

## Elevate your standard of care

Transition to  $NRFit^{TM}$  spinal anaesthesia with BD, your trusted partner in safety



### A safer standard for spinal anaesthesia

From the beginning of a procedure through discharge, a misconnection can occur at any moment. And just one of these small errors can result in catastrophic consequences for patients and their families—permanent nerve injury,<sup>1</sup> paraplegia,<sup>2</sup> even death.<sup>3,4</sup> The good news: NRFit<sup>™</sup> technology, the new standard in spinal anaesthesia products, can help to prevent these errors.

Developed by the International Standards Organization and defined by ISO 80369-6, NRFit™ products feature a unique design that is incompatible with connectors used in other applications such as enteral feeding or intravenous injection. By replacing the universal connector design, this new standard helps to prevent neuraxial misconnections and improve patient safety.

#### Get to the things that matter faster

The improved patient safety of NRFit™ connections combined with the quality, reliability and service of BD allow you to manage the transition to a new standard of care with ease.



#### Identifiable safety

BD® Regional Anaesthesia NRFit™ Neuraxial Products are easily identifiable through every product and package having an NRFit™ label and a yellow component



#### Familiar use

With NRFit<sup>™</sup> products from BD, the connection may be new, but the functionality and technique remain the same



#### Seamless transition

Our team is committed to supporting a smooth transition to NRFit<sup>™</sup> products

#### Choose BD for the change to NRFit™ Anaesthesia Products

With the right partner, transitioning to a safer standard of care can be easy. BD manufactures a full portfolio of ISO 80369-6 compliant spinal anaesthesia products, from medication preparation to delivery. And our high standards of manufacturing quality, service and support come with each and every one.



#### 100+ years of the BD standard

Legacy of precision engineering, innovation, reliability and high quality regional anaesthesia products



#### A robust spinal portfolio

Available individually or in multiple configurations of sets



#### Trusted clinical performance

BD® Whitacre Needle, the pioneer of pencil-point spinal needles that is supported by 25 independently published studies, is now available with NRFit<sup>™</sup> design

#### Improved safety and trusted products from one trusted supplier

One procedure. One source. With NRFit™ Spinal Anaesthesia Products from BD, it really is that simple. From medication preparation components to the BD® Whitacre Spinal NRFit<sup>™</sup> Needle or BD® Quincke Spinal NRFit<sup>™</sup> Needle and syringes for medication delivery, BD offers the NRFit™ components you need to safely, effectively and efficiently complete a spinal anaesthesia procedure.



#### Four benefits, one convenient solution



Offering includes the BD® Whitacre Spinal NRFit™ Needle or BD<sup>®</sup> Quincke Spinal NRFit<sup>™</sup> Needle from a leading manufacturer of spinal anaesthesia products

### 3 Confident connections

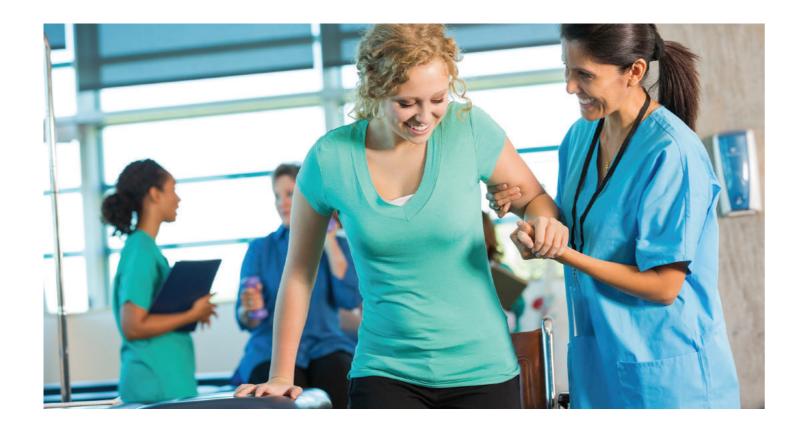
NRFit<sup>™</sup> lock devices require an extra half-turn rotation on average for a secure connection compared to Luer lock devices, which may provide care providers added confidence in the security of the connection

#### 2 Safer connections

Connecting BD® Syringes NRFit™ Slip and BD<sup>®</sup> Spinal NRFit<sup>™</sup> Needles requires minimal force, helping to limit unintended medication leakage due to insufficient connection

#### 4 Recognizable components

The BD portfolio includes NRFit™ components for neuraxial access and Luer components for local skin injection. NRFit™ labels and yellow components on NRFit<sup>™</sup> products make it easy to distinguish between the two even after they are removed from the packaging





