Operative Experience

3B Scientific

ENERGY EFFICIENT 10+ HOURS BATTERY LIFE

IMPROVING PATIENT CARE UNDER FIRE

TACTICAL CASUALTY CARE SIMULATION SUITE

The Tactical Casualty Care Simulation Suite is a suite of **lifelike and anatomically-accurate, high-fidelity, male and female simulators** for comprehensive TCCC and medical provider level care training.

Featuring lifelike tissue and high anatomic fidelity, the TCCS and TCCS Plus lines of simulators are highly ruggedized, water-resistant and fully mobile. With over 10+ hours of battery life they are ideally suited for challenging, real-world, indoor and outdoor environments.

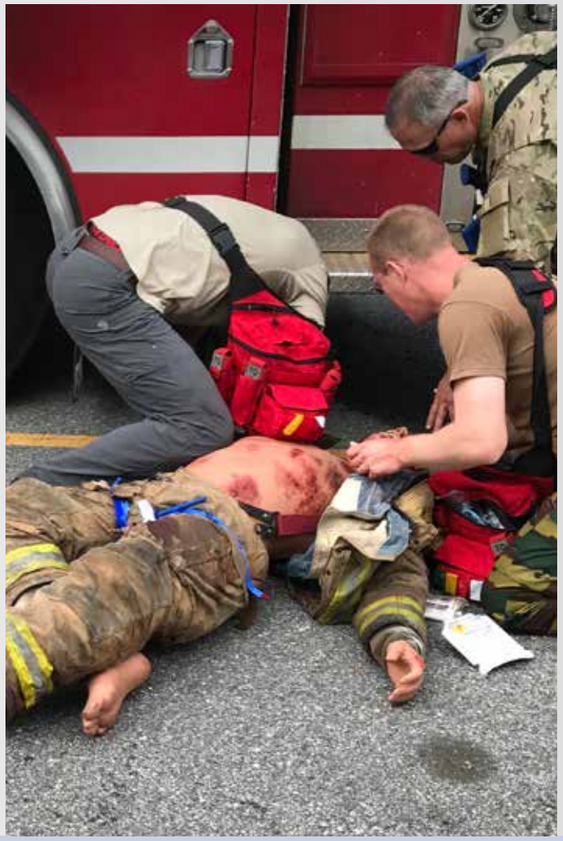
TACTICAL AND TRAUMA CARE

Operative Experience

3B Scientific

Tactical Casualty Care Simulation Suite | Trauma Care Simulation Suite | Tactical Hemorrhage Control

Art. No. 1022652



TACTICAL AND TRAUMA CARE SIMULATION SUITE

These Tactical and Trauma Care Simulators are a suite of life-like and anatomically-accurate, high-fidelity, male and female simulators for comprehensive TCCC/TECC, ACLS/ALS and medical provider level care training.

Featuring life-like tissue and high anatomic fidelity, the TCCS and TCS line of simulators are ruggedized, water-resistant, fully mobile, and with over 10+ hours of battery life they are ideally suited for challenging, real-world, indoor and outdoor environments.

ABOUT OPERATIVE EXPERIENCE

The mission of Operative Experience is to revolutionize surgical and medical team training. Using medical simulators with unprecedented anatomical and surgical fidelity within a rigorous experiential instructional paradigm, Operative Experience will reduce training costs while increasing training effectiveness and retention. Operative Experience is dedicated to applying this technology throughout the continuum of care, from tactical operations in the field to emergency procedures in the OR.

ABOUT THE 3B SCIENTIFIC GROUP

3B Scientific was founded in 1948 in Hamburg, Germany and has grown to be one of the world's leading manufacturers of Medical and Science Education solutions. The product portfolio covers a complete and comprehensive range of equipment for simulation and skill training, anatomy, healthcare and patient education and is continuously updated with new products and innovations. The mission of 3B Scientific is to advance medical and healthcare delivery through the quality, breadth and global reach of relevant educational and simulation products. Represented in over 120 countries worldwide, the brand name 3B Scientific® stands for best quality, best value, and best service.

TACTICAL CASUALTY CARE SIMULATOR (TCCS)

Comprehensive Tactical Combat Casualty Care Preparedness

AIRWAYS

- Assessment of oral and nasal areas
- Realistic airway – intubation capable
- Insert nasal & oral pharyngeal airways
- Difficult airway management
- Perform advanced foreign body removal from airway
- Perform suction of the airway – nasal and oropharyngeal
- Tracheal intubation
- Supports supraglottic devices (incl. LMAs)
- Crycothyrotomy

HEMORRHAGE MANAGEMENT

- Remote controlled venous bleeding and arterial hemorrhage
- Bleeding control via pressure, elevation, and pressure points
- CAT and junctional tourniquets
- Apply tourniquets to control bleeding
- Apply junctional tourniquets to control massive hemorrhage
- Assess and treat upper and lower limb amputations
- Wound packing
- Multiple and independent bleeding sites
- Penetrating trauma wounds
- 3 liter blood reservoir

BREATHING

- Remote controlled respiratory rate
- Bilateral and independent chest excursion
- Tension pneumothorax corrected by midclavicular and anterior axillary needle insertion
- Support to external ventilation

