Realistic training
with 3B Scientific Simulators

3B Scientific

SIMone™

NEW Features and Cases

THE 3B SCIENTIFIC GROUP IS ISO 9001 CERTIFIED
DESIGNED & QUALITY CONTROLLED IN GERMANY

Simulate high-stress scenarios with the award-winning **SIMone**™!

Every birth is different.
Prepare yourself with:

SIMone™

NEW **Features and Cases**

In case of fetal or maternal risk it is often essential to finish a birthing process as quickly as possible. Other than Caesarean section, the only options for supporting a physiological birth process by means of assisted vaginal delivery are forceps delivery and vacuum extraction.

Forceps or Vacuum?
The application of the forceps is faster than a step-by-step increased vacuum process. The use of forceps is simple and safe if the head is located on the pelvic floor and the sagittal suture does not deviate more than 45° from the straight diameter. Forceps permit active rotation and are advantageous in the case of a deep transverse position. An advantage of vacuum extraction is the ease of placement and therefore, the lower likelihood of material trauma. It is also the instrument of choice during delivery from the mid-pelvis. An excessively forced vacuum extraction can lead to the disconnection of the vacuum cap and therefore strong intracranial-pressure fluctuations in the infant. If the cap disconnects repeatedly, the infant must be delivered using forceps.

All-in-one PC

Adjustable height

Easy to move

The 3B Scientific® birth simulator gives training in:
- Correct use of instruments in assisted vaginal delivery
- Defining the position of the fetal head in relation to the maternal pelvis
- Management of birth complications by means of anamnesis, findings and interventions

The high realism in training with SIMone™ is unique because:
- The instruments are used together with application of the natural force to guide the baby along the natural curve of the pelvic axis
- The characteristic sounds of birthing make the situation very life-like

Birthing scenarios:
- Multipara (normal birth)
- Nullipara (normal birth)
- Hyperactive labor
- Labor dystocia
- Intrauterine asphyxia
- Fever complications
- Preeclampsia/HELLP
- Overdue births

Train realistic high-stress scenarios for vacuum and forceps delivery:

- Haptic response technology
- Visual and audio interface
- Full debrief for optimal learning effect

The birthing simulator

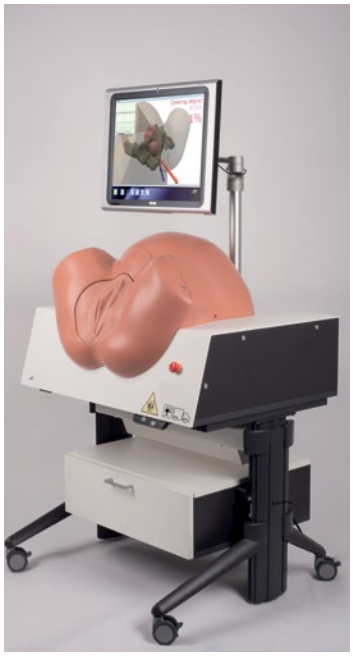
SIM*one*™ is a model of a female abdomen with a vulva and the ischial spines as landmarks. Inside the model there is a fetal head with a sagittal suture and fontanelles. The monitor above the model displays an exact image of the position and rotation of the fetal head within the maternal pelvis. Furthermore, the CTG and partogram, as well as documentation (history, findings) and interventions, are displayed. Objective determination of the position of the fetal head in relation to the maternal pelvis is now also possible. The female abdomen can be adjusted in height to simulate realistic birthing positions and to allow optimized working positions for all users. The birthing simulator can be easily transported thanks to a wheeled base.

Training scenarios

SIM*one*™ represents the complete clinical course including anamnesis, diagnosis and intervention. A variety of delivery scenarios are presented and the cardiotocogram and partogram support the assessment of the course of the delivery. The repositioning of the mother, the administration of medication and amniotomy are all interventions that may be used in order to achieve the necessary progress during the delivery. In order for the physicians that are carrying out the procedures to determine their level of proficiency, all the measures taken during the delivery can be reviewed afterwards. These different scenarios are a true reflection of the realities of the delivery room.