# PDPH is "the most common serious complication"<sup>5</sup>

Postdural puncture headache (*PDPH*) is the most common serious complication resulting from spinal and epidural anaesthesia and lumbar punctures.<sup>5</sup> PDPH is generally thought to be the result of decreased cerebrospinal fluid (*CSF*) pressure due to CSF leakage through the dura puncture hole.<sup>5,6</sup> The size and type of spinal needles are two of the most important factors for decreasing the risk of PDPH.<sup>5</sup>

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

Studies show that using smaller gauge (25 G) pencil-point needles result in reduced CSF loss and a five-times lower incidence of PDPH compared to larger gauge (22 G) cutting needles.<sup>5</sup> This difference is significant. Using pencil-point needles has also been shown to reduce post-lumbar puncture headache (PLPH) in lumbar puncture and myelogram patients.<sup>7</sup>

#### We offer the BD® Whitacre Spinal NRFit™ Needle

The BD® Whitacre Spinal NRFit™ Needle combines the improved safety of the NRFit™ design with the pioneer of the pencil-point spinal needle8 to help anaesthetists conduct safe spinal anaesthesia procedures.



#### Familiarity

Distinctive positive dural click<sup>9</sup> to signal proper needle placement



#### Clarity

Clear hub enables visualization of CSF to help in placing the needle properly



#### Trustworthy

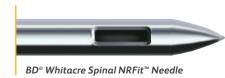
BD® Whitacre Needles are supported by over 25 independently published studies

#### BD® Spinal NRFit™ Needles and Sets

BD® Whitacre Spinal Needles and BD® Quincke Spinal Needles are trusted by clinicians around the world. Their clear hubs enable anaesthetists to visualize CSF for proper needle placement, and the manufacturing quality, reliability and consistency of every BD product gives them peace of mind.

#### BD® Whitacre Spinal NRFit™ Needles

The BD® Whitacre Spinal NRFit<sup>™</sup> Needle is the needle you trust, now with ISO 80369-6 compliant safety features. Available in 8 sizes ranging from 88.9 mm to 119.1 mm and gauges from 22 G to 27 G, BD® Whitacre Spinal NRFit<sup>™</sup> Needles also offer the option of thin walls (indicated as TW) for maximized flow through same gauged needles.



BD® Whitacre Spinal NRFit™ Needles					
Order no.	Description	Order no.	Description		
400978	22 G x 88.9 mm (3 1/2 in.)	400221	25 G x 119.1 mm (4 11/16 in.)		
400979	24 G x 88.9 mm (3 1/2 in.), TW	400982	27 G x 88.9 mm (3 1/2 in.)		
400980	25 G x 88.9 mm (3 1/2 in.)	400222	27 G x 103.2 mm (4 1/16 in.)		
400220	25 G x 103.2 mm (4 1/16 in.)	400223	27 G x 119.1 mm (4 11/16 in.)		

BD® Spinal NRFit™ Needle Sets			400224	400225	400226	400227	400228	400229	400230
Procedure									
	BD® Whitacre Spinal NRFit™ Needles								
	25 G x 88.9 mm (3 1/2 in.) BD® Whitacre Spinal NRFit™ Needle						•		
	25 G x 103.2 mm (4 1/16 in.) BD® Whitacre Spinal NRFit™ Needle							•	
	27 G x 88.9 mm (3 1/2 in.) BD® Whitacre Spinal NRFit™ Needle					•			
Procedure needles	27 G x 103.2 mm (4 <i>1/16 in.</i> ) BD® Whitacre Spinal NRFit™ Needle								•
	BD° Quincke Spinal NRFit™ Needles								
	25 G x 88.9 mm (3 1/2 in.) BD® Quincke Spinal NRFit™ Needle		•						
	26 G x 88.9 mm (3 1/2 in.) BD® Quincke Spinal NRFit™ Needle			•					
	27 G x 88.9 mm (3 1/2 in.) BD® Quincke Spinal NRFit™ Needle				•				
Tutus divess use all	20 G x 31.8 mm (1 1/4 in.) BD® Spinal Introducer NRFit™ Needle		•	•			•	•	
Introducer needles	22 G x 31.8 mm (1 1/4 in.) BD® Spinal Introducer NRFit™ Needle				•	•			•

#### BD® Quincke Spinal NRFit™ Needles

Featuring a stylet and cannula hub key/slot arrangement that facilitates proper needle bevel orientation, BD $^\circ$  Quincke Spinal NRFit $^{\mathsf{M}}$  Needles are available in 22 sizes with lengths ranging from 76.2 mm to 177.8 mm and gauges from 18 G to 27 G.



