

Introducing the better way to treat fractures – the Sonoma CRx® collarbone rod



Sonoma Orthopedic Products has developed revolutionary technology that transforms the way surgeons treat certain problematic broken bones. Our patented, flexible-to-rigid surgical rods support and align fractured bones from within. Many surgeons describe the CRx® as acting like a cast within the bone. This elegant technology and technique preserves the surrounding muscles and skin and requires very small incisions. Thousands of patients have been satisfied by their complete and quick recovery as well as their lack of scars, pain and prolonged immobilization.

The CRx® Rod and Velox™ Minimally-Invasive Procedure



The CRx® is small, but incredibly strong and dynamic. It is precision manufactured in the USA of surgical-grade stainless steel. Patented Wavibody® technology allows the CRx® to transform from flexible to rigid.

For this reason, it is the **only implant in the world** capable of maintaining and conforming to the natural shape of the collarbone and holding it from the inside during healing.



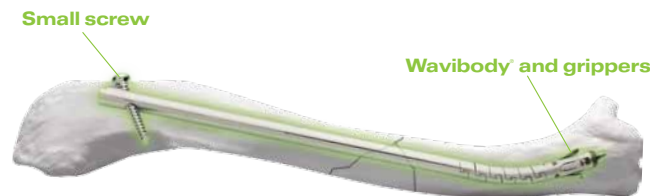
Can you see the scar?

This is an example of the small scar left from VELOX™ procedure.



CRx® is implanted with the VELOX™ minimally-invasive surgical technique which avoids harming muscle, and does not damage the collarbone blood supply. Compared to traditional methods of treating collarbone fractures VELOX™ and CRx® can provide the following extraordinary benefits:

- ◆ **Faster rehabilitation**
- ◆ **Complete recovery**
- ◆ **No pain from snagging** or “tenting” of the skin and muscle because CRx® does not alter anatomy with metal or screws outside the bone like a surgical plate
- ◆ **Preserved bone strength** even if the CRx® is removed
- ◆ **Minimally-invasive removal** – If you want the CRx® removed for any reason, it may not require additional rehabilitation, and return to full function is rapid.



Procedure Overview:

Several sizes of CRx® are available, and your surgeon will pick the size that fits your collarbone. After the surgeon realigns your fractured bone, the CRx® is inserted through a very small incision. The flexible rod snakes through the curved center canal of the bone. Once it is in place, the surgeon “activates” the rod, causing the rod to become rigid. Activation also triggers the expansion of grippers that support and hold the bone in alignment for healing. A small screw is then placed in the opposite end of the rod to secure it.

Simple Steps to Satisfying Results



Step 1: The CRx® rod is inserted into the collarbone

The high-precision, flexible rod is introduced into the center canal of the fractured collarbone through a small skin incision. The flexibility of the rod allows it to avoid nerves and muscles during insertion as it aligns the fractured bone pieces.

Step 2: Activation of the CRx® rod

Once inside the bone, the surgeon activates the rod so it becomes rigid to provide stabilizing comfort and healing.



Step 3: Enjoy a quicker and complete recovery

The CRx® acts like a cast inside the bone once it is properly implanted. This allows patients to get back to the activities they love faster and with more confidence in a complete recovery.

SONOMA CRx®
CLAVICLE FRACTURE REPAIR DEVICE

A Fast Comeback Takes Inner Strength



Pre-Operative X-Ray

A 37-year-old mountain biker suffered a collarbone fracture on his right side.



Immediate Post-Operative X-Ray

The day after CRx® surgery, the patient reported minimal pain. He was able to return to work five-days after surgery. Shortly thereafter, he was restored with his full range of motion, and resumed mountain biking after gaining his surgeon’s approval.

YOU want to experience complete and fast healing.



SONOMACRx
CLAVICLE FRACTURE REPAIR DEVICE

Other treatments don't provide the results you deserve.

Alternative Treatment with a sling



While in a sling, the ends of the fractured bones are meant to rub together until they fuse. This causes the patient several weeks of pain. It is common for the result to be a non-anatomic alignment; bringing about a large bump under the skin and permanent restricted range of motion or shoulder weakness. For this reason, 30% of patients are unsatisfied with their results, and may not be able to return to their active lifestyle¹.



Alternative Treatment with a plate



Using a plate to treat a collarbone fracture is effective in healing the bone. However, it is common for patients with a surgical plate and screws to experience pain and discomfort caused by their skin and muscles rubbing against the plate. This discomfort is felt by approximately 88% of plate patients, causing about 20% of them to eventually get their plate removed^{2,3}.



CRx® removal vs. Plate removal



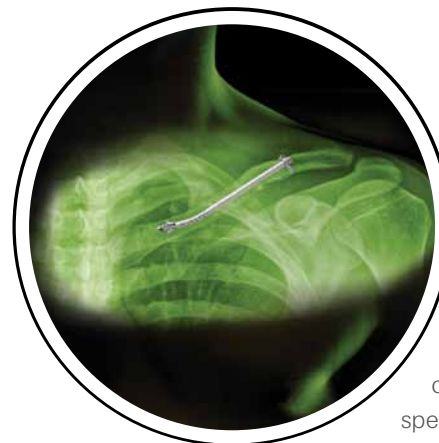
A small percentage of patients sometimes choose to remove the CRx® once their fracture has healed. (Your surgeon can advise whether this is suitable for you.) The surgeon only needs to make a small incision in the back of the patient's shoulder to remove the rod. Removing the device does not compromise the bone, and the bone should return to full strength. In fact, CRx® leaves bone 230% stronger than plates after removal⁴. (see below)



Patients who have their plate removed unfortunately leave their bone vulnerable for another break. The holes left in the bone from the numerous screws holding the plate in place compromise the strength of the healed bone for a period of time. For this reason, surgeons generally recommend patients stop any high-performance activities for several months after plate removal in an attempt to let the holes fill in with new bone.

Sonoma Company History

Sonoma Orthopedic Products, Inc. (Sonoma) began with a biomedical engineer while he stood in a hospital reviewing the x-rays of his daughter's wrist fracture. He was convinced there must be a better and less-invasive way to reconstruct the fractured bones. In the following years, other members of his family experienced arm and collarbone fractures. These experiences forged the foundational science, technology and mission of Sonoma. The company is devoted to inventing advanced implants and surgical techniques to provide fracture patients with fast and complete recovery.



Find a Doctor

For more information, or to find a doctor who specializes in CRx® collarbone fracture VELOX™ procedure, visit: www.sonomaorthopedics.com



INNER STRENGTH FOR A **FAST COMEBACK**

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- 2. Whipple. Sonoma. 2012
- 3. Wang. Int J Shoulder Surg. 2011
- 4. Wijdicks. Knee Surg Sports Traumatol Arthrosc. 2012

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