Training methodology

SIM*one*™ is the first birthing simulator directed to the needs of medical personnel. As a training instrument, it provides various teaching methods. Even if the study content during the teaching of medical specialists in obstetrics and gynecology includes assisted deliveries, this does not guarantee that during their training, physicians will encounter all possible pathologies. Therefore the better the delivery personnel are trained and the better they can perform in a routine sense, the fewer complications will occur and the better more difficult complications can be dealt with. After all, even experienced obstetricians will sometimes encounter situations during deliveries that occur only rarely.

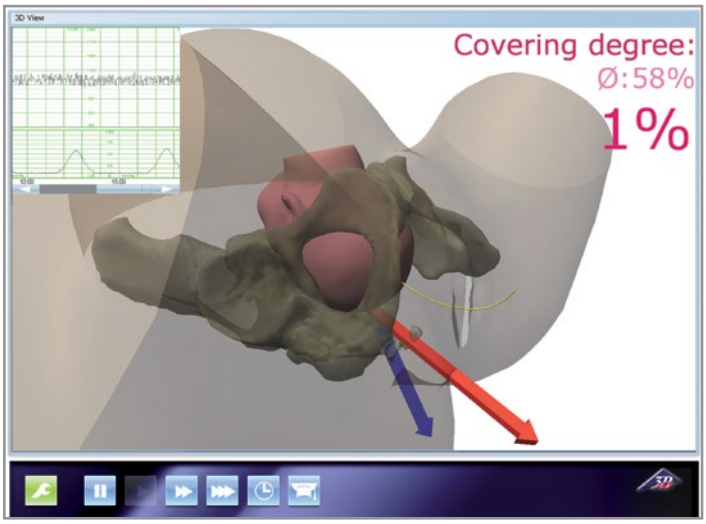


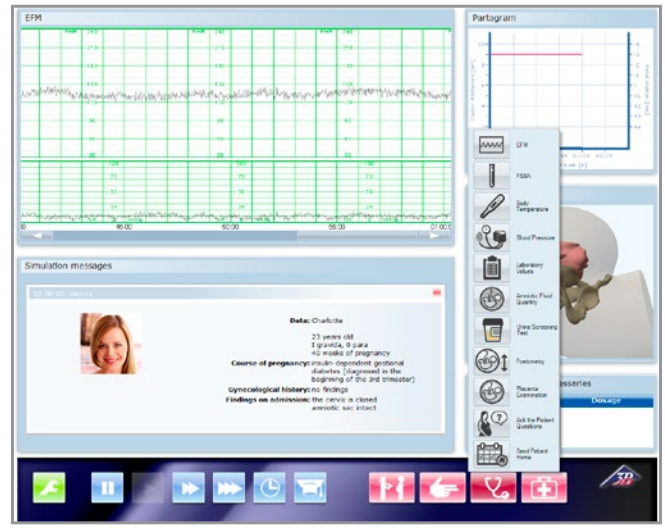

Safety during instrument use
The simulator presents the haptics required in order to perform the instrument assisted delivery in the correct manner: presentation data, placement of the forceps and extraction, taking care of the head of the infant and the maternal soft tissue. The monitoring software provides information in response to the manipulation of the fetal head in the context of force-feedback. The speed and resistance shown during delivery correspond with a real situation.

Professional feedback
SIM*one*™ was tested and evaluated by more than 50 doctors with experience in obstetrics. The majority of those questioned (83.0%) stated that the simulator was very highly or highly realistic. Almost all of the participating doctors (96.1%) would recommend other doctors to use SIM*one*™ for obstetric training to prepare for all sorts of complications effectively.*

Recognizing the right moment
During the delivery scenario, the user of the simulator assesses the course of the delivery and considers all the necessary measures, for example the recognizing the correct moment for a forceps delivery. In this context, questions concerning indications and conditions are always decisive:
Are the forceps necessary? Is a vacuum extraction the better alternative?

