

# The goal is simple: the best possible outcome

BD Regional Anaesthesia—products you can trust, from a partner you can rely on



# A lot goes into everything going right

Every patient is unique, requiring the approach that's right for them—and the right tools for the procedure. Ultimately, successful Anaesthesia outcomes depend upon the skill and experience of the anaesthesiologist. We're proud that so many of them trust BD products to help them manage their patients' pain and achieve better outcomes.



100+ years

Of creating innovative, reliable, high-quality regional Anaesthesia products



#### A robust portfolio

Available individually or in multiple configurations of kits and sets



#### The BD standard

Precision engineering and high quality for every Anaesthesia needle and syringe

## Regional Anaesthesia is recommended



Superior pain relief compared to general anaesthesia and improvement in post-operative pain<sup>1-2</sup>



Fewer in-hospital complications<sup>3</sup> compared to general Anaesthesia



Aids in **earlier,** post-surgery ambulation<sup>1-2</sup>



**Decreased hospital stay** compared to general Anaesthesia<sup>4</sup>



2

## Distinct tactile feel with enhanced precision

While all of BD's regional Anaesthesia products are high quality, the BD<sup>T</sup> Whitacre spinal needle stands out. BD<sup>T</sup> Whitacre needles yield a distinct tactile "click" or "pop" as the pencilpoint penetrates the dura, alerting the clinician of proper placement. This may help reduce the occurrence of further needle advancement, which may lead to nerve root irritation and paresthesia<sup>5-7</sup>.

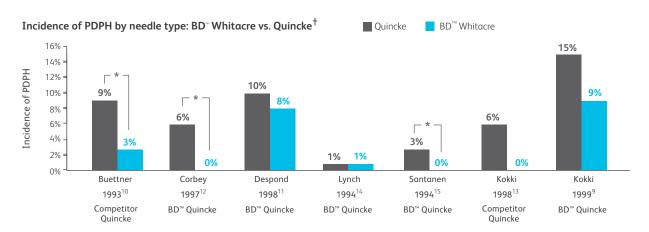


# The best treatment for PDPH is to prevent it in the first place



Post-dural puncture headache (PDPH) is generally thought to be the result of decreased cerebrospinal fluid (CSF) pressure due to CSF leakage through the dura puncture hole<sup>8</sup>. This complication is costly to hospitals, both in terms of patient experience and primary treatment, but smaller gauge, pencil-point needles like the  $BD^{TW}$  Whitacre spinal needles have been shown to minimize the risk of PDPH compared to larger gauge, cutting-point needles<sup>9,10,16</sup>.

The  $BD^{M}$  Whitacre spinal needle is supported by 25+ independent published studies.



\* Denotes statistically significant difference | + Compares both competitor Quincke and BD<sup>™</sup> Quincke needles

## We can even help procurement manage pain

While our products are designed for the anaesthesiologist and patient, we understand that every hospital has its own pain points.

The BD regional Anaesthesia solution enables procurement to reduce costs and increase efficiencies by streamlining vendor relationships. Clinicians in every care setting get the tools they need and want—in kits, sets and trays built around their preferences, all from a trusted, reliable, global partner known for its logistical and supply chain management excellence. Finally, there are the potential cost benefits that stem from BD's extensive presence throughout the hospital and the entire medication process—from preparation to patient recovery and everything in between.



# Spinal Anaesthesia

## Giving anaesthesiologists peace of mind

BD™ Whitacre and BD™ Quincke spinal needles' clear hubs enable anaesthesiologists to visualize CSF for proper needle placement. The manufacturing quality, reliability and consistency of every BD product gives clinicians peace of mind.



#### Better post-operative patient experience

With the BD<sup>™</sup> Whitacre spinal needles that minimize the risk of PDPH<sup>10,12,15</sup>



Enhanced precision

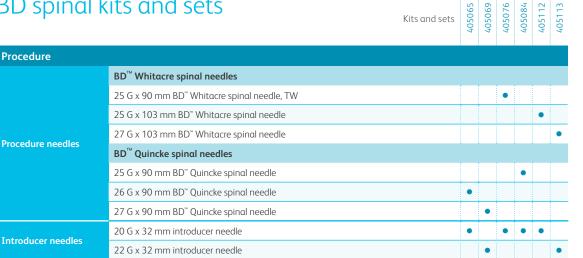
With BD<sup>™</sup> spinal needles that enable visualization of CSF, aiding proper needle placement



#### From a trusted partner

With a range of products and configurations to meet Anaesthesia needs throughout your facility

## BD spinal kits and sets



## BD<sup>™</sup>Whitacre spinal needles

They are available in different sizes with lengths ranging from 90 mm to 127 mm and gauges from 22 G to 27 G.