CIRCULATION

- Remote controlled heart rate
- Remote controlled pulses – carotid and non-injured limbs
- Humeral and sternal IO
- IV cannulation

MANIKIN AND SOFTWARE

- Full-body, wireless simulator
- Ruggedized and water-resistant for indoor and outdoor environments
- Realistic and lifelike weight (84 kg)
- Fully articulated limbs
- Easy-to-use instructor tablet and software (iOS, Android and Mac/PC)
- Two-way headset communication system
- Simulation logs
- System “health” status with complete and real-time self-diagnostics

TACTICAL CASUALTY CARE SIMULATOR FEMALE (TCCSF)

The World’s First Life-Identical Female Tactical Simulator for TCCC Training

AIRWAYS

- Assessment of oral and nasal areas
- Realistic airway – intubation capable
- Insert nasal & oral pharyngeal airways
- Difficult airway management
- Perform advanced foreign body removal from airway
- Perform suction of the airway – nasal and oropharyngeal
- Tracheal intubation
- Supports supraglottic devices (incl. LMAs)
- Crycothyrotomy

HEMORRHAGE MANAGEMENT

- Remote controlled venous bleeding and arterial hemorrhage
- Bleeding control via pressure, elevation, and pressure points
- CAT and junctional tourniquets
- Apply tourniquets to control bleeding
- Apply junctional tourniquets to control massive hemorrhage
- Assess and treat upper and lower limb amputations
- Wound packing
- Multiple and independent bleeding sites
- Penetrating trauma wounds
- 1.2 liter blood reservoir

BREATHING

- Remote controlled respiratory rate
- Bilateral and independent chest excursion
- Tension pneumothorax corrected by midclavicular and anterior axillary needle insertion
- Support to external ventilation

CIRCULATION

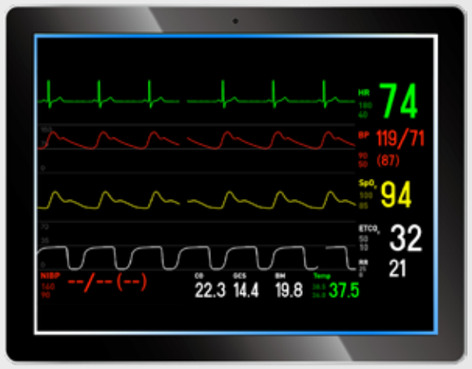
- Remote controlled heart rate
- Remote controlled pulses – carotid and non-injured limbs
- Humeral and sternal IO
- IV cannulation

MANIKIN AND SOFTWARE

- Full-body, wireless simulator
- Realistic female form with less muscle mass, lighter skeleton and anatomically accurate genitalia
- Ruggedized and water-resistant for indoor and outdoor environments
- Realistic and lifelike weight (59 kg)
- Fully articulated limbs
- Easy-to-use instructor tablet and software (iOS, Android and Mac/PC)
- Two-way, headset communication system
- Simulation logs
- System “health” status with complete and real-time self-diagnostics

TACTICAL CASUALTY CARE SIMULATOR PLUS (TCCS PLUS)

A High-Fidelity, Clinically-Responsive Tactical Trauma Simulator for Prolonged Field Care Training



AIRWAYS

- Endotracheal tube placement
- Tongue-swelling for difficult airway
- Bag-valve-mask ventilation
- Assessment of oral and nasal areas
- Nasal and oral pharyngeal airways insertion
- Supports supraglottic devices (incl. LMAs)
- Cricothyrotomy

MEDICATION AND IV

- Medication and vascular access
- Intramuscular sites for medication
- IV cannulation
- Humeral, sternal and tibial IO

BREATHING

- Remote controlled respiratory rate
- Bilateral and independent chest excursion
- Tension pneumothorax correctedby midclavicular and anterior axillary needle insertion
- Support to external ventilation
- Bilateral chest tube insertion

PATIENT MONITORING

- ECG monitoring
- Patient vital signs
- Multiple waveform display

CIRCULATION

- Remote controlled heart rate
- 4 lead ECG
- Unilateral blood pressure measurement
- Carotid, brachial, radial, femoral, popliteal, dorsalis and posterior sensed pulses
- Defibrillation, cardioversion and pacing*

NEUROLOGICAL

- Blinking eyes with tri-state pupils

HEMORRHAGE MANAGEMENT

- Remote controlled pulsatile hemorrhage
- Bleeding control via pressure, elevation, and pressure points
- CAT and junctional tourniquets
- Wound packing
- Multiple and independent bleeding sites
- Penetrating trauma wounds

