3M

Bair Hugger™

Normothermia System™

Warm Every Patient.

Control what matters the most

Hypothermia can develop in the hour immediately following the induction of anaesthesia[1]

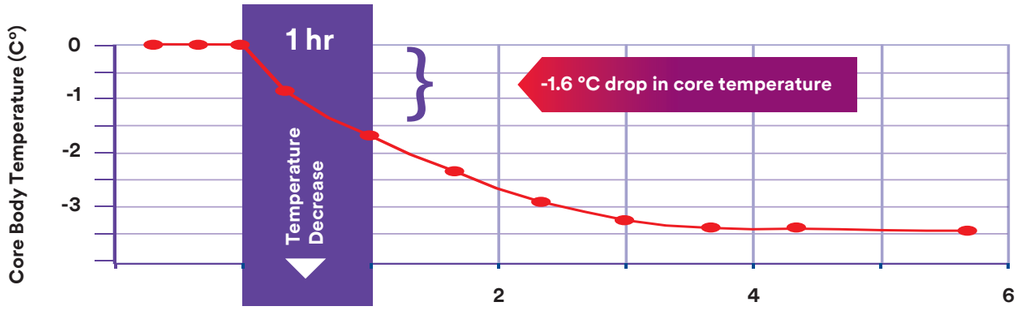


Chart adapted from: Sessler, DI., Perioperative Heat Balance. Anesthesiology 2000;92(2):578-96.

Characteristic patterns of general anaesthesia-induced hypothermia[2-4]

Phase I:

Rapid decrease in core temperature primarily caused by redistribution of heat.
Heat loss: 81% redistribution; 19% environmental

Phase II:

Slower, linear decrease in temperature primarily caused by heat loss which exceeds the body's ability to produce heat

Phase III:

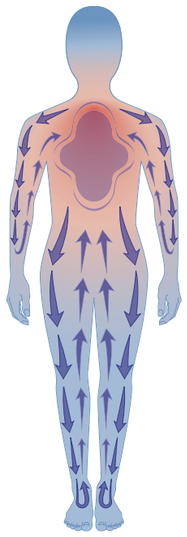
Temperature plateaus once it has dropped beyond the widened interthreshold range and triggers the thermoregulatory response

1 . Sessler DI, Perioperative Heat Balance. Anesthesiology, V92, No.2, February 2000.
2. Matsukawa, T., et al., Heat flow and distribution during induction of general anesthesia. Anesthesiology, 1995. 82(3): p. 662-73.
3. Sessler, D.I., Mild Perioperative Hypothermia. N Engl J Med, 1997. 336(24): p. 1730-7.
4. Sessler, DI., Perioperative Heat Balance. Anesthesiology 2000;92(2):578-96.

81%

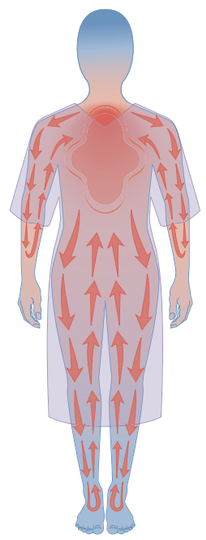
of hypothermia in the first hour is due to temperature redistribution[1]

Pre-warming prior to the induction of anaesthesia helps to maintain normothermia and mitigate the effects of heat redistribution[2]



Induction of Anaesthesia

Vasolidation allows warmer blood from the core to cool as it flows through the periphery which lowers the body temperature.



Prewarmed Patient

Prewarming before surgery increases the peripheral temperature, so the blood's rate of cooling is reduced.

1. Matsukawa T, et al. Anesth. 1995. 82(3): p.662-73.
2. Brandes IF, Jipp M, Popov AF, Seipelt R, Quintel M, Bräuer A. Intensified thermal management for patients undergoing transcatheter aortic valve implantation (TAVI). J Cardiothor Surg. 2011 Sep 25;6(1):1.

The physiological effects of hypothermia, ranging from mild to severe, can have a significant impact on patient outcomes[1,2]

MAJOR Complications

Myocardial Events

- Hypothermia can increase the incidence of cardiac events.[3,4]
- A study by Frank et al. found high-risk patients with even mild hypothermia are three times as likely to experience adverse myocardial outcomes.[3]

Surgical Site Infections (SSIs)

- Hypothermia can increase the incidence of wound infection[4,5,6] and prolong hospitalisation.[4,5]

Blood loss and risk of transfusion

- Even mild hypothermia significantly increases blood loss by 16% and the risk for transfusion by ~22%.[7]
- A 1.6°C reduction in core body temperature can increase blood loss by 30% and significantly augment allogenic transfusion requirement.[8]

MINOR Complications

Prolonged Recovery

- Drug metabolism is decreased which prolongs the duration of post-operative recovery by approximately 40 minutes.[9]

Thermal Discomfort

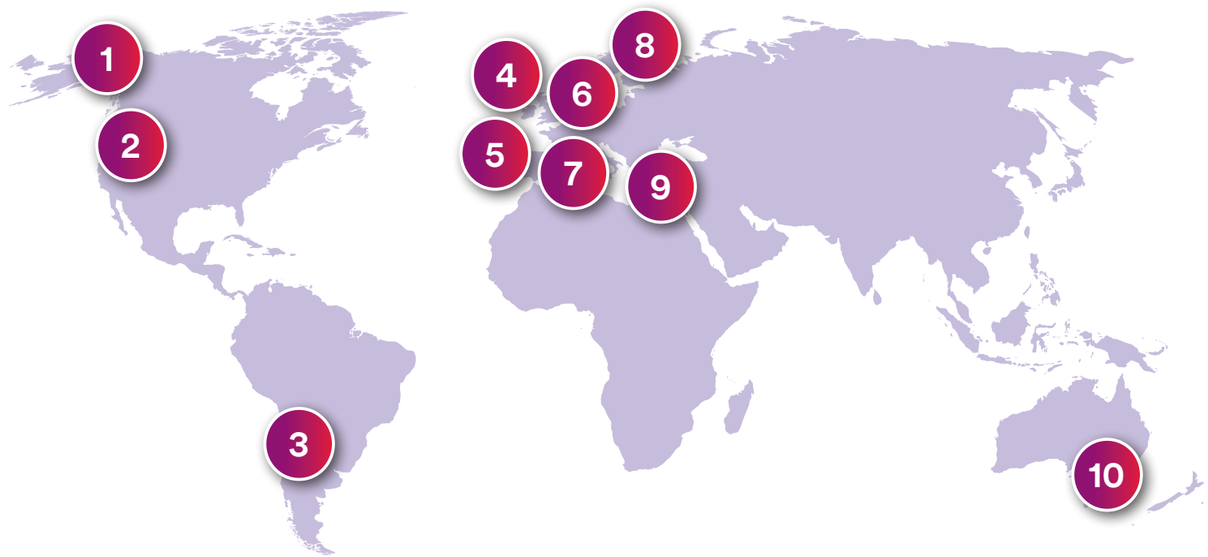
- Patients often report shivering as the worst part of their hospitalisation, sometimes rating it worse than surgical pain.[10]

Postoperative Shivering

- Occurs in 40% of unwarmed patients,[11] increases oxygen consumption and exacerbates postoperative pain.[10]

1. Madrid E. The Cochrane Library. 2016. 2. Sessler DI. Lancet. 2016. 3. Frank SM. JAMA. 1997; 277(14):1127-1134. 4. Scott AV, et al. Anesth. 2015;123:116-25. 5. Kurz A. NEJM. 1996 May 9;334(19):1209-16. 6. Melling A, et al. Lancet. 2001;358:876-80. 7. Rajagopalan S. Anesth. Jan 2008;108(1):71-77. 8. Schmied H. Lancet 1996; 347:289–92. 9. Lenhardt, et al. Anesth. 1997;98(6):1318-1323. 10. Sessler DI. NEJM. 1997; 336(24):1730-1737. 11. Just B, et al. Anesth. 1992;76:60-64.

