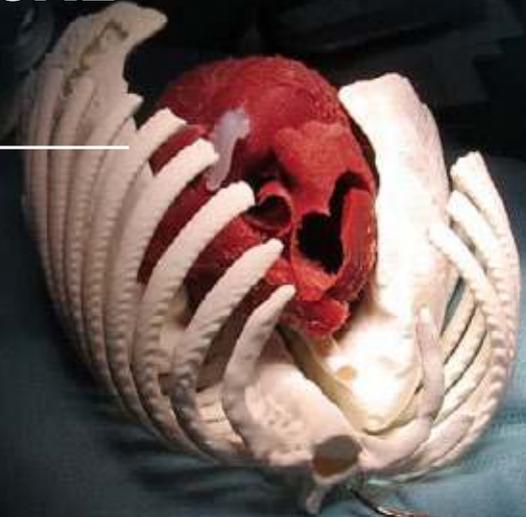

BRINGING 3D TECHNOLOGIES TO THE MEDICAL SECTOR

**SIMULATION AND
TRAINING MODELS**



**3DLIFE
Prints**

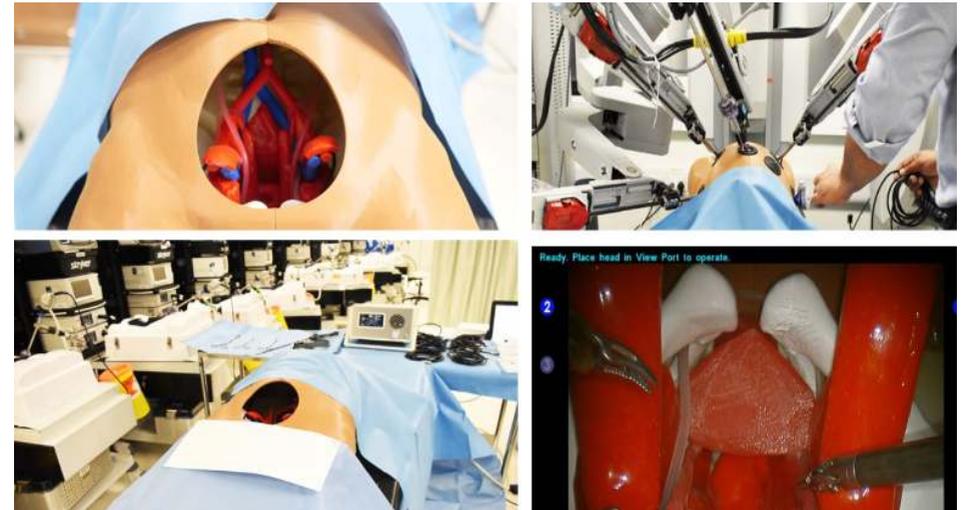
HYPOSPADIA SIMULATOR



Treating Hypospadias is a highly complex procedure with high revision rates. This simulator, 3D printed in silicone is a first-of-a-kind solution to allow surgeons to hone their skills prior to surgery. An Olympus Orb Eye solution was used by the surgeon in this example for the simulation.



ENDOSCOPIC SIMULATOR



3D printed functional abdomen simulation model: insufflated & regular abdomen covers, arterial & venous blood supply, pelvis, colon, sigmoid colon, silicone bladder & prostate, ureters/urethra, lymph nodes & obturator nerves.



“At the end of the day, the more you practise the better a surgeon you become. Being able to use 3D printed models that mimic tissues from bone to vessels provides us with an incredible opportunity to create high fidelity simulation models”

Iain Hennessey
Consultant Paediatric Surgeon

NEPHRECTOMY SIMULATOR



The models for this simulation are created in a range of silicone densities and colours to match those in the body. The models can be placed within a laparoscopic simulator for dissection.

The tumour, parenchyma and capsule are created in contrasting density of silicone to allow clear differentiation. The arteries, veins and ureter can be included. Kidney stones can be supplied if required.

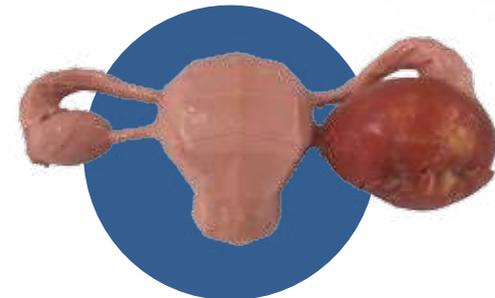


OVARIAN CYST REMOVAL SIMULATOR



This model is made in silicone to replicate the look and feel of human tissue. It is intended for use in a laparoscopic simulator.

The model has a large cyst contained within one of the ovaries.



CRANIOTOMY SIMULATOR



The models for this simulation are made in a variety of materials that closely mimic the appearance and physical properties of the anatomy. The brain is 3D printed in life-like silicone together with a skull in woodfill or plaster. The skin is created by adding a thin layer of silicone onto the skull. The materials have been selected to provide as high fidelity as is possible without using organic sources.