SOUNDS

- Airway sounds
- Heart sounds
- Lung sounds

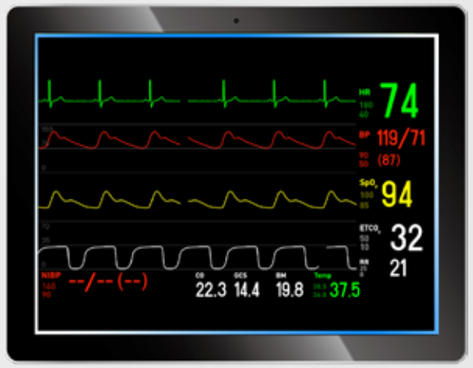
MANIKIN AND SOFTWARE

- Full-body, wireless simulator
- Ruggedized and water-resistant for indoor and outdoor environments
- Realistic and lifelike weight (84 kg)
- 3 liter blood reservoir
- Fully articulated limbs
- Easy-to-use instructor tablet and software (iOS, Android and Mac/PC)
- Student tablet for vital signs monitoring
- Two-way, headset communication system
- Simulation logs
- System “health” status with complete and realtime self-diagnostics

*requires iSimulate patient monitor software

TACTICAL CASUALTY CARE SIMULATOR FEMALE PLUS (TCCSF PLUS)

High-Fidelity Medical Provider Level Prolonged Field Care for the Female Combatant



AIRWAYS

- Endotracheal tube placement
- Tongue-swelling for difficult airway
- Bag-valve-mask ventilation
- Assessment of oral and nasal areas
- Nasal and oral pharyngeal airways insertion
- Supports supraglottic devices (incl. LMAs)
- Cricothyrotomy

MEDICATION AND IV

- Medication and vascular access
- Intramuscular sites for medication
- IV cannulation
- Humeral, sternal and tibial IO

BREATHING

- Remote controlled respiratory rate
- Bilateral and independent chest excursion
- Tension pneumothorax corrected by midclavicular and anterior axillary needle insertion
- Support to external ventilation
- Bilateral chest tube insertion

PATIENT MONITORING

- ECG monitoring
- Patient vital signs
- Multiple waveform display

CIRCULATION

- Remote controlled heart rate
- 4 lead ECG
- Unilateral blood pressure measurement
- Carotid, brachial, radial, femoral, popliteal, dorsalis and posterior sensed pulses
- Defibrillation, cardioversion and pacing*

NEUROLOGICAL

- Blinking eyes with tri-state pupils

HEMORRHAGE MANAGEMENT

- Remote controlled pulsatile hemorrhage
- Bleeding control via pressure, elevation, and pressure points
- Combat Application Tourniquets, and junctional tourniquets
- Wound packing
- Multiple and independent bleeding sites
- Penetrating trauma wounds

SOUNDS

- Airway sounds
- Heart sounds
- Lung sounds

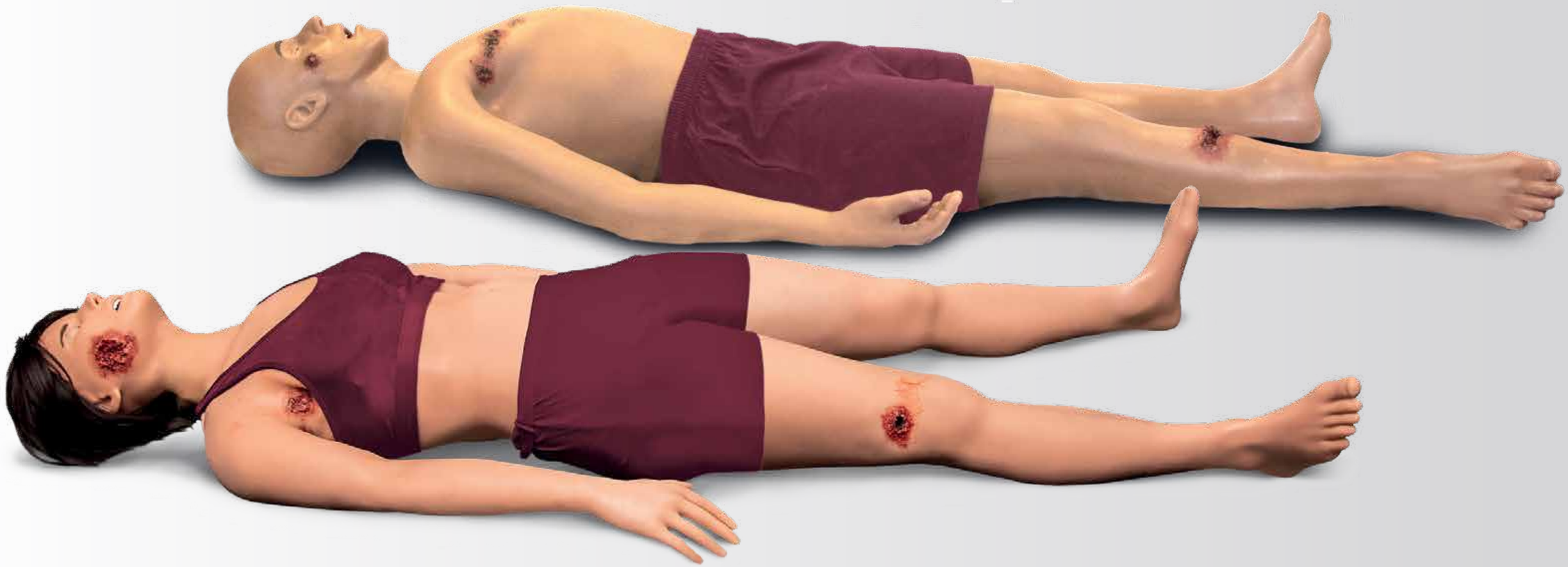
MANIKIN AND SOFTWARE

- Full-body, wireless simulator
- Ruggedized and water-resistant for indoor and outdoor environments
- Realistic and lifelike weight (59 kg)
- 1.2 liter blood reservoir
- Fully articulated limbs
- Easy-to-use instructor tablet and software (iOS, Android and Mac/PC)
- Student tablet for vital signs monitoring
- Two-way, headset communication system
- Simulation logs
- System “health” status with complete and realtime self-diagnostics

