) in the market, 3D HIP offers a much safer and more feasible alternative to existing gold standard treatments Tripe/Double Pelvic Osteotomies (TPO/DPO).

EXISTING TREATMENTS

TPO and DPO are invasive surgeries which involve making two or three cuts in the pelvis to allow the socket to be rotated to provide adequate stabilisation for the head of the femur, and then fixing a plate to maintain the new positioning of the bones.

Another procedure, which is one of the oldest and most straightforward treatments for hip dysplasia, is shelf arthroplasty using bone grafts. While this procedure shows promising results, there are still some limitations to the technique, such as deficient coverage on the anterior and posterior quadrants of even the well-placed shelfs. Other than that, the success of this method relies heavily on precise bone graft positioning and fit. When placed too high, the bone graft might resorb due to lack of mechanical loading. When placed too low or is too large, the bone graft shelf would impinge on the femoral head and neck. It stands to reason that the better the fit and size, the better the long-term outcome might be.[1]

Later, shelf arthroplasty was performed using Biocompatible Osteoconductive Polymer (BOP). As the procedure is not pre-planned in 3D, its success is entirely dependent on the intraoperative experience of the surgeon.[2] Although initial clinical results were promising, one study in normal dogs showed that ossification around the BOP fibers was slow and unsatisfactory to recommend its use for the treatment of hip dysplasia. Another study showed that the fibers in the BOP induced uncontrolled bone proliferation.

3D HIP IS BORN

The current advances in 3D-printing technologies made 3D HIP possible. Using imaging processing software, CT scans of the patient are semi-automatically segmented to produce an anatomic model, which in turn is used to design the 3D shelf implant. A range of motion simulations is then performed to determine if any design alterations are needed. Holes for locking screws are also incorporated in pre-planned positions, making sure that their trajectories do not interfere with the acetabulum. The implants are then manufactured from medical grade titanium alloy by direct 3D-printing, post-processed, and delivered to the surgeon. The whole process takes only a few weeks' time.

3D HIP Images, 1, 2: Willemsen K, Tryfonidou M, Sakkers R, Meij B, et. al. Patient-specific 3D-printed shelf implant for the treatment of hip dysplasia: Anatomical and biomechanical outcomes in a canine model

ASK US ABOUT 3D HIP

1. Send us an email at: **info@leibinger-medical.com**
2. Call us at: **+49 7463 99291 0**
3. Visit our webpage: **www.leibinger.vet/3D-HIP**
4. Scan the QR-Code above with your mobile phone camera

3D HIP WORKSHOP

Shelf Arthroplasty of Dorsal Acetabular Rim

WEBSITE

VET SHOP

COURSE DETAILS

Day 1

9:oo	Registration Welcome and Introduction
9:40	History of shelf arthroplasty for hip dysplasia Development of acetabular rim extension (ACE-X) using personalized titanium implant (3D HIP)
11:00	Break
11:30	Hip dysplasia and hip laxity Case selection for 3D HIP Pre-op planning 3D HIP with imaging
12:30	Lunch
13:30	Surgical anatomy hip joint for 3D HIP Approach to the hip Equipment and materials Placement of the implant
15:00	Break
15:30	Dry Lab
17:00 -17:30	Wrap up, Questions

Day 2

9:00	Results and outcome of the 3D HIP Pitfalls and Complications Workflow 3D HIP: from patient to surgery
10:00	Break
10:15	Wet Lab
13:00 -14:00	Sandwiches, Questions and Feedback, Adjourn

RITA LEIBINGER MEDICAL

FACULTY

Prof. Dr. Björn Meij
DVM, PhD, DECVS

Björn Meij is a Dutch veterinarian, professor and European specialist (Diplomate ECVS) in small animal surgery since 1993. Today, he is head of surgery at the Utrecht university where he leads a team of specialist surgeons and is ECVS resident coordinator.

Dr. Meij is well-known for his research within orthopaedics and neurosurgery.

Course Assistant: **Irin Kwananocha,** DVM, MSc, DTBVS, CCRP

COMPLEMENTARY INFORMATION

Hands-On Training:
Wet Lab
Dry Lab

CE Credits:
To be advised
(10 hours, usually)

Course Fee:
To be advised
(1.690 € excl. VAT, usually)

Course Fee inclusions:
Course Materials
Dry & Wet Lab Materials
Lunch, Drinks, Snacks

PRE-REGISTER FOR THE COURSE

Our upcoming course in November 2024 is already fully booked. You may, however, pre-register to receive pre-announcements and updates, and priority registration for the next course.

1. Visit: **www.leibinger.vet/3D-HIP**
2. Or scan the QR Code at the right to fill out the form

3D HIP

Why use 3D HIP?

The 3D HIP ADVANTAGE

- **Precise fit and positioning** result to higher success rates, low complications, rapid recovery, and high joint stability.
- **Made of Titanium** for superior biocompatibility, which also promotes faster bone healing.
- **Minimally invasive and minimally traumatic technique** compared to other procedures (e.g. TPO and DPO)
- **Rapid learning curve** due to its simplicity and its technologically driven approach
- **Fast patient recovery and short surgery time**: Pre-planning in 3D ensures a seamless fit and a straightforward procedure