CARDIAC SIMULATOR



The heart model is made in silicone to replicate the consistency of cardiac tissue. It can be sutured using standard materials. The model can be nested in a thorax or a set of 3D printed ribs and lungs to further increase the realism to the surgeon.



PERCUTANEOUS ENDOSCOPIC GASTROSTOMY

This soft stomach 3D model is made in flexible silicone to provide surgeons with a realistic simulator for PEG insertion training.

It is used by theatre staff to practice stomach tube insertions prior to undertaking the procedure on patients. The model can also be easily modified to include specific anatomical features for particular patients.



SUTURE TRAINING



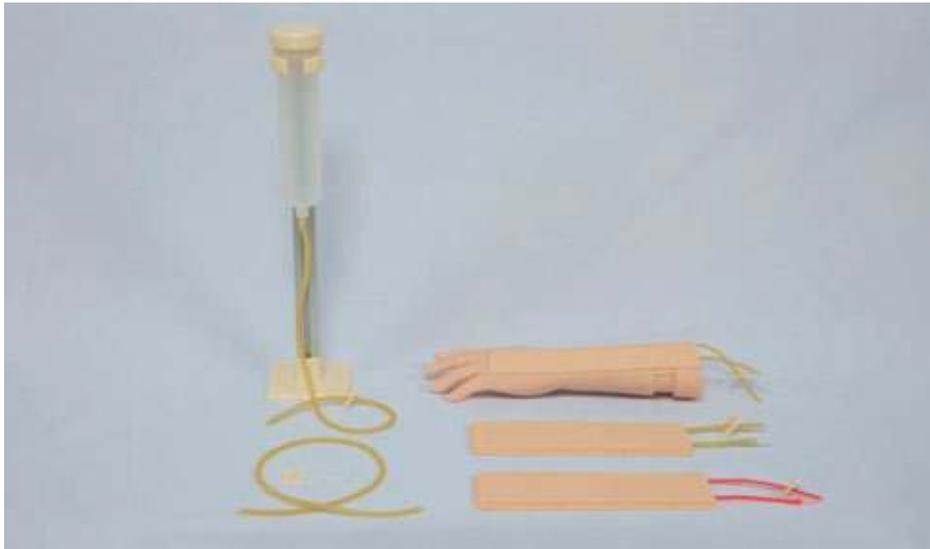
This model is suitable for training of suturing, ligation, and suture removal. It provides a realistic feel of suturing and ligation with appropriate tension feedback. The model has been created to provide a realistic hardness, thickness, and density of epidermis, dermis, and hypodermis and as such it is suitable for deep dermal suturing.

Models are available of:

- An adult or child's arm with snap-on and replaceable skin pad
- Abdomen
- Limited space (oral)



INTRAVENOUS (IV) TRAINING



These training models are suitable for injection training and blood sampling.

They have a realistic feel for needle insertion and can withstand over 100 repetitions. The arms have a snap-on and replaceable skin pad with three types of blood vessel for different skill levels.

Models available of:

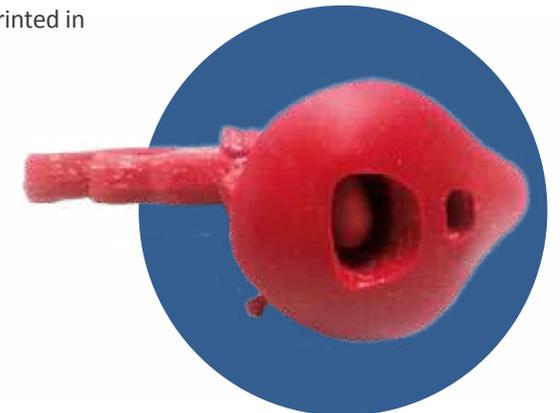
- Adult arm
- Child's arm
- Skin pad

AIRWAY TRAINER (MOUTH PART ONLY)



This model is of the mouth piece only, as marked with a 1 on the picture.

This 3D printed part is more durable than a standard OEM part and has incorporated design changes from user feedback. It also has a more realistic feel as it is printed in 100% silicone.



3D LIFEPRINTS

3D LifePrints is a 3D technology company that provides innovative solutions in emerging and expanding markets. In the UK, 3D LifePrints supplies 3D printing services into the medical sector.

From its embedded 3D printing hubs at Alder Hey Children's Hospital, Wrightington Hospital and Nuffield Orthopaedic Centre 3D LifePrints supplies bespoke 3D printed anatomical models to the NHS, private hospitals, universities, medical device manufacturers and medical training centres.

CONTACT

To arrange a meeting to discuss 3D LifePrints providing your medical institution with 3D printing and modelling services or to get a quote for a 3D printed anatomical model, please contact:

Email: info@3dlifeprints.com

Tel: +44 (0) 151 528 2617