*requires iSimulate patient monitor software

TACTICAL HEMORRHAGE CONTROL TRAINER (THCT)

Rapid Assessment and Hemorrhage Control Training



The Tactical Hemorrhage Control Trainer (THCT) is an lifelike, wireless and autonomous patient simulator for TCCC rapid assessment and hemorrhage control training. The THCT features independent upper and lower body venous and pulsatile arterial bleeding, controlled remotely with a free and easy-to-use mobile phone application. The THCT can also be used to train essential TCCC point-of-injury skills such as emergency airway management, needle decompression and intraosseous injection.

FULL-BODY MANIKIN

- Full-body, wireless, tetherless, and autonomous simulator
- Anatomically-accurate soft tissue
- Ruggedized and water-resistant for indoor and outdoor environments
- Multiple wound configurations including amputations and gunshot wounds
- Realistic and lifelike weight
- Fully-articulated limbs
- Easy-to-use instructor phone app (iOS and Android)
- Extended battery life: 20+ hours

ESSENTIAL SKILLS TRAINING

- Endotracheal tube placement
- Supports supraglottic devices (including LMAs)
- Bag-valve-mask ventilation
- Assessment of oral and nasal areas
- Oropharyngeal and Nasopharyngeal airway
- Needle decompression (mid-clav/mid-ax)
- Chest Seal
- Cricothyrotomy
- Humeral and sternal intraosseous
- Catheterization
- IV cannulation

HEMORRHAGE CONTROL

- Remotely-activated venous and pulsatile arterial bleeding
- Wound packing and bandaging
- Junctional and standard tourniquet application
- Blood reservoir: 6L male/3.5L female

RAPID ASSESSMENT

- Airway and breathing
- Oral and nasal
- Bleeding

TCCS/THCT WOUND CONFIGURATIONS

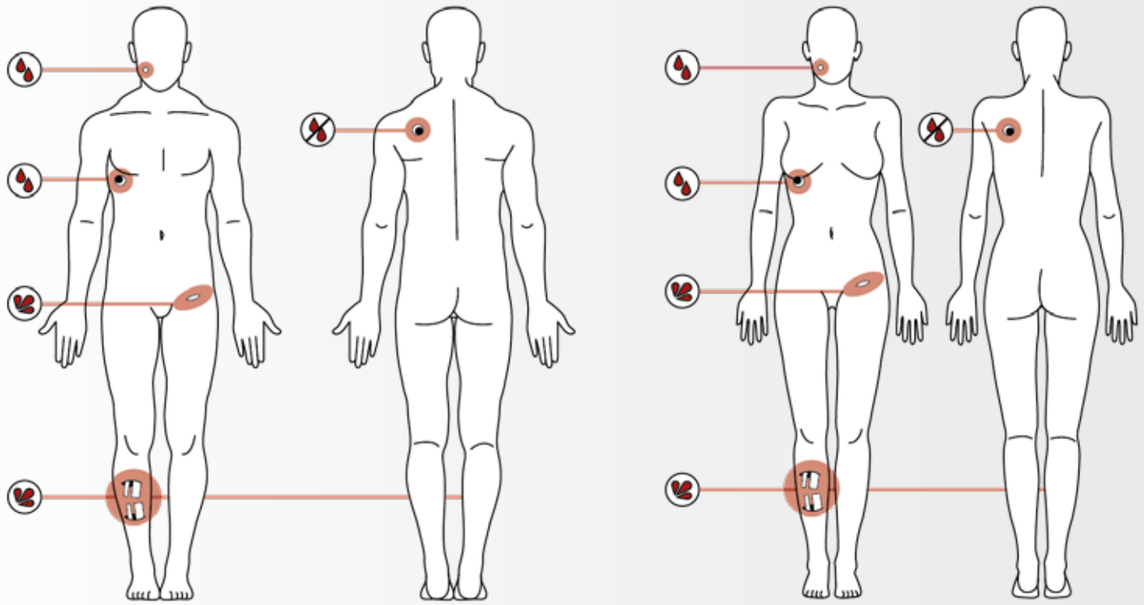
Available for male and female simulators

› WOUND PATTERN: TRAUMA

1

TCCS 1 MALE	**Art. No. 1022853**	TCCS PLUS 1 MALE	**Art. No. 1022919**	THCT 1 MALE	**Art. No. 1022925**
TCCS 1 FEMALE	**Art. No. 1022850**	TCCS PLUS 1 FEMALE	**Art. No. 1022910**	THCT 1 FEMALE	**Art. No. 1022975**

