# *Needle Control: Bevels & Bends*

*2023 revision by Brian Skellie and Ruben Triguero* | brnskll.com

## Disclaimers

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| *All piercing technique classes presented at the Association of Professional Piercers Conference are taught from the point of view of the individual instructors. The APP does not sanction a particular piercing technique. The views presented by piercing technique instructors are the instructor's opinions alone, and not those of the APP.* | • *Secure the needle before transferring jewelry and/or disposing of the needle.*<br>• *Dispose of the dirty needle as soon as you can.*<br>• *Do not hold the dirty needle any longer than you have to.*<br>• ***Do not** modify or bend a dirty needle.* |

### Let's think about how the cutting surfaces of a needle work

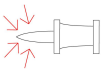
A **wedge** *[point configuration]* with a **handle** *[body]* : The bevel is a simple machine: a wedge. Made into a blade, it moves the tip of the needle by cutting in the direction of the angle it is ground to. Hypodermic needles cut **off center** by design, which creates drag & forces to compensate

A needle is a tool. And like any tool, it has a working part and a handle. The bevel is the working part. It travels through the skin on that edge. The rest of the needle is for us to hold it.

- Jim Ward talks about early piercing needles
- How it's made: Hypodermic needle
- Making of Sharpass needles by Industrial Strength LLC
- More details

Visualizing the bevel centered on the line that passes straight through →> is close to having it at 90° to the angle of the entry and exit points. This can help with accuracy, especially for cartilage.

- One of the biggest faults of the hypodermic piercing needle is that it pierces off center.
- You can compensate by centering the A of the bevel in line with the piercing, instead of centering the shaft of the needle.
- This way you don't overcompensate and create a U *shaped* cut with a flap, and you can control the displacement in all directions pretty equally on your entry and exit, reducing drag along the way.



**Not like push pins, Brian adds:** *It is still weird to me that we use punches (inconvenient and messy) and hypos (off center) for piercing. I did all of my original piercings with custom made solid needles. They were essentially very sharp polished tapered point or tapercut needles with the same centered distribution as a push pin or sewing needle. Though accurate, they required far more pressure for penetrating tougher tissues.*

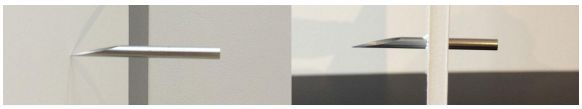
## Cutting edge theory

Instead of using the length of the needle as your horizontal reference, use the bevel blade's cutting edge.

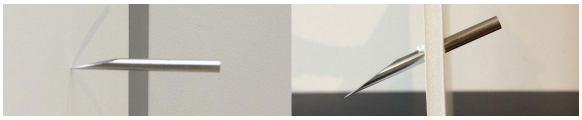
- Minimize trauma & avoid a C shaped cut
- Reduce bleeding
- Use the needle's natural tendency to travel to your advantage

## Centering the wedge for more accurate results, and less tissue trauma:

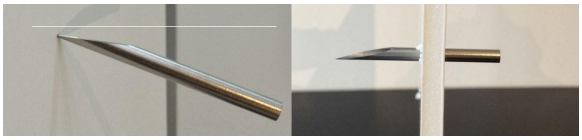
- Use the bevel as your horizontal reference point.
- Concentrate on the cutting face of the A bevel passing through flat, rather than the tube handle
- Try it on inanimate layered objects, like different textures of cloth or banana peels.



