

What does my leg alignment mean for my knee?



Knock-kneed

Neutral

Bow-legged

Did you get x-rays of your legs today?

If so, do you know what your alignment means for your knee?

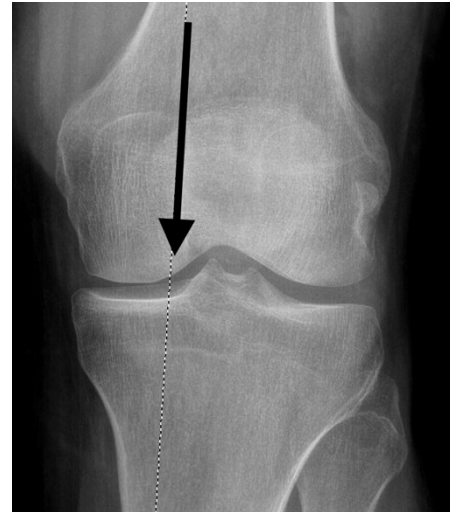
Drawing a line from the center of your hip to the center of your ankle tells us whether you are **bow-legged**, **knock-kneed**, or have **neutral** alignment.

Bow-legged and knock-kneed legs are abnormal and put your knees at increased risk for additional injury if your alignment is not corrected.

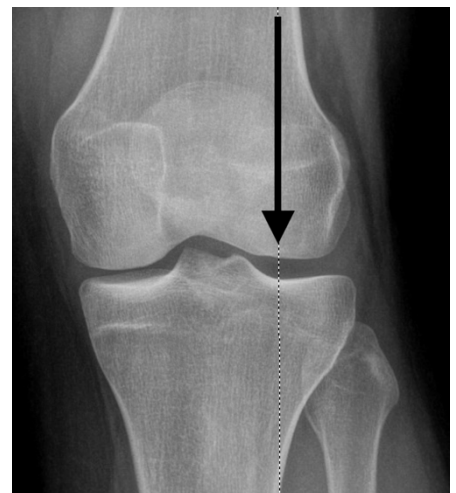
Bow-legged is called *varus* alignment.

Knock-kneed is called *valgus* alignment.

If you're bow-legged, most of your body weight goes through the inside part of your knee. This increases the risk of hurting structures in the medial compartment of your knee, whether it is your **meniscus** or **cartilage**. This can potentially increase the risk of osteoarthritis.

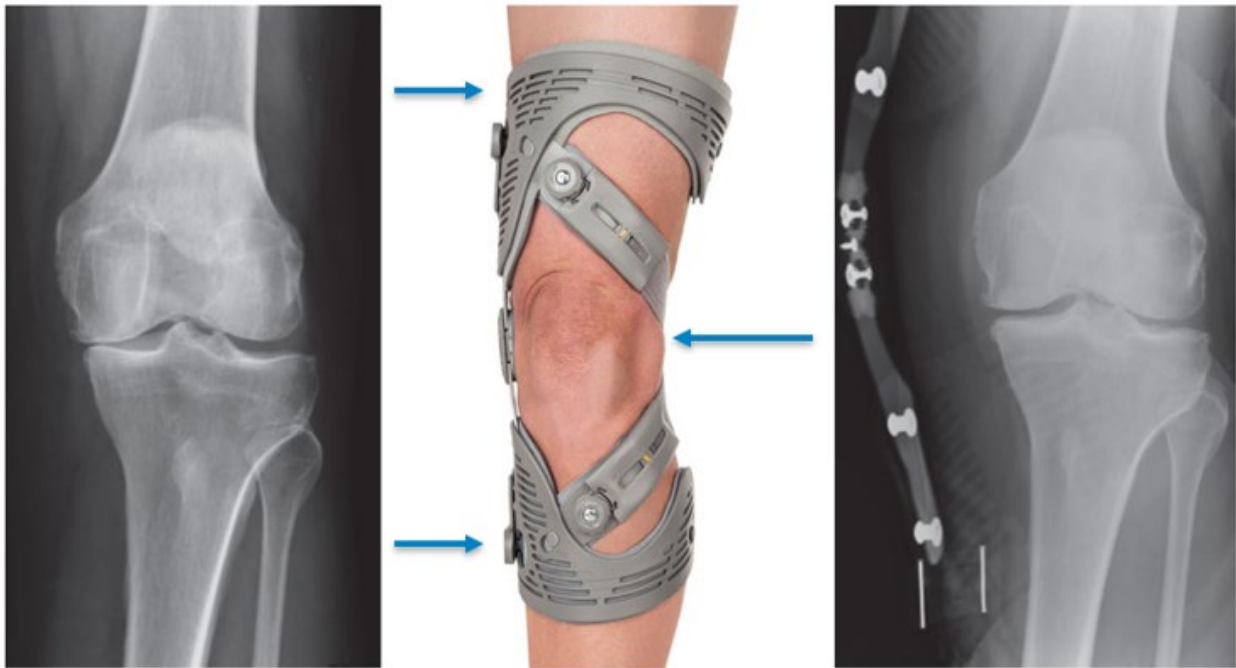


If you're knock-kneed, most of your body weight goes through the outside part of your knee. This increases the risk of hurting structures in the lateral compartment of your knee, whether it is your **meniscus** or **cartilage**. This can potentially increase the risk of osteoarthritis.