Healthcare organisations around the world have published recommendations or guidelines emphasising the importance of maintaining normothermia



HealthCare Organisations around the world

1. Canada
Canadian Patient Safety Institute

2. United States
CDC SSI Guideline, CMS, AORN, ASA, ASPAN, The Joint Commission

3. Brazil
Brazil Society of Cardiology Guideline for Perioperative Evaluation

4. U.K.
UK National Institute for Health and Clinical Excellence

5. Spain
Spanish Ministry of Science and Innovation

6. Denmark
Clinical Guideline: Prevention of Periop Hypothermia

7. Italy
SIAARTI Clinical Guideline for Perioperative Normothermia

8. Sweden
Swedish Association of Local Authorities and Regions

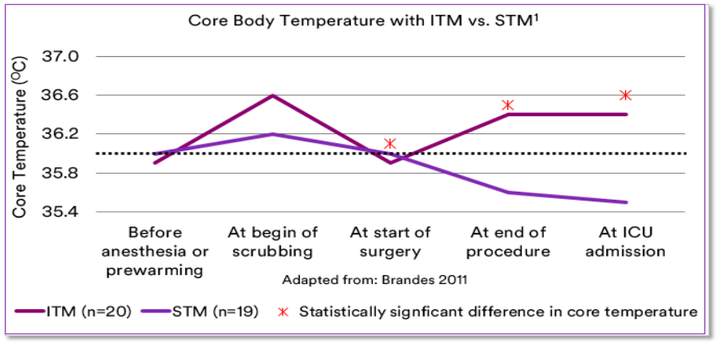
9. Turkey
Turkish Anaesthesia Guidelines to Prevent Unwanted Perioperative Hypothermia

10. Australia
Australian College of Perioperative Nurses

Australian Commission on Safety and Quality in Healthcare

Pre-op

Pre-warming prior to the induction of anaesthesia helps to maintain normothermia and mitigate the effects of heat redistribution[1]



Patients who received intensified thermal management (ITM) were more likely than patients who received standard thermal management (STM) to:

- Maintain nomothermia
- Have a higher core temperature, post surgery
- Be extubated in the OR;
- Require less mechanical ventilation

ACORN recommends:

Appropriate warming interventions should be commenced preoperatively and continued intraoperatively.[2]

The prevention and management of inadvertent perioperative hypothermia requires a collaborative and interdisciplinary approach at all stages of the perioperative journey across preoperative, intraoperative and post-operative areas.[2]

Temperature recording will be implemented and documented at regular intervals for all patients undergoing surgery.[2]

AORN recommends:

In all phases of perioperative care, the perioperative RN should develop an individualised plan of care and implement the interventions chosen for prevention of unplanned hypothermia. The patient's temperature should be measured and monitored in all phases of perioperative care.[3]

NICE recommends:

Forced-air warming should be started preoperatively if the patient's temperature is <36.0°C.[4]

ASPAN recommends:

Institute active warming (which may include forced-air warming) for patients who are hypothermic. Consider preoperative warming to reduce the risk of intra/postoperative hypothermia.[5]

1. Brandes IF, Jipp M, Popov AF, Seipelt R, Quintel M, Bräuer A. Intensified thermal management for patients undergoing transcatheter aortic valve implantation (TAVI). J Cardiothor Surg. 2011 Sep 25;6(1):1.
2. Standards for Perioperative Nursing in Australia, 15th Edition, ACORN (Australian College of Perioperative Nurses) 2018
3. 2018 Guideline for prevention of unplanned patient hypothermia, AORN (Association of perioperative Registered Nurses)
4. NICE guidelines [CG65] (2008)
5. ASPAN's Evidence-Based Clinical Practice Guideline for the Promotion of Perioperative Normothermia (2010).

Best Practices in Active Prewarming:

A summary of current guidelines/recommendations

Why is active prewarming important?

Active prewarming using forced air is most effective in preventing unintended hypothermia during the perioperative period.[1]

"Research supports that preoperative forced-air warming can limit the redistribution of body heat that occurs after the induction of anesthesia." [2]

What is active prewarming?

Active vs. Passive Warming	
ACTIVE	**PASSIVE**
Adding heat to the body surface using a warming system such as forced-air warming to increase mean body temperature.[3]	A method used to prevent heat loss such as warm cotton blankets, drapes, plastics, etc.[3]

Active warming can be achieved by using a forced air warming device, for example, as opposed to passive warming which is done by using warm cotton blankets. Studies have shown that passive warming is simply not as effective in preventing unintended hypothermia during surgery and post operatively.[4,5,6]

"It is important to maintain normothermia by active methods throughout the perioperative period, including prewarming patients to avoid an initial drop in body temperature"[7]

What the guidelines say:

American Society of PeriAnesthesia Nurses (ASPAN) 2016:

"Consider preoperative warming to reduce the risk of intra/postoperative hypothermia. Evidence suggests prewarming for a minimum of 30 minutes may reduce the risk of subsequent hypothermia."[8]

Association of Perioperative Registered Nurses (AORN) 2016*:

"The majority of the evidence establishes the benefit of preoperative patient warming."[9]

American College of Surgeons (ACS):**

"The use of preoperative warming prior to short, clean cases has been shown to reduce SSI and is recommended. For longer cases, both preoperative warming and ongoing temperature monitoring and warming measures are recommended."[10]

Society for Healthcare and Epidemiology of America/Infectious Diseases Society of America (SHEA/IDSA) Practice Recommendation:

"Randomized controlled trials have shown the benefits of both preoperative and intraoperative warming to reduce SSI rates and to reduce intraoperative blood loss."[11]

Disclaimers:
ACORN = Australian College of Perioperative Nurses NICE = The National Institute for Health and Care Excellence. ASPAN = The American Society of PeriAnaesthesia Nurses.
* AORN is a registered trademark of AORN. AORN does not endorse any commercial company's products or services.
** Reprinted with permission from the Journal of the American College of Surgeons.