Some BD<sup>™</sup> Whitacre spinal needles have thin walls (indicated below as TW), designed to maximize flow through needles of the same gauge.



BD" Whitacre spinal needles						
Order no.	Description	Order no.	Description			
401995	22 G x 90 mm (3 1/2 in.)	409442	25 G x 119 mm (4 11/16 in.)			
405104	24 G x 90 mm (3 1/2 in.), TW	402051	27 G x 90 mm (3 1/2 in.)			
402050	25 G x 90 mm (3 1/2 in.), TW	409443	27 G x 119 mm (4 11/16 in.)			

## BD<sup>™</sup> Quincke spinal needles

They are available in different sizes with lengths ranging from 90 mm to 178 mm and gauges from 18 G to 27 G. The key/slot arrangement of stylet and cannula hubs on the BD<sup>™</sup> Quincke spinal needles facilitates proper needle bevel orientation.



BD" Quincke spinal needles							
Order no.	Description	Order no.	Description				
405247	18 G x 75 mm (3 in.)	405255	22 G x 75 mm (3 in.)				
405248	18 G x 90 mm (3 1/2 in.)	405256	22 G x 90 mm (3 1/2 in.)				
408360	18 G x 156 mm (6 in.)	405148	22 G x 127 mm (5 in.)				
405249	19 G x 75 mm (3 in.)	405149	22 G x 178 mm (7 in.)				
405250	19 G x 90 mm (3 1/2 in.)	405240	23 G x 90 mm (3 1/2 in.)				
405251	20 G x 38 mm (1 1/2 in.)	405245	25 G x 51 mm (2 in.)				
405252	20 G x 75 mm (3 in.)	405257	25 G x 90 mm (3 1/2 in.)				
405253	20 G x 90 mm (3 1/2 in.)	405234	25 G x 119 mm (4 11/16 in.)				
405211	20 G x 156 mm (6 in.)	405258	26 G x 90 mm (3 1/2 in.)				
405254	22 G x 38 mm (1 1/2 in.)	405259	27 G x 90 mm (3 1/2 in.)				
405244	22 G x 64 mm (2 1/2 in.)						

Introducer needles						
Order no.	Description	Order no.	Description			
405261*	22 G x 32 mm (1 1/4 in.), TW	405260**	20 G x 32 mm (1 1/4 in.)			
* 405260 – For use with 25 G needle or smaller **405260 – For use with 25 G needle or smaller						

BD needle gauge color chart			 _	 _	_	_	_	_	_		
For 25 G needle color, please refer to specific catalog code above	16 G	17 G								27 G	

# Epidural Anaesthesia

# A full epidural solution that helps clinicians perform the procedure, from prep to finish

BD's portfolio for epidural Anaesthesia—kits, needles, syringes, infusion pumps, sets and accessories—contains everything anaesthesiologists need to perform an epidural block. Our high-quality products are designed with features that enhance procedural control for clinicians, helping them enhance patient comfort.



# Long-lasting pain management

With closed-end and open-end nylon epidural catheters to provide continuous anaesthesia



#### Greater clinical control

With ergonomic grips on BD Perisafe™ Weiss epidural needles and enhanced tactile precision on BD Epilor™ loss-of-resistance (LOR) syringes



#### From a trusted partner

With a range of products and configurations to meet Anaesthesia needs throughout your facility

Kit 6220

# BD epidural continuous kit

		7
Procedure		
Procedure	BD <sup>™</sup> Weiss epidurαl needles (fixed wings)	
needles	18 G x 90 mm BD Perisafe" Weiss epidural needle	•
	Epilor <sup>™</sup> plαstic LOR syringes	
LOR syringes 7 mL BD Epilor <sup>™</sup> LOR plastic BD Luer Lok syringe		•
Cathology	Nylon catheters	
Catheters	20 G BD Perisafe <sup>™</sup> nylon catheter, CE*	•
	Flat filter (0.2 micron filter)	٠
Epidural accessories	Cap BD Luer Lok male	٠
uccessories	BD Perisafe <sup>™</sup> epidural catheter connector	٠

\*Closed-end

# **BD** epidural components

## **BD** epidural needles

The fixed wings of the BD<sup>™</sup> Weiss epidural needle provide an ergonomic grip for anaesthesiologists, enabling more control over needle insertion and depth. Both the BD<sup>™</sup> Weiss and the BD Tuohy epidural needles have calibrated needle-depth markings to illustrate depth. Whether anaesthesiologists are looking for tactile feedback or penetration characteristics, BD has a range of epidural needles to provide the control that meets their needs.