Nonsurgical treatment options:

1. Do nothing – sometimes your malalignment does not correlate with your symptoms.
2. Bracing – there are braces designed to help “straighten” your knee while you wear the brace. These take the pressure off the affected side of your knee. They are called **unloading** or **offloading knee braces**.

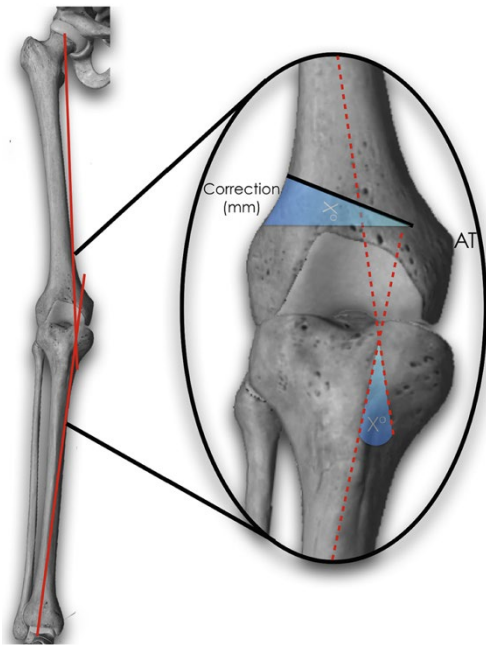


<https://orthoticsplus.com.au/orthotics/knee/unloader-brace/>

Surgical treatment options:

Varus-producing osteotomy

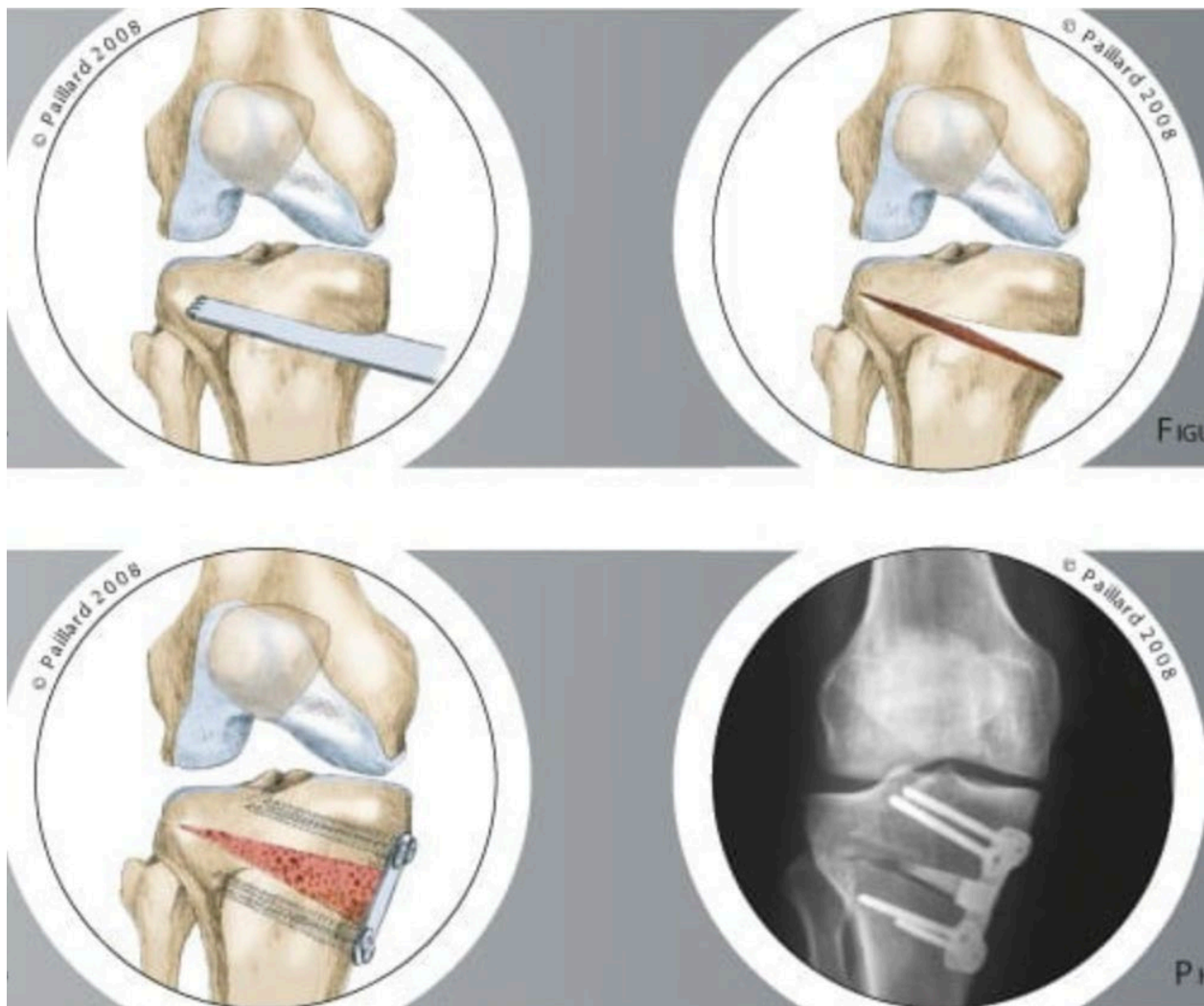
This is used to treat knock-knees. It can be performed by adding a wedge of cadaver bone to the outside part of your thigh bone near your knee. To do this, we have to cut your thigh bone, wedge the cadaver bone in this new cut, and then hold everything in place with a plate and screws.