BD-	Quincke	<b>Spinai</b>	NKFIT	neeale	

BD® Quincke Spinal NRFit™ Needles				
Order no.	Description	Order no.	Description	
400065	18 G x 76.2 mm (3 in.)	400077	22 G x 76.2 mm (3 in.)	
400070	18 G x 88.9 mm (3 1/2 in.)	400079	22 G x 88.9 mm (3 1/2 in.)	
400215	18 G x 152.4 mm (6 in.)	400217	22 G x 127 mm (5 in.)	
400925	19 G x 76.2 mm (3 in.), TW	400218	22 G x 177.8 mm (7 in.)	
400926	19 G x 88.9 mm (3 1/2 in.), TW	400930	23 G x 88.9 mm (3 1/2 in.), TW	
400927	20 G x 38.1 mm (1 1/2 in.)	400063	25 G x 76.2 mm (3 in.)	
400928	20 G x 76.2 mm (3 in.)	400089	25 G x 88.9 mm (3 1/2 in.)	
400929	20 G x 88.9 mm (3 1/2 in.)	400219	25 G x 119.1 mm (4 11/16 in.)	
400216	20 G x 152.4 mm (6 in.)	400931	26 G x 88.9 mm (3 1/2 in.)	
400072	22 G x 38.1 mm (1 1/2 in.)	400932	27 G x 88.9 mm (3 1/2 in.)	
400073	22 G x 63.5 mm (2 1/2 in.)			

BD® Spinal Introducer NRFit™ Needles				
Order no.	Description	Order no.	Description	
400177*	20 G x 31.8 mm (1 1/4 in.)	400919**	22 G x 31.8 mm (1 1/4 in.)	

<sup>\*</sup>For use with needles 25 gauge and smaller
\*\*For use with needles 27 gauge and smaller

BD needle gauge color chart
-----------------------------



A magnification of the BD® Quincke Spinal NRFit™ Needle Hub

#### Medication preparation and delivery

BD offers NRFit<sup>™</sup> syringes in 3 mL and 5 mL sizes with slip and lock tips for spinal procedures, as well as blunt fill and filter needles for your medication preparation needs. BD® Syringe customers can utilize their existing medication preparation practices with BD Syringes NRFit<sup>™</sup> Slip and Lok, because the fluid path materials remain the same as BD® Syringes.\*

The syringes also reduce drug waste compared to BD® Syringes.

For over 100 years, BD has built its legacy on performance and trust through the delivery of high-quality products, service and support—resulting in a portfolio of hypodermic needles and syringes that is more widely used by healthcare professionals globally than any other brand.



BD® 5 mL Plastic Syringe NRFit™ Slip *(in hand)* 

BD® Plastic NRFit™ Syringes		
Order no.	Description	
400050	BD® 3 mL Syringe NRFit™ Lok	
400172	BD® 3 mL Syringe NRFit™ Slip	
400173	BD® 5 mL Syringe NRFit™ Lok	
400051	BD® 5 mL Syringe NRFit™ Slip	
BD® Blunt Fill αnd Blunt Filter NRFit™ Needles		
Order no.	Description	
400066	BD® Blunt Filter NRFit™ Needle	
400067	BD® Blunt Fill NRFit™ Needle	

<sup>\*</sup>BD $^{\circ}$  Syringes NRFit $^{\infty}$  Lok and NRFit $^{\infty}$  Slip utilize the same fluid path materials as BD $^{\circ}$  Syringes manufactured in the U.S.



complication in obstetric anaesthesia. Semin Perinatol. 2014;38(6):386–94. doi: 10.1053/j.semperi.2014.07.007. **6** Ghaleb A. Postdural puncture headache. Anesthesial Res Pract. 2010;2010. doi:10.1155/2010/102967. **7** Ahmed SV, Jayawarna C, Jude E. Post lumbar puncture headache: diagnosis and management. Postgrad Med J. 2006;82:713–716. doi: 10.1136/pgmj.2006.044792. **8** Calthorpe N. The history of spinal needles: getting to the point. Anaesthesia. 2004;59(12):1231–1241. doi: 10.1111/j.1365-2044.2004.03976.x. **9** Sharma S, Philip J, Perez B, Slaymaker E, Wiley J.

BD Switzerland Sàrl, Terre Bonne Park – A4, Route de Crassier 17, 1262 Eysins, Switzerland

Comparison of 25G Pencan®, 2/24G Safetap™ and 25G Whitacre spinal needles. *Anesth Analg.* 1999;88(2S):267S.

**C€** € €

bd.com