Actual size

BD™ Weiss epidural needles							
Order no.	Description	Order no.	Description				
405194	16 G x 90 mm (3 1/2 in.)	405188	18 G x 90 mm (3 1/2 in.)				
405191	17 G x 90 mm (3 1/2 in.)	405190	18 G x 127 mm (5 in.)				
405193	17 G x 127 mm (5 in.)	405186	20 G x 90 mm (3 1/2 in.)				

BD™ Tuohy epidural needles							
Order no.	Description	Order no.	Description				
405092	17 G x 90 mm (3 1/2 in.)	405028	20 G x 90 mm (3 1/2 in.)				
405018	18 G x 90 mm (3 1/2 in.)						

### **BD** epidural catheters

Closed-end catheters are designed to reduce the potential of occlusions and are preferred by clinicians. BD Perisafe<sup>™</sup> nylon catheters are available in both open-end and closed-end, multi-port tip configurations.

BD Perisafe™ Nylon catheters with epidural catheter connector				
Order no.	Description			
Only available in kits	19 G x 914 mm (36 in.) CE			
Only available in kits	20 G x 914 mm (36 in.) CE			

## Syringes for use with pumps

BD also offers Luer Lok syringes, in sizes ranging from 10 to 50 mL, that are recommended for use with syringe pumps.

Description
10 mL BD Plastipak <sup>™</sup> Luer Lok syringe
20 mL BD Plastipak <sup>®</sup> Luer Lok syringe
30 mL BD Plastipak <sup>™</sup> Luer Lok syringe
50 mL BD Plastipak <sup>™</sup> Luer Lok syringe

Pump compatibility may vary by manufacturer. For additional details, please refer to your infusion pump manual.

BD needle gauge color chart	_	_	_	_	_	_	_	_	_	_	_	_	_
For 25 G needle color, please refer to specific catalog code above	16 G	17 G	18 G							25 G			

7

# Combined spinal and epidural (CSE) Anaesthesia

## It's the best of both worlds, in one convenient solution



Enhanced patient experience With BD<sup>™</sup> Whitacre needles that have been shown to minimize the risk of PDPH<sup>10,12,15</sup>



Greater performance

With the only CSE matched set system containing the BD<sup>™</sup> Whitacre spinal needle



#### From a trusted partner

With a range of products and configurations to meet Anaesthesia needs throughout your facility



BD's CSE portfolio is designed to enhance patient comfort and clinical control-making it ideal for labor and delivery procedures.

## BD Durasafe<sup>™</sup>kits and sets

BD offers kits designed specifically for CSE procedures. They contain the world-class Whitacre spinal needle with a hub that fits snugly with the  $BD^{\mathbb{M}}$  Weiss epidural needle. The Weiss epidural needle also has bigger wings to give anaesthesiologists a secure grip, enabling more control during insertions.

	Durasafe sets	405139
Procedure		
Colorad as a disc	BD <sup>™</sup> Whitacre spinal needles	
Spinal needles	25 G x 119 mm BD <sup>™</sup> Whitacre spinal needle	•
	BD <sup>™</sup> Weiss epidurαl needles (fixed wings)	
Epidural needles	17 G x 90 mm BD <sup>™</sup> Perisafe Weiss epidural needle	•



# Medication preparation

BD syringes are available in sizes ranging from 1 mL through 50 mL to meet your medication preparation needs, both in the pharmacy and at the bedside. BD has a portfolio of hypodermic needles and syringes that is more widely used by healthcare professionals globally than any other brand.