Mitchell JJ, Dean CS, Chahla J, Moatshe G, Cram TR, LaPrade RF. Varus-Producing Lateral Distal Femoral Opening-Wedge Osteotomy. Arthrosc Tech. 2016 Aug 1;5(4):e799-e807.

Valgus-producing osteotomy

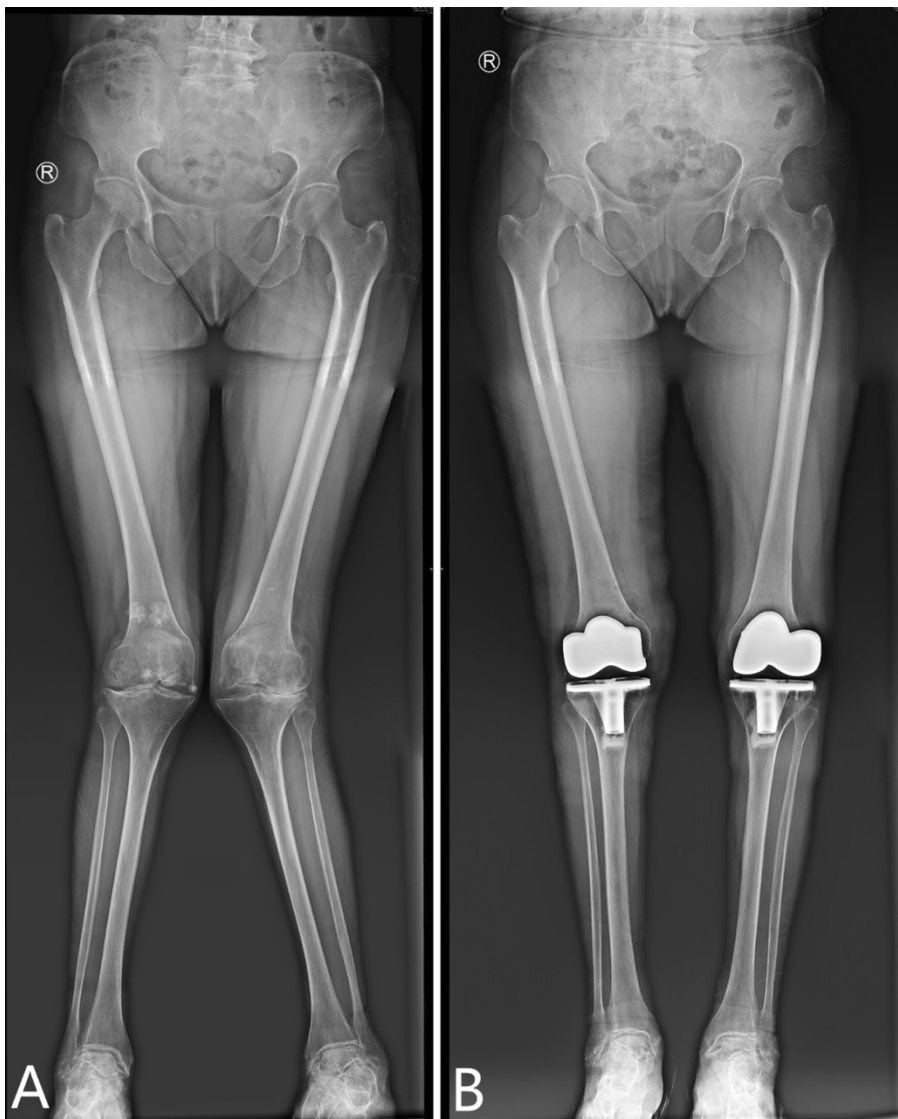
This is used to treat bow-legs. It can be performed by adding a wedge of cadaver bone to the inside part of your shin bone near your knee. To do this, we have to cut your shin bone, wedge the cadaver bone in this new cut, and then hold everything in place with a plate and screws.



<https://www.orthopaedic-surgery-paris.com/the-surgeries/knee-surgery/tibial-valgus-osteotomy/#results>

Total knee arthroplasty

If the arthritis in your knee is severe and contributing to your symptoms, you may be referred to a **joint replacement surgeon**. Knee replacements can structurally improve alignment. However, as with all metal and plastic components, they have a limited lifespan.



Li T, Liu Y, Li C, Zhang H. SMOC approach for total knee arthroplasty in valgus knees. *Journal of Orthopaedic Surgery and Research*. 2022 Feb 2;17(120).