Wound Description	Bleeding	Type
Right side of the face Gun Shot Wound (GSW)	Yes	Venous
Left back side GSW exit wound	No	–
Right side of the chest GSW	Yes	Venous
Left inguinal wound	Yes	Arterial
Right tibial / fibula open fracture	Yes	Arterial



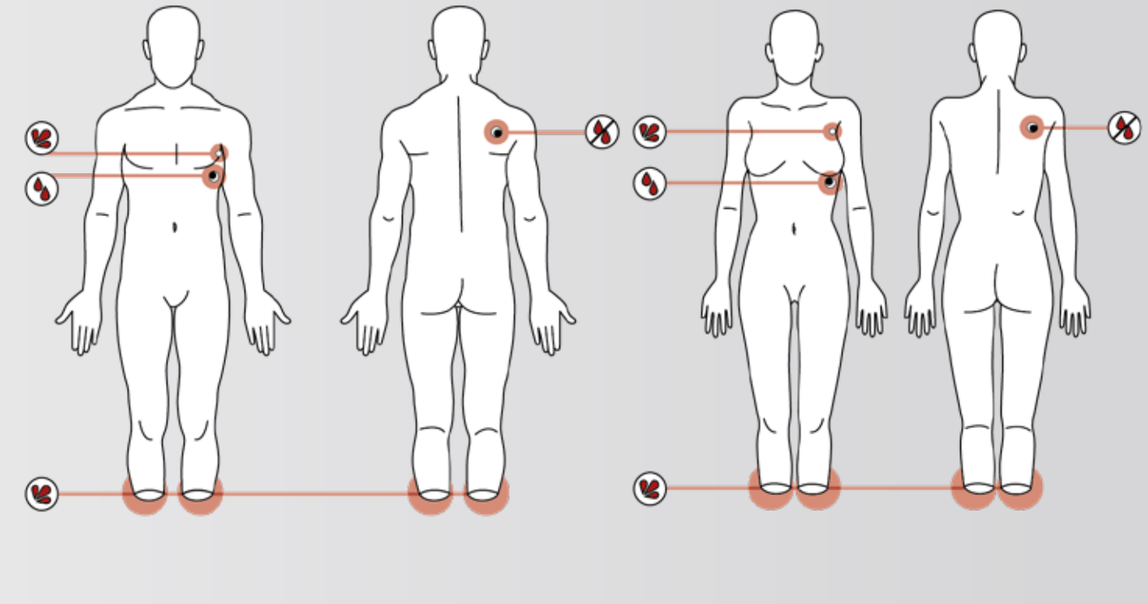
No bleeding · Venous bleeding · Arterial bleeding · Open fracture

› WOUND PATTERN: TRAUMA

2

TCCS 2 MALE	**Art. No. 1022854**	TCCS PLUS 2 MALE	**Art. No. 1022920**	THCT 2 MALE	**Art. No. 1022926**
TCCS 2 FEMALE	**Art. No. 1022851**	TCCS PLUS 2 FEMALE	**Art. No. 1022911**	THCT 2 FEMALE	**Art. No. 1022976**

Wound Description	Bleeding	Type
Gun Shot Wound (GSW) Left side of the chest	Yes	Venous
GSW exit right side of the back	No	–
Left axillary wound	Yes	Venous
Bilateral below the knee amputation	Yes	Arterial



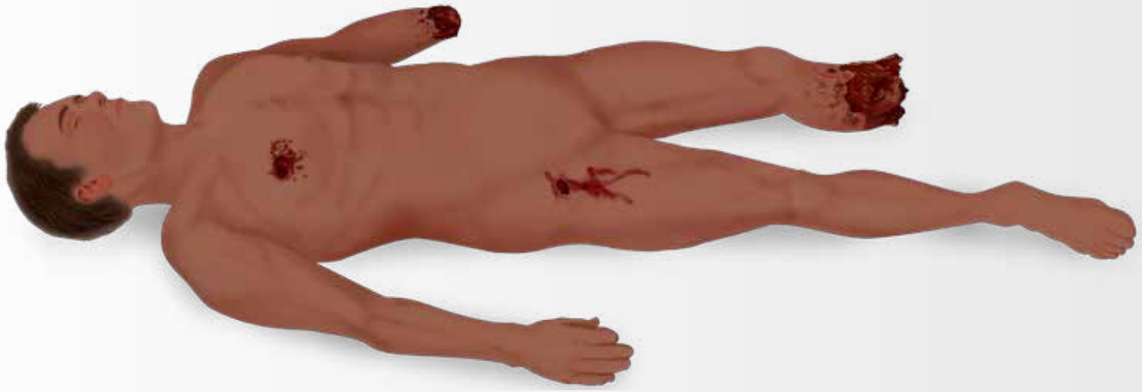
No bleeding · Venous bleeding · Arterial bleeding

Available in Caucasian, African American and Hispanic skin tones.