Syringes			
Order no.	Description	Order no.	Description
309628	1 mL BD Plastipak <sup>™</sup> Luer Lok syringe	305959	10 mL BD Plastipak <sup>™</sup> Luer Lok syringe
303172	1 mL BD Plastipak <sup>™</sup> TB Luer Slip tip syringe	307736	10 mL BD Emerald <sup>™</sup> Luer Slip tip syringe
307727	2 mL BD Emerald <sup>™</sup> Luer Slip tip syringe	303219	10 mL BD Emerald <sup>™</sup> Luer Slip eccentric tip syringe
309658	3 mL BD Plastipak <sup>™</sup> Luer Lok syringe	301189	20 mL BD Plastipak <sup>™</sup> Luer Lok syringe
302986	3 mL BD Emerald <sup>™</sup> Luer Slip tip syringe	301229	30 mL BD Plastipak <sup>™</sup> Luer Lok syringe
309649	5 mL BD Plastipak <sup>™</sup> Luer Lok syringe	300865	50 mL BD Plastipak <sup>™</sup> Luer Lok syringe
307731	5 mL BD Emerald <sup>™</sup> Luer Slip tip syringe		

BD™ Blunt fill and filter needles					
Order no.	Description	Order no.	Description		
305211	18 G x 40 mm blunt filter needle	303129	18 G x 40 mm blunt fill needle		

The BD Texium<sup>™</sup> system

The BD PhaSeal<sup>™</sup> system

Tip caps	
Order no.	Description
305819	BD syringe tip cap



BD understands that ensuring reliable medication preparation and administration is critical, with some drugs requiring extra safety precautions. Our preparation tools have been designed with precision and protection in mind.

For the preparation and administration of hazardous drugs for intrathecal chemotherapy, BD offers the BD Hazardous Drug Safety (HDS) portfolio, designed to help reduce the risk of hazardous drug exposure. It includes the BD PhaSeal<sup>™</sup> system as well as the flexible and efficient BD Texium<sup>™</sup> system.

To learn more about our integrated solutions for hazardous drug safety, visit **bd.com**.

10 BD Regional Anaesthesia

# Paediatric solutions

# The same BD quality, in small sizes that match your patients

BD offers shorter sizes of its preferred spinal and epidural needles, including the  $BD^{M}$  Quincke and the  $BD^{M}$  Chiba, for enhanced safety during lumbar puncture or spinal Anaesthesia.

Spinal needles	
Order no.	Description
405243	25 G x 25 mm (1 in.) BD" Chiba needle
405245	25 G x 51 mm (2 in.) BD <sup>™</sup> Chiba needle



These BD syringes have fine-scale markings to provide dose accuracy for your smallest patients.

Syringes				
Order no.	Description	Scale markings		
309628	1 mL BD Plastipak <sup>™</sup> Luer Lok syringe	0.01 mL		
303172	1 mL BD Plastipak <sup>™</sup> TB Luer Slip tip syringe	0.01 mL		
309657	3 mL BD Plastipak <sup>™</sup> Luer Lok syringe	0.02 mL		
309649	5 mL BD Plastipak Tuer Lok syringe	0.2 mL		



# Everything you need, for Anaesthesia and beyond





#### Operating room

Enhanced patient safety and optimal experience with BD<sup>™</sup> Whitacre needles, BD<sup>™</sup> Quincke needles and BD<sup>™</sup> Chiba needles, also available in small sizes for paediatric patients and in spinal sets.

# From the pump to the patient, all from one reliable source



-	

#### Ambulatory surgery center

Fully configured trays with everything clinicians need for spinal Anaesthesia to help enhance the patient experience before, during and after procedures.



#### Pharmacy

Syringes, needles and hazardous drug safety solutions for preparation of intrathecal chemotherapy and Anaesthesia medications—from a medication preparation provider with a portfolio of hypodermic needles and syringes that is more widely used by health care professionals globally than any other brand.



#### 3

#### Post-Anaesthesia care

For continuous pain management after the procedure, including epidural continuous kits.

You also benefit from working with a provider known for its high standards of manufacturing quality, global logistical capabilities and customer service.





#### Labor and delivery

Enhanced patient comfort and clinical control while performing epidural blocks and combined spinal and epidural procedures with kits that contain the BD<sup>™</sup> Whitacre spinal needles and BD<sup>™</sup> Weiss epidural needles and nylon catheters.





5

#### Paediatric and neonatal intensive care

Lumbar puncture trays available in pediatric configurations, containing all the components clinicians need to measure CSF pressure and CSF specimens, featuring the PDPH-reducing BD<sup>™</sup> Whitacre spinal needles<sup>17</sup>.