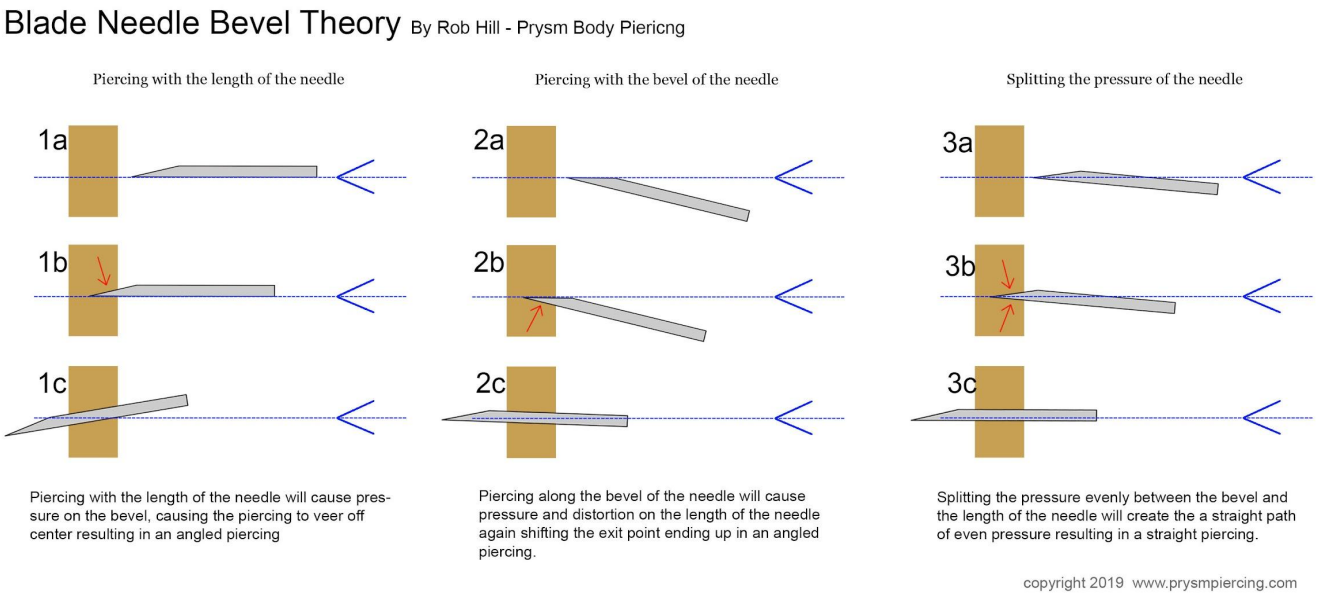
Here is a beginner's idea of what a needle should do:
**C form wounds**



Here is what can happen if it is not controlled:
**On mark & off center**



Initial 90° perpendicular to the entry and exit: **() form wounds**
Different exit wound, different internal damage, different healing.




**Needle trajectory examples:** The motion from the initial 90° angle is carried into centering the wedge as the tip exits accurately on mark. As it passes through, the tissue is **pulled** over the smooth solid outer wall of the needle, taking pressure off the opening & cutting edges.

- Focus more on **pulling** the tissue away from the exit point to distribute the forces evenly, rather than pushing the needle through.
- "Plunger" style piercing with the finger **pushing** from the back of the needle tends to result in less control over the exit and in more drag and internal damage.

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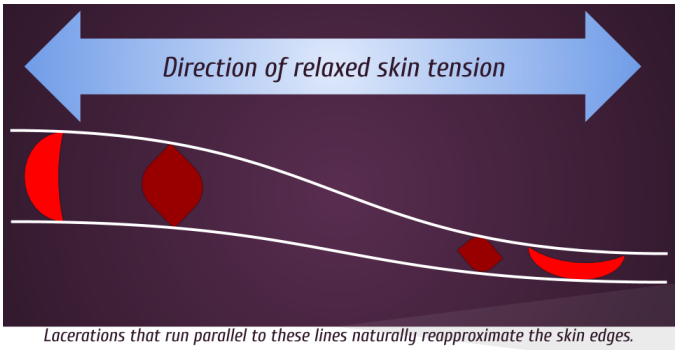
## Goal: Wound shaping. It is possible to create a | or () shaped slit instead of a C or U shaped flap.

The angle of how you aim influences this:

1. Slow down
2. Keep entry and exit perpendicular
3. Make a tiny incision and stretch it
4. Center the wedge

Minimize the flap of tissue that could result in a scarring or tearing while healing. Try on banana peels, paper or jeans until you get the hang of spreading the tissue evenly without cutting.




*Lacerations that run parallel to these lines naturally reapproximate the skin edges.*
*Lacerations that run at right angles to the tension lines tend to gape apart*

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## Tension and release

*"A state of tension exists naturally in skin. For instance, wounded skin will gape, becoming elliptical instead of round."*

— Langer's Lines: To Use or Not to Use; Wilhelmi, Bradon J.; Blackwell, Steven J.; Phillips, Linda G.; Plastic & Reconstructive Surgery. 104(1):208-214, July 1999

### Dividing lines and folds

- Skin tension or cleavage lines
- Folds visible when pinching skin

*"Thirty-six differently named guidelines have developed as surgeons have searched for an ideal guide for elective incisions. Many surgeons prefer **Langer's lines**. These lines were developed by Karl Langer, an anatomy professor, from cadavers in rigor mortis. However, Kraissl preferred lines oriented perpendicular to the action of the underlying muscles. Later, Borges described relaxed skin tension lines, which follow furrows formed when the skin is relaxed and are produced by pinching the skin. However, these are only guidelines; there are many contributors to the camouflaging of scars, including wrinkle and contour lines. **Borges's** and **Kraissl's** lines (not Langer's) may be the best guides for elective incisions of the face and body, respectively."* — Maxillofacial Reconstruction of Ballistic Injuries
http://www.intechopen.com/books/a-textbook-of-advanced-oral-and-maxillofacial-surgery/maxillofacial-reconstruction-of-ballistic-injuries