***Wulf J, Lüdemann C, Lukutin W, Burgkart R:**
Expert assessment of a high-fidelity audio and force feedback birthing simulator: a questionnaire-based validation study. Proceedings of the 14th Annual Meeting of the Society in Europe for Simulation Applied to Medicine; University of Herfortshire, Hatfield, UK, 19-21 June 2008





Basic training
Basic training is oriented to model instruction in which the trainer demonstrates each individual process, points out possible errors and allows participants to carry out the processes themselves using the simulator. In this way the participant learns to work with the forceps and the vacuum cup. Impressively displayed is the exact image of the position and rotation of the fetal head within the maternal pelvis on the monitor next to the model.

Problem Based Learning (PBL)
A refresher and special training course makes use of problem based learning and simulates what begins as a normal process, during which problems subsequently arise. Here, it is the task of the participant to react quickly and correctly. After the training, participants receive feedback and information on how to correct errors as the simulator can be rewound to the time at which the actions of the participant were below best practice. For this type of teaching, SIM*one*™ offers a wide range of possible deliveries.

Item no. 1019599

Overview of **new** scenarios & interventions

		Case 1	Case 2	Case 3
Fever	**Case History**	Sophia: • 28 years old • II-Gravida 0-Para • 39 weeks of pregnancy	Emma: • 32 years old • III-Gravida I-Para • 40+2 weeks of pregnancy	Olivia: • 21 years old • I-Gravida, 0-Par+D2+E2:E9+E2:E10 • 40+3 weeks of pregnancy
	New Features	**Fever complication** • fetal tachycardia of 190 bpm • mother's body temperature 39 °C	**Infection complication** • infantile tachycardia of 170 bpm • laboratory values of the mother show an infection • mother's body temperature 38 °C	**Heavy infection complication** • fetal tachycardia of 190 bpm • laboratory values of the mother show an heavy infection • mother's body temperature 39,8 °C
	New Actions	• administer fluids • (Ringer Solution or NaCl) • administer Paracetamol • administer labor inducing drugs	• administering antibiotics • administer Paracetamol • administer fluids • (Ringer Solution or NaCl)	• administering antibiotics, • fluids and antipyretic drugs
Preeclampsia/HELLP	**Case History**	Mia: • 19 years old • I-Gravida, 0-Para • 37+5 weeks of pregnancy	Lily: • 21 years old • I-Gravida, 0-Para • 40+1 weeks of pregnancy	Emily: • 18 years old • I-Gravida, 0-Para • 38+2 weeks of pregnancy
	New Features	**Mild preeclampsia** • no contractions • blood pressure • blood test of the mother • Urine screening	**Severe preeclampsia** (stage 2 event) • irregular labor contractions • blood pressure increased • blood test of the mother • Urine screening	**HELLP syndrome** • blood pressure • blood test of the mother
	New Actions	• ask the mother • administer misoprotol, prostaglandin or oxytocin • administer methyldopa	• administer methyldopa	• perform a cesarean section under general anesthesia
Overdue Birth	**Case History**	Chloe: • 33 years old • IV-Gravida, I-Para • 40 weeks of pregnancy	Charlotte: • 23 years old • I-Gravida, 0-Para • 40 weeks of pregnancy	Nora: • 38 years old • III-Gravida, I-Para • 40+3 weeks of pregnancy
	New Features	**Overdue** (mother refuses the labor induction procedure)	**Overdue** (mother accepts the labor induction procedure)	**Overdue** (post cesarean section, mother refuses a new caesarean section and the labor is induced)
	New Actions	• examine amniotic fluid quantity • foetometry • placenta examination • ask the mother • sending mother home	• examine amniotic fluid quantity • foetometry • placenta examination • ask the mother • administer Prostaglandin • administer Misoprostol	• ultrasound fetometry • ask the mother • administer Prostaglandin

New Interventions and Findings


Body Temperature


Blood Pressure


Laboratory Values


Amniotic Fluid Quantity


Urine Screening Test


Foetometry


Placenta Examination


Ask the Patient Questions


Send Patient Home

New Medicinal Options


Misoprostol

Prostaglandin


General Anaesthetic


Paracetamol


Methyldopa


Ceftriaxone


Ringer Solution


NaCl

3B Scientific

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SIMone™

Life-like training in vaginal-operative extraction: The patented birth simulator from 3B Scientific

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All accessories and replacement parts are available at 3bscientific.com

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