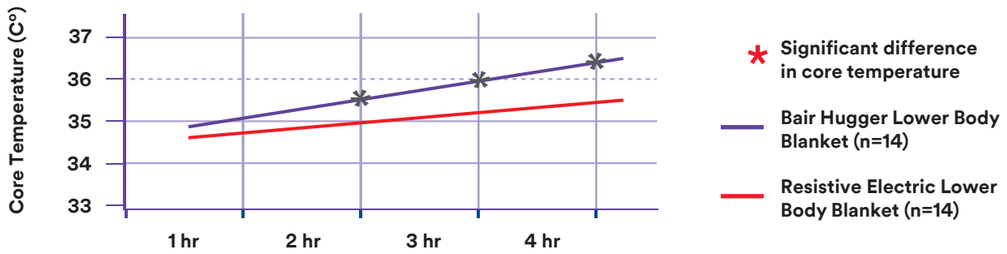
References:
1. Ng, S.F., et al., A comparative study of three warming interventions to determine the most effective in maintaining perioperative normothermia. Anesth Analg, 2003. 96(1): p. 171-6
2. Adriana M., Moriber N. Preoperative Forced-Air Warming Combined with Intraoperative Warming Versus Intraoperative Warming Alone in the Prevention of Hypothermia During Gynecologic Surgery. AANA Journal. 2013;86(6):446-561.
3. Sessler, D. I. Consequences and treatment of perioperative hypothermia. Anesthesiology Clinics of North America, J. L. Benumof, Editor. 1994, W. B. Saunders Company: Philadelphia. p. 425-456
4. Fossum S, Hays J, Henson MM. A Comparison Study on the Effects of Prewarming Patients in the Outpatient Surgery Setting. J Perianesth Nurs. 2002;16(3):187-194
5. Wagner D, et al. Effects of Comfort Warming on Preoperative Patients. AORN J 2006; 84:427-448
6. Benson E. E., McMillan D. E., and Ong B. The effects of active warming on patient temperature and pain after total knee arthroplasty. American Journal of Nursing. 2012;112(5): p. 26-33
7. Nelson G, Altman AD, et al. Guidelines for pre- and intra-operative care in gynecologic/oncology surgery: Enhanced Recovery After Surgery (ERAS(R)) Society recommendations - Part I. Gynecologic Oncology. 2016;140:313-322
8. American Society of PeriAnesthesia Nurses. Clinical guideline for the prevention of unplanned perioperative hypothermia. J Perianesth Nurs. 2001;16:305-314
9. Guideline for prevention of unplanned patient hypothermia. In: Guidelines for Perioperative Practice. Denver, CO: AORN, Inc; 2017:567-590.
10. Ban KA, Minei JP, Laronga C, Harbrecht BG, Jensen EH, Fry DE, Itani KMF, Dellinger EP, Ko CY, Duane TM. American College of Surgeons and Surgical Infection Society: Surgical Site Infection Guidelines, 2016 Update. J Am Coll Surg 2017;224:59-74.
11. Anderson DJ, Podgorny K, et al. Strategies to Prevent Surgical Site Infections in Acute Care Hospitals: 2014 Update. Infection Control and Hospital Epidemiology. 2014;35(6)

Intra-op

Studies show the 3M™ Bair Hugger™ System warms patients up to two times faster compared to other warming modalities[1,2,3]

In a 2011 randomised trial, the Bair Hugger System rewarmed patients faster compared to a resistive electric device.[1] Studies have also demonstrated faster postoperative warming with the Bair Hugger System vs. other systems.[2,3]

Bair Hugger System vs. Resistive Electric Device[1]



*Bair Hugger Lower Body Blanket rewarming rate = 0.49°C h-1; Hot Dog® Lower Body Blanket rewarming rate = 0.24°C h-1.

Postoperative rewarming rates (Janke et al, 1996)[2]

p< 0.0002

Warming method	Rewarming rate (°C h^{-1})	n
Bair Hugger system	0.75	15
Electric under mattress	0.5	15

Postoperative rewarming rates (Harrison et al, 1996)[3]

p< 0.01

Warming method	Rewarming rate (°C h^{-1})	n
Bair Hugger system	0.95	10
Aluminised plastic “space” blanket	0.4	10

ACORN recommends:

Appropriate warming strategies should be implemented where the patient is identified as being of a higher risk of perioperative hypothermia and associated adverse outcomes.

Temperature recording will be implemented and documented at regular intervals for all patients undergoing surgery.[4]

AORN recommends:

In all phases of perioperative care, the perioperative RN should develop an individualised plan of care and implement the interventions chosen for prevention of unplanned hypothermia. The patient’s temperature should be measured and monitored in all phases of perioperative care.[5]

Both NICE and ASPAN recommend:

Forced-air warming should be implemented intraoperatively in all patients undergoing a procedure with an anticipated anaesthesia time >30 minutes.

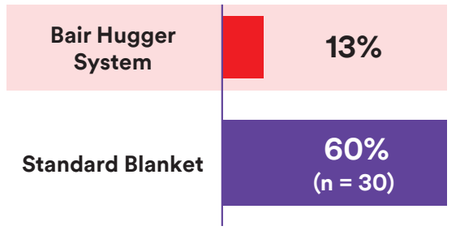
All patients who are at higher risk for hypothermia or who are hypothermic preoperatively should receive intraoperative forced-air warming.[6,7]

ACORN = Australian College of Perioperative Nurses. AORN = Association of perioperative Registered Nurses NICE = The National Institute for Health and Care Excellence.
ASPAN = The American Society of PeriAnaesthesia Nurses.
1. Röder G. Anaesthesia. 2011 Aug;66(8)667-674. 2. Janke E. Br J Anaesth. 1996 Aug 1;77(2):268-70. 3. Harrison SJ, Ponte J. Convective warming combined with vasodilator therapy accelerates core rewarming after coronary artery bypass surgery. Br J Anaesth. 1996 Apr 1;76(4):511-4. 4. Standards for Perioperative Nursing in Australia, 15th Edition, ACORN (Australian College of Perioperative Nurses)
5. 2018 Guideline for prevention of unplanned patient hypothermia, AORN (Association of perioperative Registered Nurses)
6. NICE guidelines [CG65] (2008) 7. ASPAN’s Evidence-Based Clinical Practice Guideline for the Promotion of Perioperative Normothermia (2010).

