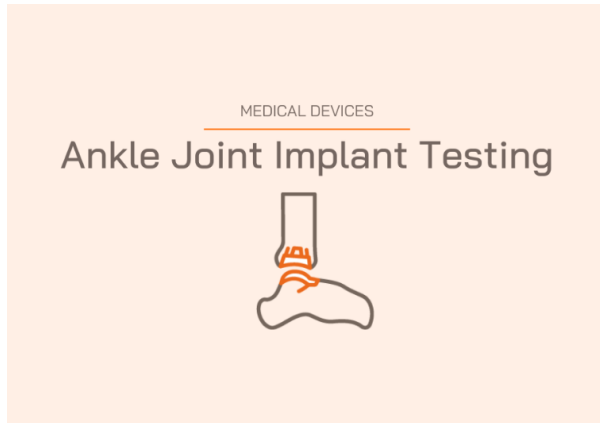


# Ankle Joint Implant Testing



## What Is Ankle Joint Implant Testing?

**Ankle joint implant testing** ensures that ankle joint implants are capable of enduring the **regular wear and loads** that ankle joints naturally undergo. Ankle joint implants need to be evaluated for their life cycle, how they respond to different loads, and how they fatigue over time.

Ankle joint implant testing at [Applus+ Laboratories](#) is part of our [medical device testing services](#) and ensures your **ankle joint implant is compliant with the relevant international standards**. We provide full lifecycle simulation testing as well as offer clients' advice on improvements to help with compliance.

## What Ankle Joint Implant Testing Services Do We Offer?

At Applus+ Laboratories, **ankle joint implant testing** involves static and dynamic load testing as well as wear testing **against the standard ISO 22622**. We simulate how an ankle joint implant will cope under regular activities such as **walking, running, jumping, and landing** to ensure its **longevity and safety for patients**.

## Fatigue and Wear Testing for Ankle Joint Implants Against ISO 22622

In order to show that ankle joint implants **fully comply with ISO 22622**, we perform ankle joint implant testing with varying **static and dynamic loads, wear testing, torque testing**, as well as **fatigue testing**. Here are the details for ankle joint implant testing:

- **Ankle Joint Implant Set Up:**  
Ankle joint implants are positioned multiple ways in order to simulate the angles that they would be at in the human foot. Our set up allows us to account for the

complex multi-planar movements that the ankle joint naturally undergoes in real life.

- **Static and Dynamic Loading Scenarios:**

The ankle joint implant is subjected to different loading scenarios that mimic the natural use of the ankle joint. These include rotational tests to see how the ankle joint implant handles shear and torsional stress.

- **Torque Testing:**

The ankle joint implant also needs to be tested to see whether it is capable of withstanding rotational loads to mimic turning or changing direction when walking. Torque testing involves evaluating how an ankle joint implant can endure frequent twists and turns.

- **Fatigue Testing:**

The ankle joint implant is subjected to various predetermined load cycles to mimic extended usage. These cycles persist until the implant either breaks or surpasses a set number of cycles without failing, thereby verifying the implant's durability over its expected life cycle.

## Our Testing Facilities and Equipment for Ankle Joint Implant Testing

We use **state-of-the-art equipment** to perform ankle joint implant testing to **simulate real use** of the talocrural region. Our equipment provides accurate results that can aid your compliance with the relevant standards.

At Applus+ Laboratories, we are equipped with a knee simulator featuring **one bench and 3+1 stations**, enabling us to **conduct wear tests**. Our facility also includes **servohydraulic uniaxial test frames** for static, dynamic, and fatigue tests. This setup allows us to load ankle joint implants for up to **ten million cycles** to assess fatigue, as well as evaluate the implants' responses to different fitting types and varying physiological conditions.

## What Are the Benefits of Ankle Joint Implant Testing?

Ankle joint implants need to be **durable and safe for patients** before they can be commercialised. Performing the **necessary tests are therefore essential** for getting your product to market as fast as possible.

## Improving Safety and Efficacy for Ankle Joint Implants

With manufacturers experimenting with **more innovative [materials for implants](#)**, testing these materials to ensure that they will not have **adverse effects on the human body**, and they are durable enough to last a patient's lifetime. Strict testing and regulations **help boost efficiency and innovation**.

## Compliance with International Standards for Ankle Joint Implants



**ISO 22622 is an internationally recognised standard** and being tested against it can **boost your credibility** in the global marketplace. Going through the relevant testing to ensure that your ankle joint implant is compliant can help you **widen your [market access](#)**.

## Why Choose Applus+ Laboratories for Ankle Joint Implant Testing?

Choosing Applus+ Laboratories for your ankle joint implant testing means partnering with **a leader in medical device testing solutions**.

We provide **high-quality, ASTM-compliant testing services** that ensure the reliability of your ankle joint implant products. Our comprehensive range of testing capabilities, coupled with our **commitment to client service**, makes us the ideal partner for all your ankle joint implant testing needs.

Applus+ Laboratories **strives to be a one-stop shop for medical device testing**, offering a full range of services that can speed up your time to market. We offer:

- Development testing and advice on improvements
- Full lifecycle testing
- Product and process qualification with batch release tests
- Contract Manufacturing Organisation services

With a **presence in multiple countries**, we can deliver our testing services to customers around the world, ensuring you have access to the best in ankle implant testing no matter where you are.

Let Applus+ Laboratories be your trusted partner for all your ankle joint testing needs. We can support your projects with our high-quality services and expert guidance.