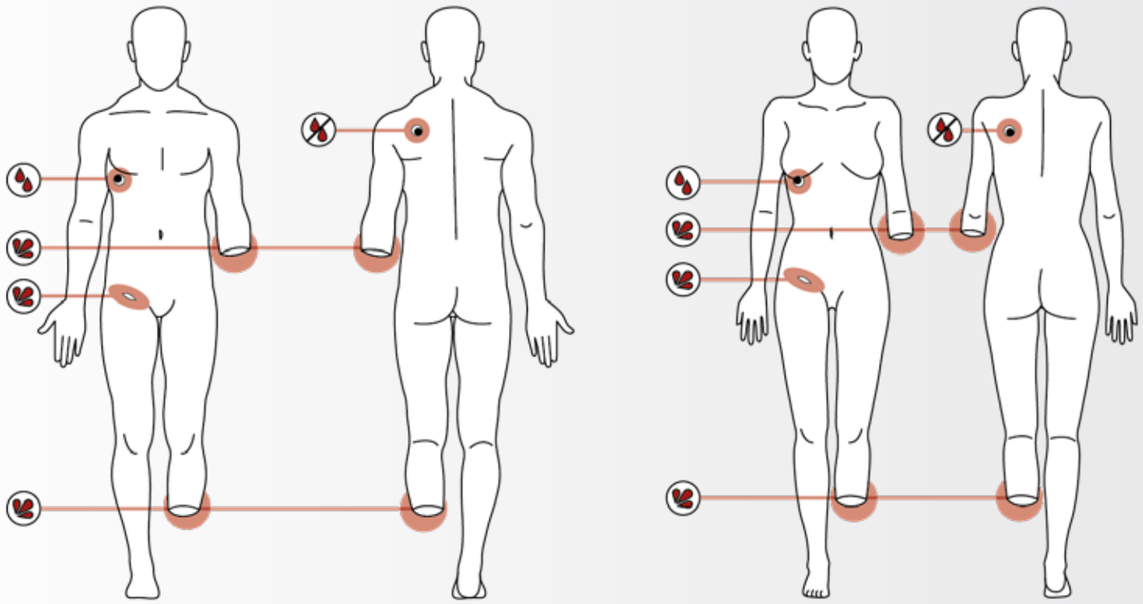
WOUND PATTERN: TRAUMA

3

TCCS 3 MALE	**Art. No. 1022855**	TCCS PLUS 3 MALE	**Art. No. 1022921**	THCT 3 MALE	**Art. No. 1022927**
TCCS 3 FEMALE	**Art. No. 1022852**	TCCS PLUS 3 FEMALE	**Art. No. 1022912**	THCT 3 FEMALE	**Art. No. 1022977**



Wound Description	Bleeding	Type
Gun Shot Wound (GSW) Right side of the chest	Yes	Venous
GSW exit left side of the back	No	–
Left lower arm amputation	Yes	Arterial
Left below the knee amputation	Yes	Arterial
Right side inguinal wound	Yes	Arterial



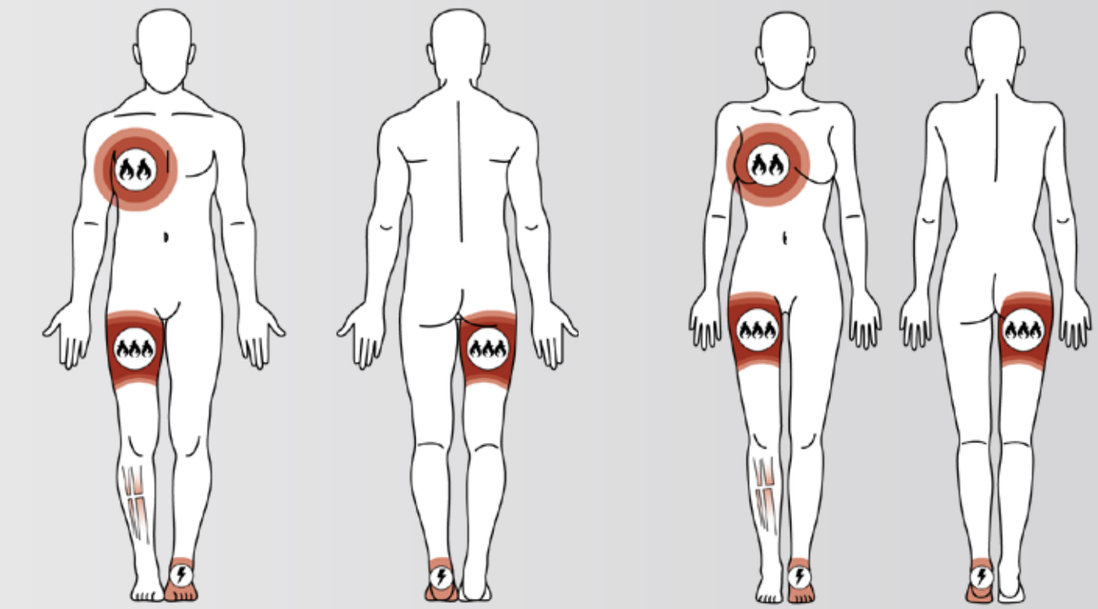
No bleeding Venous bleeding Arterial bleeding

WOUND PATTERN: BURN

4

TCCS 4 MALE	**Art. No. 1022916**	TCCS PLUS 4 MALE	**Art. No. 1022922**		
TCCS 4 FEMALE	**Art. No. 1022907**	TCCS PLUS 4 FEMALE	**Art. No. 1022913**		