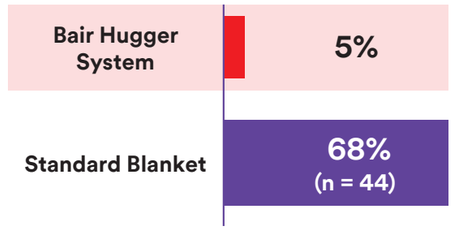
Post-op

3M™ Bair Hugger™ System can provide patient comfort and satisfaction[2-6]

Patients experiencing shivering (Horn et al, 2002)[2]



Patients experiencing shivering (Yoo et al, 2009)[3]



- Randomised trials have demonstrated reduced risk for shivering in patients warmed with the 3M™ Bair Hugger™ system compared to standard blankets.[1,2,3]
- Patients warmed with 3M™ Bair Hugger™ warming gowns perceived greater control over their comfort level and higher satisfaction levels 30 minutes after treatment was initiated compared to patients receiving standard warmed blankets.[4]
- Patients warmed with the Bair Hugger warming gown system reported higher comfort scores after 30 minutes compared to those with warmed cotton blankets.[5]
- Patients warmed pre-operatively with the Bair Hugger warming gown system experienced reduced anxiety compared to patients with warmed cotton blankets.[6]

ACORN recommends:

Post-operative active warming strategies should be considered and applied where appropriate. Temperature recording will be implemented and documented at regular intervals for all patientsundergoing surgery.[7]

AORN recommends:

In all phases of perioperative care, the perioperative RN should develop an individualised plan of care and implement the interventions chosen for prevention of unplanned hypothermia. The patient’s temperature should be measured and monitored in all phases of perioperative care.[8]

NICE recommends:

Patients who are hypothermic postoperatively should be warmed using forced-air warming until discharged from the recovery room or until they are comfortable.[9]

ASPAN recommends:

Active warming measures (which may include forced-air warming) should be implemented in patients who are hypothermic postoperatively.[10]

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ASPAN = The American Society of PeriAnaesthesia Nurses.
1. Sessler DI. Southern African Journal of Anaesth and Analgesia. 2014 Jan 1;20(1):25-31. 2. Horn EP. Anesth Analg. 2002 Feb 1;94(2):409-14. 3. Yoo HS. Arthroscopy: The Journal of Arthroscopic & Related Surgery. 2009 May 31;25(5):510-4. 4. O’Brien. Journal of PeriAnesthesia Nursing 25.2 (2010): 88-93. 5. Leeth D. Journal of PeriAnesthesia Nursing. 2010 Jun 30;25(3):146-51. 6. Wagner, DP. AORN J, 2006. 84(3): p. 427-448.7. Standards for Perioperative Nursing in Australia, 15th Edition, ACORN (Australian College of Perioperative Nurses) 2018 8. 2018 Guideline for prevention of unplanned patient hypothermia, AORN (Association of perioperative Registered Nurses) 9. NICE guidelines [CG65] (2008) 10. ASPAN’s Evidence-Based Clinical Practice Guideline for the Promotion of Perioperative Normothermia (2010).

3M™ Bair Hugger™ Normothermia System

When patients are open and exposed, and feeling vulnerable to the unknowns of surgery, the warm, caring actions of their health care provider can make a world of difference.

Proven and Trusted

- The 3M™ Bair Hugger™ system has **extensive scientific research** on maintaining normothermia.[1]
- **34 published RCT studies demonstrate the superiority** of the Bair Hugger system in maintaining normothermia.[1]
- 200+ Bair Hugger System Publications: 1989-2016.[1]

Number of Bair Hugger System Publications

Since 1987, the 3M™ Bair Hugger™ system has extended a warm hug to more than 300 million surgical patients, helping them experience the comfort and clinical benefits of warmth.

1. 3M™ Bair Hugger™ System Research Compendium.

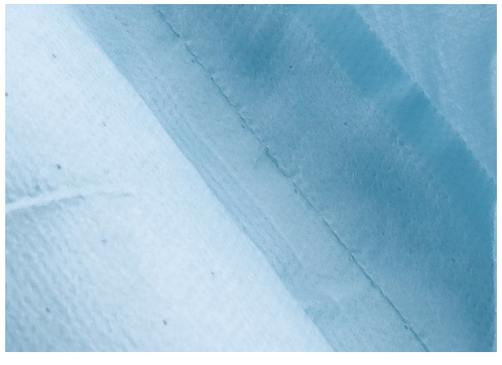
Designed to be different

Effectiveness of forced-air warming systems depends on blanket design, particularly the evenness of heat distribution across the blanket[1,2]

Moving air loses heat very quickly.[1,2] Therefore air should be channeled efficiently to all parts of a blanket to provide even heat distribution.

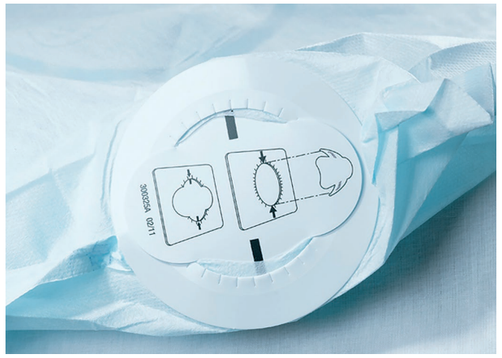
Interconnected Air Channel System

Interconnected air channels run the length of the blanket providing even distribution of warm air to the patient.



Air Hole Perforation

A symmetrical pattern of small holes extends across the entire surface of the blankets to maximise recruitment of skin surface area.



Pre-sealed hose port

In selected blankets, two re-sealable hose ports enable versatile and convenient positioning of the warming unit.

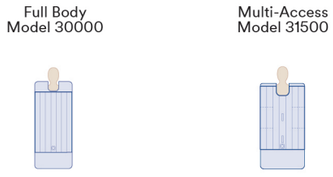
Fluid outlets

In selected blankets, fluid outlets minimise pooling of fluids on the surface of the blanket and cooling effect of excess fluids.

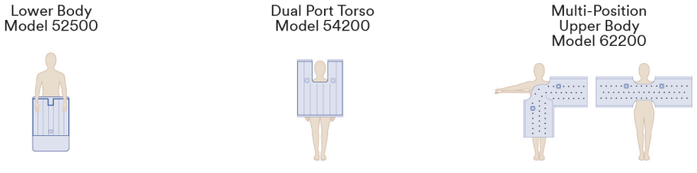
1. Brauer, A., et al., What determines the efficacy of forced-air warming systems? A manikin evaluation with upper body blankets. Anesth Analg, 2009. 108(1): p. 192-8.
2. Brauer, A. and M. Quintel, Forced-air warming: technology, physical background and practical aspects. Curr Opin Anaesthesiol, 2009.

