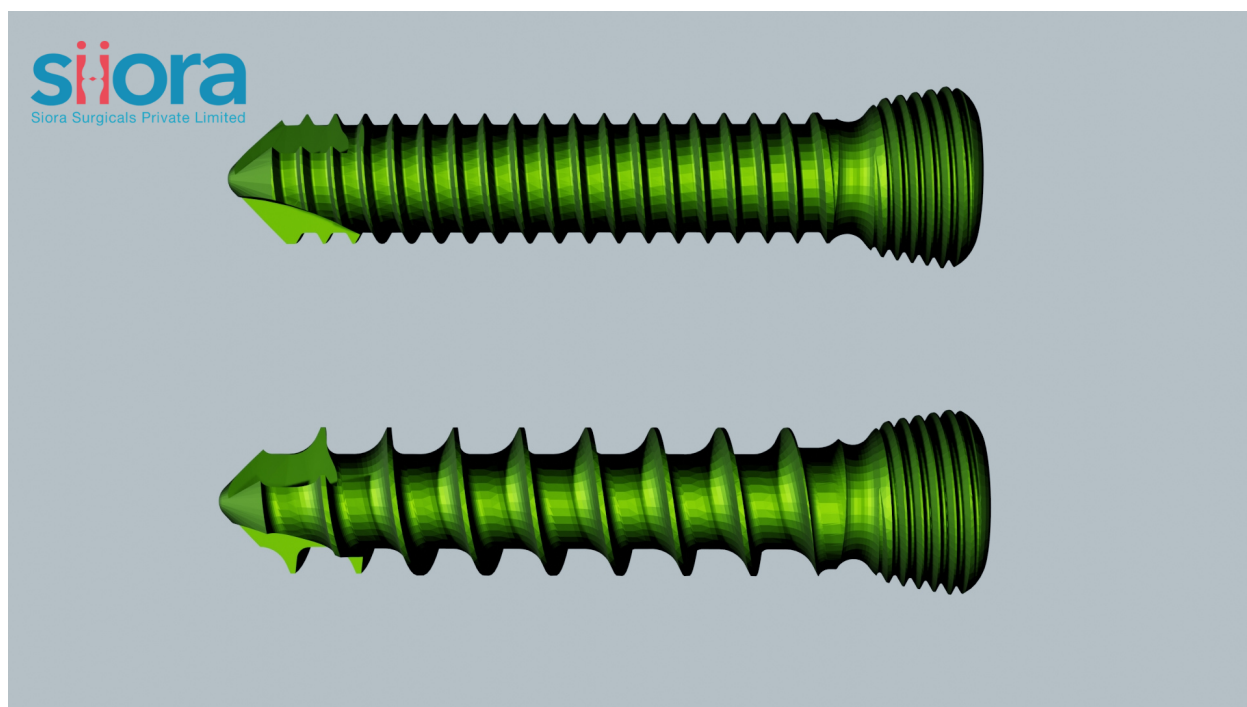


# Difference Between Cancellous and Cortical Screws - A Quick Guide



Orthopedic screws are the commonly used [trauma implants](#) for the surgical fixation of fractures and other orthopedic conditions like non-unions, malunions, and limb-lengthening discrepancies. Depending on the type of injury and its location, different types of screws are used. If we talk about different types of screws, they can be classified as cancellous and cortical screws. In this post, we will have a detailed look at the difference between these two screw types.

Before we go ahead, let us have a quick look at orthopedic screws.

## What Are Orthopedic Screws?

An orthopedic screw is an implant that is often used with other orthopedic devices for the treatment of fractures and other musculoskeletal injuries. In appearance, it is just like a normal screw with a head and threads along its length. Its function is to hold implants and/or bone fragments in place with compression. This stabilizes the fracture and allows healing. Now, depending

on the pitch and other structural parameters, orthopedic screws can be classified as cancellous or cortical. Let us see the types one by one.

### **What Are Cancellous Screws?**

Cancellous screws are specifically designed to be used in the cancellous bone, a spongy bone that forms the ends of long bones. These screws are known to produce interfragmentary compression in the joint areas.

If we talk about their structure, they have a coarse pitch and smaller thread pattern. Cancellous screws are available as self-tapping and non-self-tapping screws that can also be availed in fully-threaded and partially-threaded structures. They are commonly used for fixing fractures in large bone and large bone fragments. The thread-to-core diameter ratio of cancellous screws is high in cancellous screws.

Above all, cancellous screws are also available in locking and non-locking configurations. Non-locking cancellous screws have a plain head. While on the other hand, locking cancellous screws are made to have a threaded head profile. This helps the screws lock into a locking plate to provide a fixed-angle construct.

### **What Are Cortical Screws?**

Cortical screws are used for fixing fractures in cortical bone. They help fix orthopedic plates and other devices during fracture fixation. Cortical screws have a fine pitch with a smaller diameter. Just like cancellous screws, they are also available as fully-threaded and partially-threaded screws. The thread-to-core diameter ratio of cortical screws is low.

They are self-tapping screws but can also be availed as non-self-tapping ones as required according to the type of injury. Just like cancellous screws, cortical screws can also be availed as locking and non-locking. Locking cortical screws have a threaded head profile whereas non-locking screws have plain threads.

## **What Orthopedic Screws Are Made of?**

Orthopedic screws are made of medical-grade metal alloys and bioabsorbable materials. Two of the commonly used materials for the manufacturing of screws are medical-grade stainless steel and titanium. Before being approved fit for use, these screws are tested against stringent quality parameters by experts.

Siora Surgicals Pvt. Ltd. is a renowned orthopedic implant manufacturer in India with over 3 decades of experience in the industry. The company manufactures both cortical and cancellous screws in different sizes using medical-grade stainless steel and titanium. Siora is also a regular exhibitor at Florida [International Medical Expo](#). In 2024, the company will be exhibiting at booth X21 in FIME.

## **Contact Information**

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