Wound Description	Bleeding	Type
2nd degree burn in the chest	No	–
3rd degree circumferential burn right thigh	No	–
Closed fracture of the right leg	No	–
Electrical exit wound left bottom of the left foot	No	–



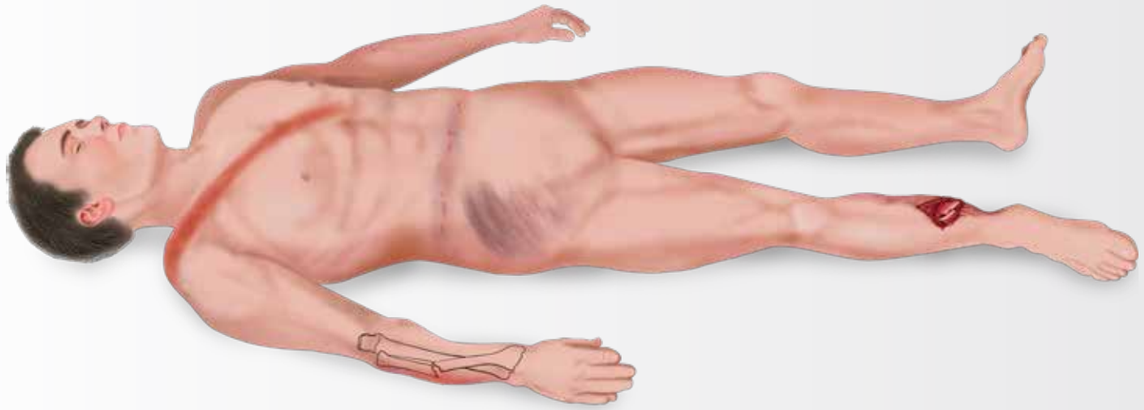
2nd degree burn 3rd degree burn Electrical burn Closed fracture

Available in Caucasian, African American and Hispanic skin tones.

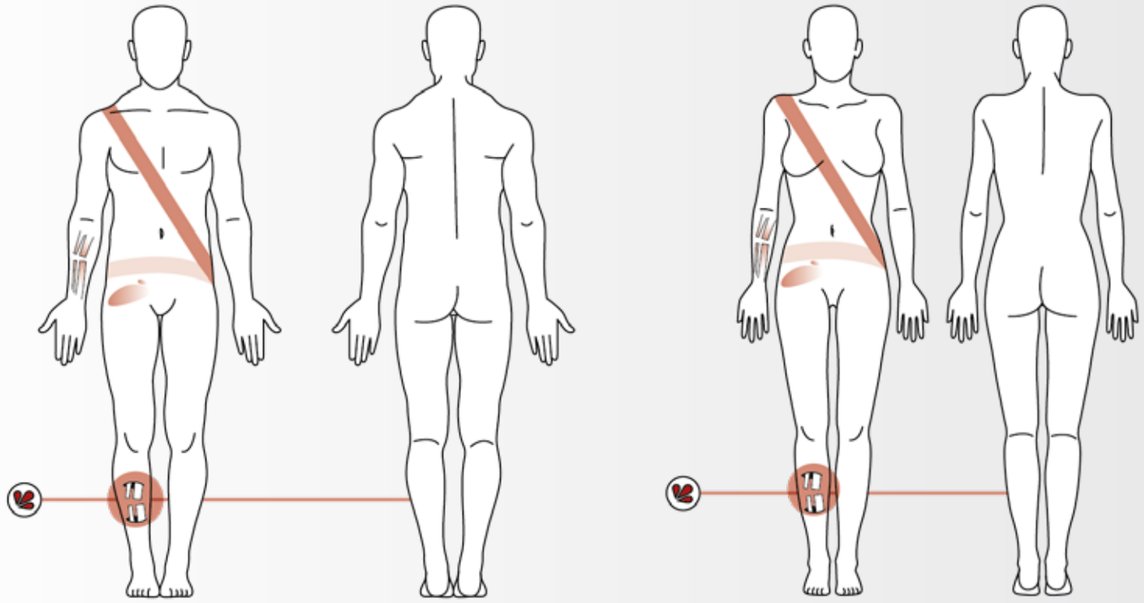
WOUND PATTERN: CAR ACCIDENT

5

TCCS 5 MALE **Art. No. 1022917**
TCCS 5 FEMALE **Art. No. 1022908**
TCCS PLUS 5 MALE **Art. No. 1022923**
TCCS PLUS 5 FEMALE **Art. No. 1022914**



Wound Description	Bleeding	Type
Bruising across the chest and abdomen (seat belt injury)	No	–
Bruising/Swelling Pelvis region	No	–
Closed fracture lower arm	No	–
Open tib/fib fracture	Yes	Arterial