Warming for every procedure

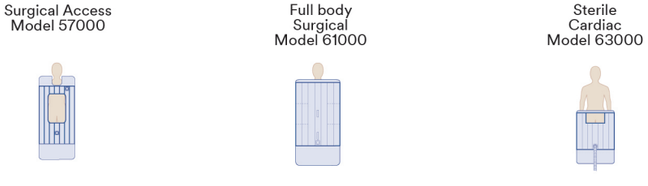
Pre- and Post-Operative Blankets



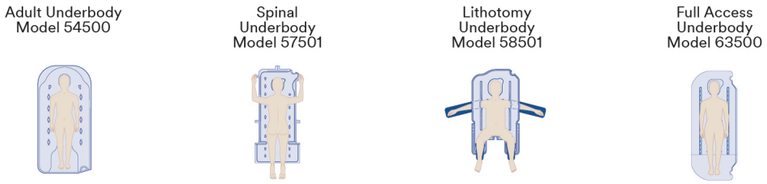
Intraoperative Blankets



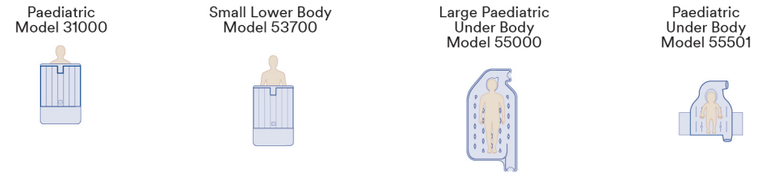
Speciality & Cardiac Blankets



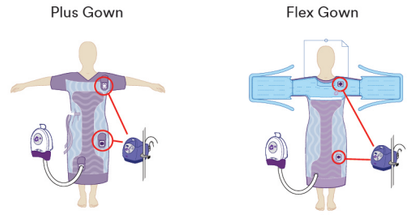
Underbody Blankets



Paediatric Blankets



Patient Warming Gowns

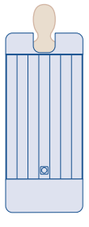


Both Plus & Flex Gown are available in small, standard and X-Large sizes.

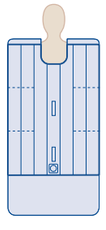
Pre- and Post-Operative Blankets

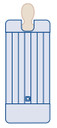
Adult and paediatric blankets to prewarm and maintain normothermia following surgery.

Full Body
Model 30000



Multi-Access
Model 31500





Full Body

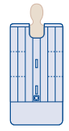
Model 30000

The 3M™ Bair Hugger™ full body blanket provides coverage to the entire patient, maximising thermal transfer.

Features

- Facilitates maximum thermal transfer with a blanket that hugs the patient
- Foot drape minimises risk of thermal injury to the feet and lower leg areas
- Integrated tuck flaps at shoulders help maintain blanket position
- Soft, comfortable, lightweight, latex-free material

Specifications				
Size	**Weight**	**Drape**	**Blankets per box**	**Hose Ports**
213 x 91 cm	142 g	N/A	10	1



Multi Access

Model 31500

The 3M™ Bair Hugger™ multi-access blanket offers clinicians easy access to any part of the patient's body while providing full patient coverage, maximising thermal transfer.

Features

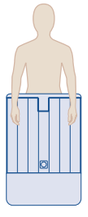
- Six convenient panels allow quick access to the patient's chest, arms, torso, and lower body
- Foot drape minimises risk of thermal injury to the feet and lower leg area
- Integrated tuck flaps at the shoulders help maintain blanket position

Specifications				
Size	**Weight**	**Drape**	**Blankets per box**	**Hose Ports**
213 x 91 cm	142 g	N/A	10	1

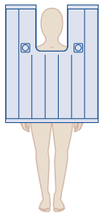
Intra-Operative Blankets

Simple solutions with clinician preferred features designed for use during most surgical procedures.

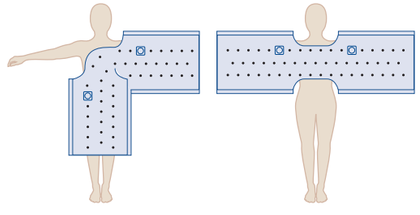
Lower Body
Model 52500

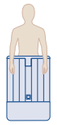


Dual Port Torso
Model 54200



Multi-Position
Upper Body
Model 62200





Lower Body

Model 52500

Designed for use during surgical procedures on the upper half of the body.

Features

- Effectively used for patients in the supine, lateral, or prone positions
- Foot drape minimises risk of thermal injury to the feet and lower leg area
- Continuous adhesive strip secures blanket to the patient

Specifications				
Size	**Weight**	**Drape**	**Blankets per box**	**Hose Ports**
152 x 91 cm	113 g	N/A	10	1

Dual Port Torso

Model 54200

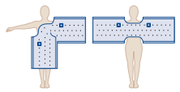
This forced-air warming blanket is specifically designed for use during lower body surgical procedures.

The dual port torso blanket features two convenient, resealable hose ports that provide forced-air warming to the upper half of the body. It is designed to affix to the lower abdominal area, where the surgery takes place.

Features

- Two convenient, resealable hose ports
- Effectively used for patients in the supine, lateral, and other positions
- Pre-attached clear head drape retains warm air around the intubated patient's head and allows observation by the clinician
- Integrated tuck flaps at shoulders help maintain blanket position
- Soft, comfortable, lightweight, latex-free material

Specifications				
Size	**Weight**	**Drape**	**Blankets per box**	**Hose Ports**
107 × 91 cm	85 g	61 × 61 cm	10	2



3M™ Bair Hugger™ Multi-Position Upper Body Blanket

Model 62200

This blanket's bendability feature was inspired by the clinician's need to optimise patient body surface coverage in order to help maintain normothermia and drive positive patient outcomes.

Engineered to deliver improved heat transfer in a wide range of surgical procedures.[1] Bends and conforms while providing uniform temperatures. Offers optimal patient body surface coverage.[2]

Effective and versatile

- Engineered to deliver improved heat transfer in a wide range of surgical procedures[1]
- Bends and conforms while providing uniform temperatures
- Offers optimal patient body surface coverage[2]

Comfortable and transformable

- Offers fast and easy applicatio
- Offers greater ability to conform to the patient's body[1]
- Engineered to provide minimum loftiness
- Suitable for perioperative use

Blanket features

- When deployed, the attached clear head drape and two neck vents keep warm air around an intubated patient's head and allow observation
- Two re-sealable hose ports provide flexibility in positioning
- Integrated tie strips and continuous adhesive strip can secure the blanket once placed
- Material is soft, comfortable, lightweight and radiolucent

Specifications				
Size	**Weight**	**Drape**	**Blankets per box**	**Hose Ports**
198 x 61 cm	104 g	61 × 61 cm	10	2

1. 3M data on file
2. 89% (72 of 81) of clinical users indicated the product o ers optimal patient body surface coverage. 3M data on .le.

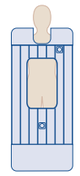
Speciality & Cardiac Blankets

3M™ Bair Hugger™ therapy offers seven styles of speciality and cardiac blankets to help you reach your warming goals even in the most challenging clinical scenarios.