#### Procurement

A streamlined vendor relationship with BD to get clinicians in every care setting the tools they want, with the potential efficiency and cost benefits of our presence throughout the entire medication process from preparation to patient recovery.

1. Kettner SC, Willschke H, Marhofer P. Does regional anaesthesia really improve outcome? Br J Anaesth. 2011; 107(1): i90–95.

2. Fischer B. Benefits, risks, and best practice in regional Anaesthesia: do we have the evidence we need? Reg Anesth Pain Med. 2010; 35(6): 545–548.

3. Memtsoudis SG, Sun X, Chiu YL, et al. Perioperative comparative effectiveness of anesthetic technique in orthopedic patients. Anesthesiology. 2013; 118(5): 1046–1058.

- 4. Neuman MD, Rosenbaum PR, Ludwig JM, et al. Anaesthesia technique, mortality, and length of stay after hip fracture surgery. JAMA. 2014; 311(24): 2508–2517.
- 5. Sharma S, Philip J, Perez B, Slaymaker E, Wiley J. Comparison of 25G Pencan(R), 2/24G Safetap(TM) and 25G Whitacre Spinal Needles. Anaesthesia & Analgesia. 1999; 88(25): 2675.
- 6. Spinal Anaesthesia Technique. International federation of nurse anesthetics. 2014. Accessed at: https://www.medbox.org/spinal-Anaesthesia-handout/download.pdf

7. Boon JM, Abrahams PH, Meiring JH, Welch T. Lumbar puncture: Anatomical review of a clinical skill. Clinical Anatomy 2004;17(7):544-53.

8. Ghaleb A. Postdural puncture headache. Anesthesiol Res Pract. 2010; 2010.

9. Kokki H, Salonvaara M, Herrgard E, et al. Postdural puncture headache is not an age-related symptom in children: a prospective, open-randomized, parallel group study comparing a 22-gauge Quincke with a 22-gauge Whitacre needle. Paediatr Anaesth. 1999;9(5):429-434

10. Buettner J, Wresch KP, Klose R. Postdural puncture headache: comparison of 25-gauge Whitacre and Quincke needles. Reg Anesth. 1993; 18(3): 166–169.

11. Despond O, Meuret P, Hemmings G. Postdural puncture headache after spinal anaesthesia in young orthopaedic outpatients using 27-g needles. Can J Anaesth. 1998; 45(11): 1106–1109.

12. Corbey MP, Bach AB, Lech K, et al. Grading of severity of postdural puncture headache after 27-gauge Quincke and Whitacre needles. Acta Anaesthesiol Scand. 1997; 41(6): 779–784.

13. Kokki H, Hendolin H, Turunen M. Postdural puncture headache and transient neurologic symptoms in children after spinal anaesthesia using cutting and pencil point paediatric spinal needles. Acta Anaesthesiol Scand. 1998; 42(9): 1076-1082.

14. Lynch J, Kasper SM, Strick K, et al. The use of Quincke and Whitacre 27-gauge needles in orthopedic patients: incidence of failed spinal Anaesthesia and postdural puncture headache. Anesth Analg. 1994; 79(1): 124–128.

15. Santanen U, Rautoma P, Luurila H, et al. Comparison of 27-gauge (0.41-mm) Whitacre and Quincke spinal needles with respect to post-dural puncture headache and non-dural puncture headache. Acta Anaesthesiol Scand. 2004; 48(4): 474–479.

bd.com

16. Tarkkila P, Huhtala J, Salminen U. Difficulties in spinal needle use. Insertion characteristics and failure rates associated with 25-, 27- and 29-gauge Quincke-type spinal needles. naesthesia. 1994; 49(8): 723–725.

17. Arendt K, Demaerschalk BM, Wingerchuk DM, Camann W. Atraumatic Lumbar Puncture Needles: After All These Years, Are We Still Missing the Point? The Neurologist. 2009: 15(1): 17–20.

BD Switzerland Sàrl. Terre Bonne Park - A4. Route de Crassier 17. 1262 Evsins. Switzerland.



BD, the BD Logo, BD Emerald, BD Epilor, BD Perisafe, BD Plastipak and all other trademarks are trademarks of Becton, Dickinson and Company or its affiliates. © 2020 BD. All rights reserved. 0000CF03891 Issue 2 (02/20).