

Shoulder Joint Implant Testing



What Is Shoulder Joint Implant Testing?

Testing **shoulder joint implants** is essential to ensure they can endure the demands and stresses of everyday use. These implants undergo rigorous evaluations through various testing methods to confirm their durability and performance. This comprehensive testing ensures that shoulder joint implants comply with international standards, a necessary step for their approval and commercialisation.

At [Applus+ Laboratories](#), our goal is to enhance the **development of our clients' products** through a **comprehensive testing service** for [medical devices](#). This service considers the usual wear and tear these products experience and their adaptation to the human body.

What Shoulder Joint Implant Testing Services Do We Offer?

As with other medical devices, shoulder joint implant testing involves different processes, all of which help us evaluate the overall **safety and durability** of the implant for patients. In the case of shoulder implant testing, we use two methods: **static and fatigue testing** and [corrosion assessment](#), and both of them are performed against **ASTM standards**.

Static and Fatigue Testing for Shoulder Joint Implants

At Applus+ Laboratories we use different procedures and standards to test if **shoulder joint implants** can withstand the **strains and pressures** of everyday life. We test these implants against the following standards:

- **ASTM F2028**
Measurement how much a **prosthetic anatomic glenoid component** rocks or pivots following cyclic displacement.
- **ASTM F1378**
Standard specification for shoulder prostheses covering **static and fatigue testing** to evaluate its mechanical strength and stability under defined conditions.
- **ASTM F1829**
As with ASTM F1378, this static method tests anatomic glenoid locking mechanism **under single-load conditions** in shear to assess the disassembly forces of modular shoulder arthroplasty

Corrosion Testing for Shoulder Implants

There is no corrosion **testing standard for shoulder joint implants** as of yet, but we do perform shoulder joint corrosion testing **based on the ASTM F1875 for hip joint implants** as well as several corresponding fatigue tests. ASTM involves seeing how an implant behaves against temperature, pH levels, and ions presence.

Our Testing Facilities and Equipment for Shoulder Joint Implant Testing

Testing different shoulder joint implants is vital for our clients to ensure that their products meet the necessary requirements. That's why at Applus+ Laboratories we offer a comprehensive service where, thanks to our **state-of-the-art equipment**, we can test their products simulating the **effects of daily use**.

Our team includes a **multi-station simulator** equipped with **5 controllable axes**, allowing simultaneous testing of up to **8 different implants**. This enables us to evaluate how the implants respond to various fitting types, fixation methods, designs, and bearing combinations.

Our facilities allow for shoulder joint implants to be **loaded for up to ten million cycles** in the anatomically correct position under physiologic conditions in our laboratories, **accurately simulating a lifetime's use** in a few weeks.

What Are the Benefits of Shoulder Joint Implant Testing?

Conducting the necessary tests on shoulder joint implants allows us to verify if these implants are **durable and safe** for patients, ensuring they can be marketed as quickly and smoothly as possible.

Optimising Safety and Efficiency in Shoulder Joint Implant Testing

Testing shoulder joint implants with advanced [materials](#) is a guaranteed method to ensure the safety and **regulatory compliance** of the materials used. These rigorous tests evaluate the materials' **safety and effectiveness**, promoting innovation and delivering safer products to patients.

Alignment with Global Standards

Adhering to international standards facilitates **broader market entry for shoulder joint implants**, accelerating the path to market expansion overseas. By aligning with universally recognised standards, compliance enhances your credibility in the [global market](#).

Why Choose Applus+ Laboratories for Shoulder Joint Implant Testing?

Choosing Applus+ Laboratories for your **shoulder joint implant testing** aligns you with a **top-tier expert in medical device testing**.

We deliver **ASTM-compliant testing services of the highest quality**, ensuring precise and reliable outcomes for your shoulder implant products. Our broad array of testing options, along with **our commitment to outstanding client support**, establishes us as the perfect choice for your shoulder implant testing requirements.

Applus+ Laboratories is dedicated to being your **all-inclusive provider for medical device testing**, featuring a comprehensive range of services that help accelerate your product's journey to the market. We provide:

- Advisory services and developmental testing
- Testing across the full product lifecycle
- Qualification of products and processes with batch release testing
- Services of a Contract Manufacturing Organisation (CMO)

With a global presence, we are equipped to offer our testing solutions to clients worldwide, ensuring access to exceptional shoulder implant testing wherever you operate.

Let Applus+ Laboratories be your reliable partner for all your shoulder implant testing needs, supporting your projects with our expertise and top-quality services.