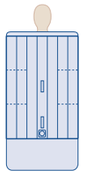
Speciality & Cardiac blankets feature:

- Flexible, easy-to-use designs
- Uniform perforation pattern across the blanket surface to ensure even convective warming
- Durable, soft, radiolucent, latex-free materials

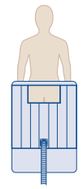
Surgical Access
Model 57000

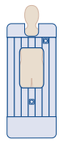


Full Body Surgical
Model 61000



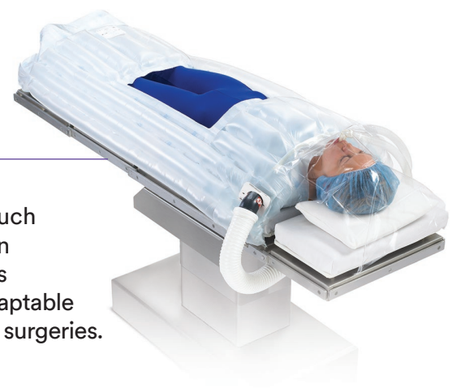
Sterile Cardiac
Model 63000





Surgical Access

Model 57000

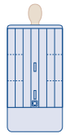


This blanket's flexible design adapts to a variety of procedures such as spinal, abdominal, hip and pelvic surgeries. The flexible design of the surgical access blanket includes two resealable hose ports for versatile positioning of the warming unit, making the blanket adaptable to a variety of procedures such as spinal, abdominal, hip and pelvic surgeries.

Features

- Two resealable hose ports provide flexible positioning of the warming unit on either side of the patient
- Attached clear head drape retains warm air around the intubated patient's head and allows observation by the clinician
- Large surgical access window (34 cm x 56 cm) provides patient access for the surgeon
- Integrated adhesive secures the surgical access window to the patient
- Soft, radiolucent materials will not interfere with imaging requirements
- Foot drape minimises risk of thermal injury to the feet and lower leg area

Specifications				
Size	**Weight**	**Drape**	**Blankets per box**	**Hose Ports**
213 x 91 cm	170 g	61 x 41 cm	10	1



Full Body Surgical

Model 61000

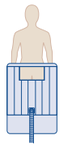
The 3M™ Bair Hugger™ full body surgical blanket tapes across the patient's chest, away from surgical sites involving the head or neck.

Six convenient access panels allow for quick access to the patient's chest, arms and lower body.

Features

- The blanket's generous size maximises heat transfer
- Foot drape minimises risk of thermal injury to the feet and lower leg area
- Integrated adhesive strip secures the blanket to the patient
- Integrated tuck flaps at shoulders help maintain blanket position

Specifications				
Size	**Weight**	**Drape**	**Blankets per box**	**Hose Ports**
183 x 91 cm	142 g	N/A	10	1



Sterile Cardiac

Model 63000

The 3M™ Bair Hugger™ sterile cardiac blanket's "cumberbund" design is pre-positioned at the waist during prep, unrolled upon closure of the saphenous vein graft incision, and inflated post-bypass.

Features

- 91 cm sterile hose allows the placement of the temperature management unit away from sterile field
- Warms the lower body to reduce core-to-periphery heat loss
- Positions easily in the sterile field
- Clear groin/femoral access window allows access to the femoral artery

Specifications				
Size	**Weight**	**Hose Length**	**Blankets per box**	**Hose Ports**
152 x 91 cm	227 g	91 cm	5	1

Underbody Blankets

The 3M™ Bair Hugger™ underbody series offers a warming solution for virtually any need. For routine procedures to complex surgeries, underbody series provide full, unrestricted access to the patient.

Underbody series blanket benefits

Simplified operating theatre prep:

Placing the underbody series blankets on the table before the patient arrives in the operating theatre allows immediate warming and more time for other pre-surgical tasks.

Designed for flexibility:

The underbody series blankets offer clinicians full, unrestricted access and flexible positioning for virtually any procedure.

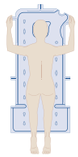
Innovation:

Fluid outlets minimise the pooling of fluids while the patient's natural pressure points compress the blanket, preventing warm air from reaching potentially ischemic tissue. Consistent perforations in the soft, radiolucent materials ensure uniform convective warming..

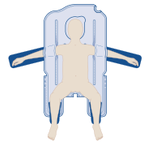
All Bair Hugger blankets are constructed of durable, soft, radiolucent, latex-free materials.

Adult Underbody Model 54500

Spinal Underbody Model 57501



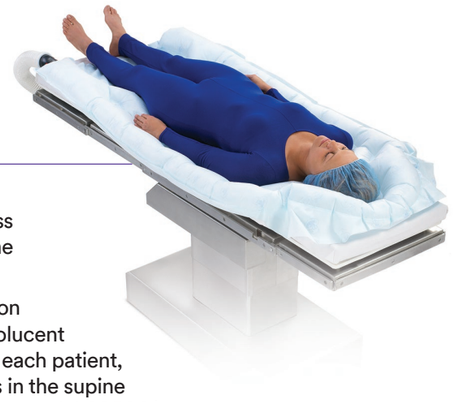
Lithotomy Underbody Model 58501



Full Access Underbody Model 63500

Adult Underbody

Model 54500



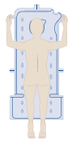
This underbody blanket provides full, unrestricted patient access and is conveniently positioned on the procedure table before the patient arrives, so it's ready when you are.

The adult underbody blanket is the ideal patient warming solution for the Cardiac Cath Lab and interventional radiology. This radiolucent blanket is positioned on the table as the room is turned over for each patient, so it's ready when you are. (This blanket is designed for patients in the supine position. For underbody warming for other surgical positions, see model 63500.)

Features

- Underbody design warms the patient while providing full, unrestricted patient access
- Ideal for patient warming during diagnostic and interventional procedures
- Fluid outlets minimise pooling of fluids on the surface of the blanket
- Consistent, even perforations across the entire blanket ensure uniform convective warming
- Soft, radiolucent materials do not interfere with imaging
- Two adhesive strips under the blanket secure the blanket to the OR/procedure table

Specifications				
Size	**Weight**	**Drape**	**Blankets per box**	**Hose Ports**
188 x 91 cm	142 g	N/A	10	1



Spinal Underbody

Model 57501

This advanced forced-air warming blanket works with the open frame of the spinal surgery cradle and does not interfere with the adjustment of support pads.

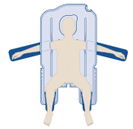
Spinal underbody blankets work with the open frame of the spinal surgery cradle without interfering with the adjustment of the support pads. Clinicians will appreciate full patient visualisation and unrestricted patient access.

Features

- Perforations on the sides of blanket allow the table frame to pass through the blanket
- A removable head section allows visualisation of the patient's face throughout the procedure
- Integrated tie strips secure the blanket to the table frame
- Blanket design allows it to draw up near the patient when inflated
- Compatible with the foot boards, leg sling, Wilson* frame or head support modalities
- One clear plastic drape (included) helps retain warm air around the head of the patient

*Wilson is a trademark of Getinge USA, Inc.

Specifications				
Size	**Weight**	**Drape**	**Blankets per box**	**Hose Ports**
213 x 91 cm	218 g	61 x 122 cm	5	1



Lithotomy Underbody

Model 58501

This advanced blanket delivers full, unrestricted patient access and flexibility for procedures involving the lower extremities and abdominal, peritoneal and pelvic cavities.

Positioned on the procedure table before the patient arrives to the room, the lithotomy underbody blanket delivers full, unrestricted patient access and flexibility for procedures involving the lower extremities and abdominal, peritoneal and pelvic cavities.