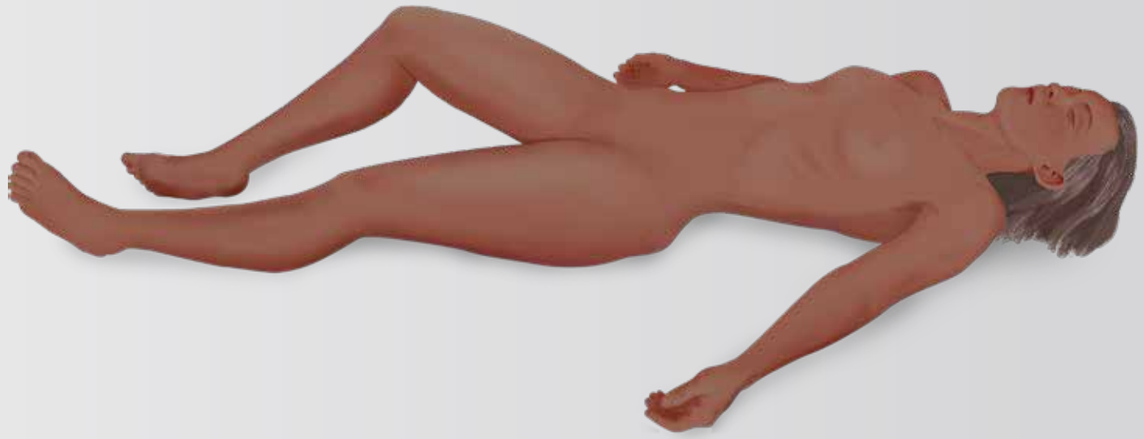


Arterial bleeding Closed fracture Open fracture

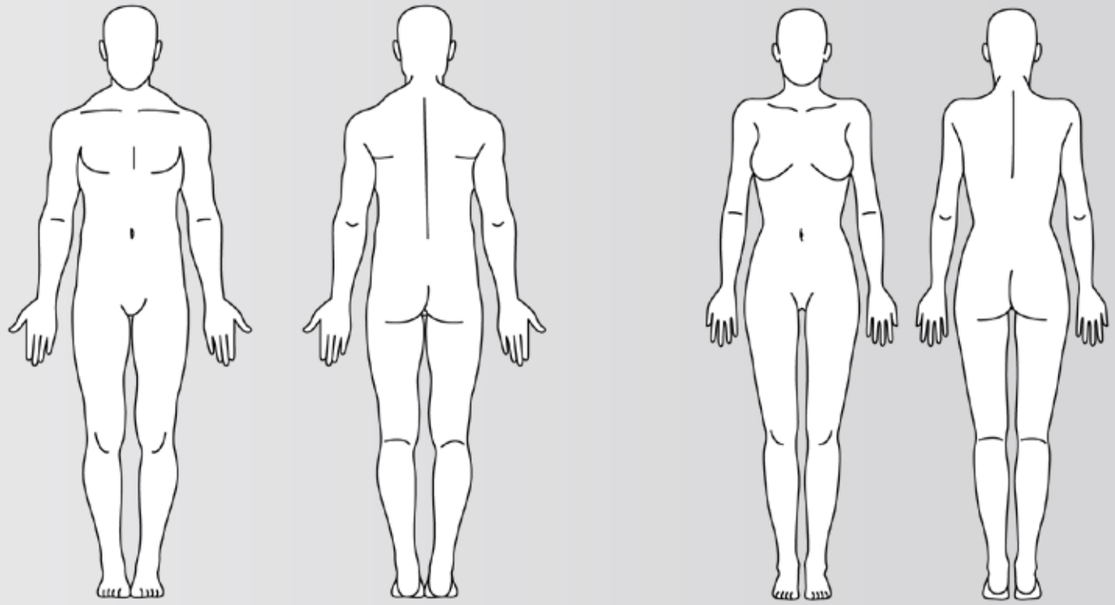
HEALTHY BODY

6

TCCS 6 MALE **Art. No. 1022918**
TCCS 6 FEMALE **Art. No. 1022909**
TCCS PLUS 6 MALE **Art. No. 1022924**
TCCS PLUS 6 FEMALE **Art. No. 1022915**



Wound Description	Bleeding	Type
No wounds	–	–



Available in Caucasian, African American and Hispanic skin tones.

Illustrations by 3B Scientific and Suzanne Hayes Visuals.

TECHNICAL SPECIFICATIONS (TCCS)

- Full-body wireless manikin
- Water resistant
- Male: 192 × 70 × 30 cm, 84 kg
- Female: 165 × 60 × 28 cm, 59 kg
  (Simulator weight can vary +/- 5%)
- Fully-articulated limbs
- Internal batteries – dual pack
- Li-Ion 18.5V, 6400 mAh
- 6A rate with built in thermal protection
- UN38.3 certified
- Run time: 10+ hours
- Electrical Input: 110v – 240v
- Two-way communication system
- Line of sight two-way communications headset
- Range up to 91 m
- Instructor Control Interface tablet
- Patient Monitor tablet (Plus models only)
- Instructor Control Interface software and license
  (iOS, Android, Windows 10, Mac OS 10.12 or greater)
- Rugged carry case
- 3.7 liters concentrated antimicrobial, antifungal,
  antifreeze simulated blood

FOR MORE INFORMATION PLEASE CONTACT YOUR 3B SCIENTIFIC REPRESENTATIVE.

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