



**BD Ultra-Fine™ Nano: BD's Shortest & Thinnest Pen Needle – Now Featuring a Modified Tip with PentaPoint™**  
*Shorter Needles Deliver Added Benefits*

**What is the BD Nano Pen Needle?**

- The new BD Nano 4mm x 32G pen needle – the BD's shortest and thinnest pen needle – is easier to use and offers greater comfort for people with diabetes who inject insulin compared to other pen needles.
- The BD Nano pen needle's thin gauge (32G) and short length (4mm) can help make people with diabetes feel less intimidated about the insulin injection experience.<sup>1</sup>
  - Studies prove that injection with the BD Nano pen needle is less painful than using a 5mm or 8mm pen needle.<sup>1</sup>
  - BD Nano offers greater injection site flexibility than other pen needles.<sup>1</sup>
- The BD Nano pen needle comfort and ease of use may help people with diabetes adhere to an insulin injection regimen and provide improved outcomes for patients who inject insulin.
  - No “pinch-up” of the skin is required to achieve a subcutaneous injection
  - The BD Nano injection technique is easy to teach and easy for patients to learn.
- The BD Nano pen needle fits all diabetes injection pens.

**Clinical efficacy**

- BD Nano is as clinically effective as and is proven to be less painful than longer insulin pen needles for people of all body types.<sup>1</sup>
  - BD Nano provides equivalent glycemic control to 5mm and 8mm pen needles.
  - Patients reported less pain when using BD Nano than with either 5mm or 8mm pen needles.
  - BD Nano effectively delivers an insulin dose to subcutaneous tissue – the recommended tissue layer for insulin injections<sup>2</sup> – while reducing the risk of injecting into muscle.

**User preference**

- In a survey of people with diabetes involved in a recent clinical trial, 65 percent of insulin-injecting people selected BD Nano as the pen needle of choice.<sup>1</sup>
  - BD Nano was preferred over 5mm and 8mm pen needles for ease of use, as well as for ease of entering into the skin.
  - BD Nano offers greater overall injection comfort and less injection-site pain than other pen needles.
  - Experienced insulin-injecting patients trying the BD Nano pen needle experienced little or no anxiety before injecting. A greater proportion of patients reported feeling “not at all anxious” before injecting themselves with BD Nano than with either 5mm or 8mm pen needles.

- The BD Nano pen needle was significantly preferred over both the 5mm and 8mm pen needles on every attribute tested, and received highest satisfaction ratings (90 percent or more) for the following attributes:<sup>1</sup>
  - Ease of entering the pen needle into the skin
  - Ease of learning injection technique
  - Injection site flexibility
  - Needle gauge

### **BD needle technology, design, and manufacturing**

- BD uses advanced technology and design to offer pen needles that provide injection comfort, needle glide, and a smooth needle finish.
  - **Fine point technology:** A three-step process that shapes the tip of every needle as finely as possible for easier penetration.
  - **Electro-polishing:** A technique that polishes away microscopic burrs, giving every needle a smooth finish.
- Every BD Ultra-Fine Pen Needle is engineered to be so thin and so smooth that we can guarantee a more comfortable injection.

### **What is PentaPoint™?**

- The BD Nano pen needle now features PentaPoint technology, BD's patented 5-bevel needle tip.
  - PentaPoint creates a flatter, thinner needle tip surface to help penetrate the skin with significantly greater ease for a smoother and gentler injection.
- Combined with BD Nano, the shortest and thinnest pen needle available, PentaPoint offers patients a more comfortable injection experience.
  - Bench testing demonstrated a 23% reduction in penetration force when entering the skin when comparing BD's patented 5-bevel needle to a traditional 3-bevel needle.

<sup>1</sup> Hirsch LJ, Gibney M, Albanese J, et al. Comparative glycemic control, safety and patient ratings for a new 4mm\32G insulin pen needle in adults with diabetes [Electronic version]. *Curr Med Res Opin* 2010; 26(6): 1531–1541.

<sup>2</sup> Gibney MA, Arce CH, Byron KJ, Hirsch LJ. Skin and subcutaneous adipose layer thickness in adults with diabetes at sites used for insulin injections: Implications for needle length recommendations [Electronic version]. *Curr Med Res Opin* 2010; 26(6): 1519–1530.