Features

- Fluid outlets minimise pooling of fluids on the surface of the blanket
- Pass-through slits allow flexible patient positioning and the use of a drawsheet
- Generous peritoneal cut-out at the base of the blanket provides the clinician unobstructed access to the patient
- Integrated tie strips can be used to secure the blanket to the stirrups / leg supports
- Adhesive strips and tuck flaps secure the blanket to the operating table
- One clear patient drape (included) helps retain warm air around the head of the patient

Specifications				
Size	**Weight**	**Drape**	**Blankets per box**	**Hose Ports**
160 x 91 cm	142 g	61 x 61 cm	10	1

Full Access Underbody

Model 63500

This versatile, advanced blanket design provides unrestricted patient access and can be used whenever full access is necessary. The full access underbody blanket is ideal for procedures including a standing surgical prep. This blanket can be conveniently positioned before the patient arrives to the room, and may be used during trauma, cardiac, complex or routine surgeries where the patient is in the supine, lateral or prone positions.

Features

- Fluid outlets minimise pooling of fluids on the surface of the blanket
- Pass-through slits allow flexible patient positioning and the use of a drawsheet
- Adhesive strips and tuck flaps secure the blanket to the operating theatre table
- Two resealable hose ports at either end of the blanket provide options for hose placement
- One clear plastic drape (included) helps retain warm air around the head of the patient

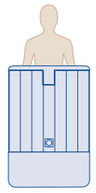
Specifications				
Size	**Weight**	**Drape**	**Blankets per box**	**Hose Ports**
221 x 91 cm	198 g	61 x 122 cm	5	2 (pre-sealed)

Paediatric Blankets

Smaller models of our 3M™ Bair Hugger™ adult-size blankets for use on younger patients.

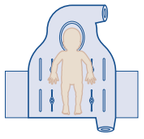
Paediatric
Model 31000

Small
Lower Body
Model 53700



Large Paediatric
Underbody
Model 55000

Paediatric
Underbody
Model 55501



Paediatric

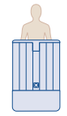
Model 31000

The paediatric full body blanket is a smaller version of the adult blanket to warm smaller patients during recovery.

Features

- Foot drape minimises the risk of thermal injury to the feet and lower leg area

Specifications				
Size	**Weight**	**Drape**	**Blankets per box**	**Hose Ports**
152 x 91 cm	142 g	N/A	10	1



Small Lower Body

Model 53700

A compact version of the adult-size lower body blanket that is ideal for warming large children or small adult patients during upper body surgery.

The small lower body blanket is a smaller version of the adult-size lower body blanket (model 52500). Developed with younger patients in mind, the model 53700 is ideal for warming a large child or a small adult during upper body surgery. It can be used in the supine, lateral or prone positions.

Features

- Can also be used as a full body blanket on smaller patients
- Foot drape minimises risk of thermal injury to the feet and lower leg area

Specifications				
Size	**Weight**	**Drape**	**Blankets per box**	**Hose Ports**
89 x 61 cm	43 g	N/A	10	1

Large Paediatric Underbody

Model 55000

The 3M™ Bair Hugger™ large paediatric underbody blanket conveniently warms a large child or a small adult patient from below while allowing clinicians full access to the patient.

Features

- Fluid outlets minimise pooling of fluids on the surface of the blanket
- Two resealable hose ports located at either end of the blanket provide options for hose placement
- Tape and tuck flaps secure the blanket to the operating theatre table
- Two drapes (included) help retain the warm air that surrounds the patient

Specifications				
Size	**Weight**	**Drape**	**Blankets per box**	**Hose Ports**
152 x 81 cm	142 g	61 × 61 cm	10	1

Paediatric Underbody

Model 55501

This under-patient design warms even the smallest patients while allowing clinicians full, unrestricted access.

The lower body forced-air warming blanket is designed for use during surgical procedures on the upper half of the body.

Features

- Fluid outlets minimise pooling of fluids on the surface of the blanket
- Consistent, even perforations across the entire blanket ensure uniform warming
- Two resealable hose ports located at either end of the blanket provide options for hose placement
- Tape and tuck flaps under the blanket secure the blanket to the operating theatre table
- Two clear plastic drapes (included) form a "tent" of warm air that surrounds the patient

Specifications

Size	Weight	Drape	Blankets per box	Hose Ports
91 x 84 cm	85 g	61 x 61 cm	10	1

Gowns

Your Patient's Recovery Starts in Pre-op

The care you provide to your patient in pre-op can have an impact on your patient's recovery from their surgical procedure. Just as you follow guidelines on antibiotic administration and hair removal with clipping, the regulation of your patient's temperature begins in the pre-op with you.

By prewarming with the 3M™ Bair Hugger™ gown you can help to prevent unintended hypothermia in your patients.[1] By actively warming the patient's periphery before the induction of anaesthesia, you are jump-starting the patient's recovery – helping to maintain normothermia which can reduce the rate of numerous complications, including surgical site infection (SSI).[2]

What is the Bair Hugger gown?

- A forced-air patient warming gown used before, during and after surgery. Replaces cotton gown and warmed cotton blankets.
- A warming unit connected to the gown allows patients to adjust the temperature through a handheld controller.

Benefits

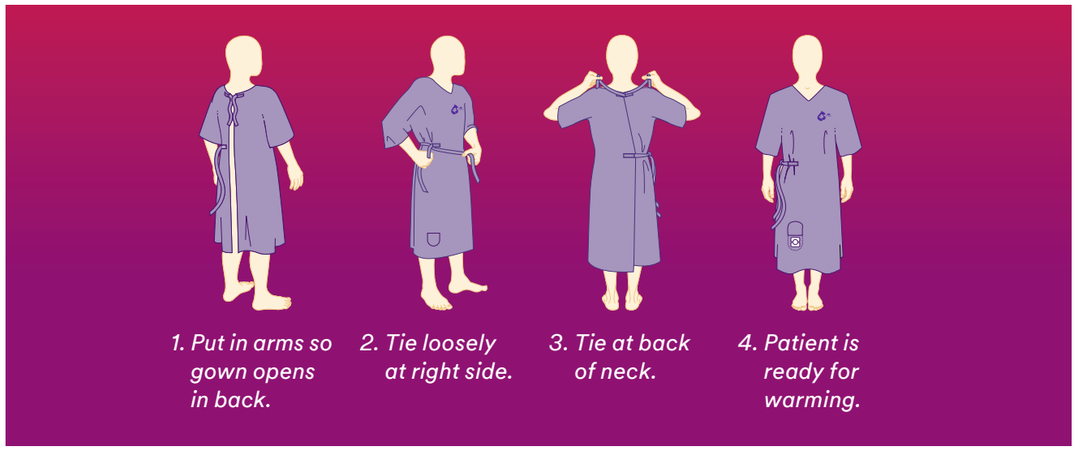
- Forced-air warming prevents and treats unintended hypothermia.[3]
- Prewarms your patient prior to surgery.
- Can increase thermal comfort.[4-8]

Adjusable warmth.

