OSSimTech™

Sim-Ortho™

Virtual practice
Real skills

The **first and only** virtual reality orthopedic **open-surgery simulator**

Sim-Ortho™ is the next generation virtual reality simulator designed for the training of medical students and orthopedic residents.

The **Sim-Ortho**™ VR training simulator currently enables simulation training of knee arthroplasty procedures, spine surgeries, trauma (available in 2017) and practice of surgical skills such as bone drilling and sawing.

With the **Sim-Ortho**™ simulator, trainees and users can focus and train their surgical skills effectively - without risk to patients and hospital daily constraints. Different surgical cases are available and surgery procedures can be trained several times - before entering the stressful OR!

I believe OssimTech's **Sim-Ortho**™ simulator will have a direct impact on student's performances. It will contribute to accelerate their learning process and significantly improve their skills and confidence while minimizing patient risks in the O.R.

- Dr. Vincent Massé M.D., Orthopedic Surgeon
FRCSc Fellow / Maisonneuve-Rosemont Hospital

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Sim-Ortho™ Virtual reality orthopedic open-surgery simulator

Modules

KNEE

SPINE

TRAUMA

TOOL HANDLING

Components

1. One quad-core PC
2. One HD flat-screen
3. 5-DoF haptic system
4. 6-DoF tracking system
5. Generic mock-up surgical tools
6. Height-adjustable mobile cart
7. One HD Touch Screen
8. 3D Glasses
9. Headphones

Developed in collaboration with:

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The **Sim-Ortho™** simulator user interface is intuitive and user-friendly, and is based on serious gaming environment.

OSSimTech™ simulators expand training possibilities in the field of open surgeries by a standardized and quality-assured training method. The **Sim-Ortho™** simulator records training data and provides a detailed evaluation and feedback of the surgical exercise and performance. Medical educators and students can obtain a detailed evaluation of individual learning curves.

Features

- Experience of real-time haptic feed-back (applied force and resistance).
- Allows practice of knee arthroplasty procedures, spine surgeries and trauma procedures (available in 2017) including intervention-based tasks (such as drilling, screwing and sawing).
- Allows handling and manipulation of handheld orthopedic surgical tools in a real surgical environment.
- Allows tracking of total tools movement (precision, orientation, amplitude, and depth), applied forces and tasks completion time.
- Performing software adaptable to training agenda and curriculum.

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