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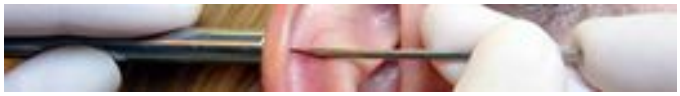
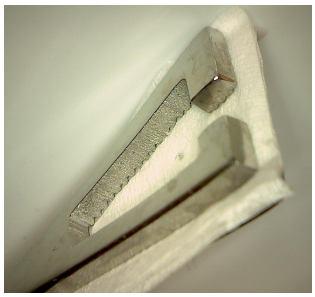
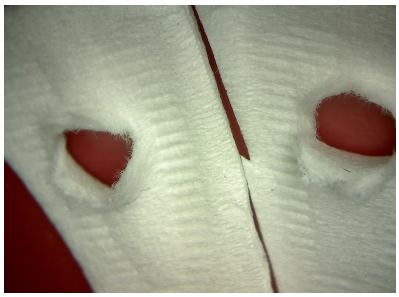
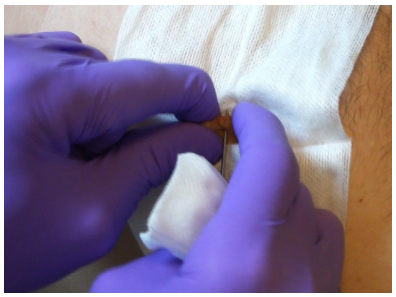


### Accuracy: Won't holding the needle perfectly straight execute a perfect piercing?

You can still achieve a straight piercing that way, but with a C shaped cut, additional drag, trauma & surfaces to heal. Holding the needle as demonstrated in this photo could also result in a piercing that is high on the back.

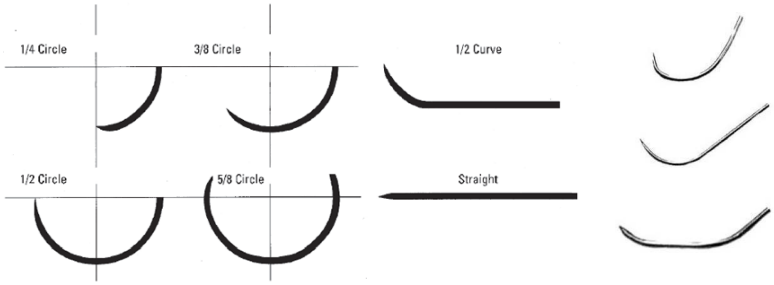
*It's not as much about piercing straighter, unless that is a problem for the person, as it is about **reducing tissue trauma, bleeding, & skin flaps** which is most noticed with thicker gauge needles.*

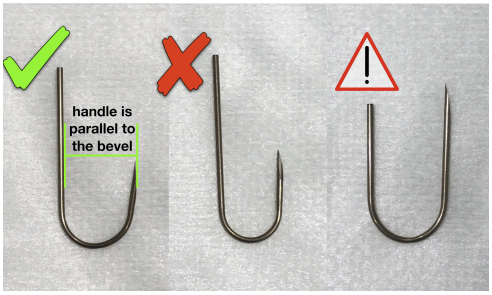
### Motion & dilation / Test medium braced in piercing forceps / Control without clamps

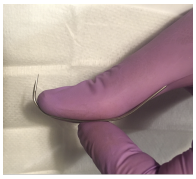




**Resulting deformations:**
Shaped exit → **O** distribution, Straight exit → **C** flap

### Typical curvatures: ⚠️Bevel orientation matters!

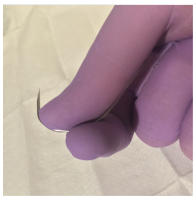


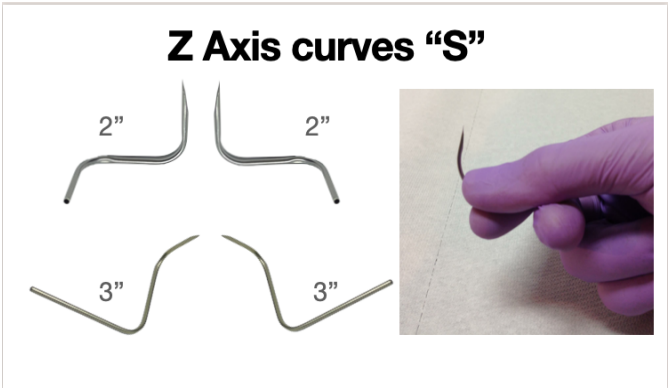



### Curvature for leverage

Back to front: rotational force with thumb and forefinger, roll and pitch with ring finger.



### Grip and Ergonomics

**S curve** & other compound curvatures.