Using the system's handheld controller, patients can adjust the temperature of the air flowing through the gown to a level that personally suits them.

"I love the Bair Paws gown. It was so easy to control the temperature. I hope all hospitals use it. Patients will love it as much as I did." -Shirley S. *Patient with Bair Hugger Gown experience*

Putting on the gown



1. Kurz A, Sessler DI, Lenhardt R. Perioperative nomothermia to reduce the incidence of surgical-wound infection and shorten hospitalization. Study of Wound Infection and Temperature Group. N Engl J Med 1996;3341209-1215. 2. Horn EP, Bein B, Bohm R, Steinfath M, Sahili N, Hocker J. The Effect of Short Time Periods of Pre-Operative Warming in the Prevention of Peri-operative Hypothermia. Anaesth. 2012. 67(6). 3. Wagner D., Byrne M. and Kolcaba K. Effects of Comfort Warming on Preoperative Patients. AORN Journal, Sept. 2006, Vol 84(3): pp. 427-448. 4. Horn EP. Anesth Analg. 2002 Feb 1;94(2):409-14. 3. 5. Yoo HS. Arthroscopy: The Journal of Arthroscopic & Related Surgery. 2009 May 31;25(5):510-4. 4. 6. O'Brien. Journal of PeriAnesthesia Nursing 25.2 (2010): 88-93. 5. 7. Leeth D. Journal of PeriAnesthesia Nursing. 2010 Jun 30;25(3):146-51. 6. 8. Wagner, DP. AORN J, 2006. 84(3): p. 427-448.

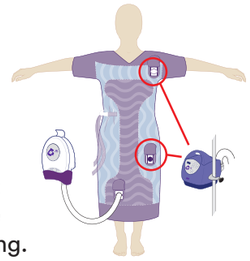
Designed to keep patients warm before, during and after surgery

Patient warming in Pre-op and Post-op
Connect 3M™ Bair Hugger™ patient adjustable warming unit hose to gown's **lower right** hose.

Patient warming in Intra-op
Connect 3M™ Bair Hugger™ warming unit to gown's **lower left** hose port.

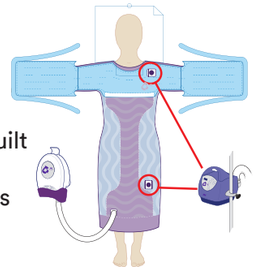
Plus Gown

Eliminates the need to reposition the gown in many procedures with one hose port for prewarming or comfort warming, and two hose ports for clinical warming.



Flex Gown

Allows flexibility with separate upper- and lower-body inserts. Built right into the gown is a head drape, tie strips and adhesive strip for better positioning.



Pre-op → Intra-op → Post-op

Prewarming patients with 3M™ Bair Hugger™ warming gowns can help reduce or prevent inadvertent perioperative hypothermia.[1]

When patients arrive in the theatre, simply position the gown as required by the procedure and connect the 77503 Bair Hugger warming unit to the hose port, as you would have done with conventional warming blankets.

Post-op warming can be done either by the Bair Hugger™ 87503 Patient Adjustable Warming Unit or the Bair Hugger™ 77503 Warming Unit. You just need to attach the warming unit to the gown once the patient arrives to PACU.

1. Brandes IF, Jipp M, Popov AF, Seipelt R, Quintel M, Bräuer A. Intensified thermal management for patients undergoing transcatheter aortic valve implantation (TAVI). J Cardiothor Surg. 2011 Sep 25;6(1):1.

Bringing flexibility to patient warming

3M™ Bair Hugger™ flex warming gown positioning options
When a patient arrives in the OR wearing a Bair Hugger flex warming gown, the surgical team can position the gown as required to provide optimal warmth without impeding surgical access.

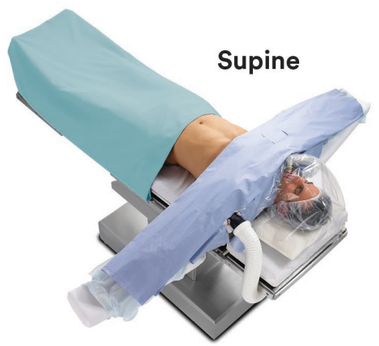
Full body example

Supine

Upper body examples

Lateral

Supine



Lower body examples

Prone

Lateral

Supine

3M™ Bair Hugger™ Blanket and Gown Systems

Blanket – Pre- and Post-Operative	
30000	PACU full body
31500	PACU multi access

Blanket – Intraoperative	
52500	Lower body
54200	Dual port torso
62200	Multi-position upper body

Blanket – Speciality	
57000	Surgical access
61000	Full body surgical
63000	Sterile cardiac

Blanket – Underbody	
54500	Adult underbody
57501	Spinal underbody
58501	Lithotomy underbody
63500	Full access underbody

Blanket – Paediatric	
31000	Paediatric full body
53700	Small lower body
55000	Large paediatric underbody
55501	Paediatric underbody

Gown – Flex	
81103	Patient Warming Gown (Small)
81003	Patient Warming Gown (Standard)
81203	Patient Warming Gown (X-Large)

Gown – Plus	
81102	Patient Warming Gown (Small)
81002	Patient Warming Gown (Standard)
81202	Patient Warming Gown (X-Large)

Booties	
90065	Patient Booties

Warming for every procedure

Pre- and Post-Operative Blankets

Full Body
Model 30000

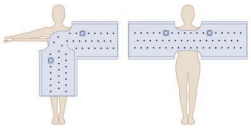
Multi-Access
Model 31500

Intraoperative Blankets

Lower Body
Model 52500

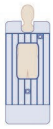
Dual Port Torso
Model 54200

Multi-Position
Upper Body
Model 62200



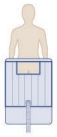
Speciality & Cardiac Blankets

Surgical Access
Model 57000



Full body
Surgical
Model 61000

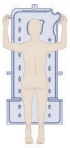
Sterile
Cardiac
Model 63000



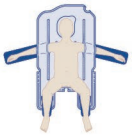
Underbody Blankets

Adult Underbody
Model 54500

Spinal
Underbody
Model 57501



Lithotomy
Underbody
Model 58501

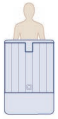


Full Access
Underbody
Model 63500

Paediatric Blankets

Paediatric
Model 31000

Small Lower Body
Model 53700

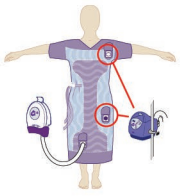


Large Paediatric
Under Body
Model 55000

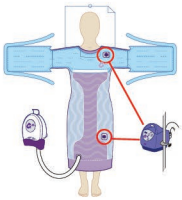
Paediatric
Under Body
Model 55501

Patient Warming Gowns

Plus Gown



Flex Gown



Both Plus & Flex Gown are available in small, standard and X-Large sizes.

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