



Standard Practice for Care and Handling of Orthopedic Implants and Instruments¹

This standard is issued under the fixed designation F 565; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice covers recommended procedures for the handling of orthopedic implants and instruments.

1.2 Hospital receiving personnel, central supply personnel, operating room personnel, surgeons, and occasionally other individuals will handle orthopedic implants and instruments. All personnel should be informed of recommended care and handling procedures to prevent damage of orthopedic implants and instruments.

1.3 This practice does not cover producer level handling and packaging procedures.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Terminology

2.1 Definitions of Terms Specific to This Standard:

2.1.1 *orthopedic implant*—a device introduced by surgically penetrating the skin or mucosa of the body with the intention that it remain within or attached to the skeleton within the body following the surgery. This device is referred to in this practice as an “implant.”

2.1.2 *orthopedic instrument*—any cooperative device used during surgical procedures involving the implantation of orthopedic implants. This device is referred to in this practice as an “instrument.”

3. Receiving Implants and Instruments

3.1 Receipt:

3.1.1 Many implants are wrapped in special sterilizable or pre-sterilized packages, envelopes, or other containers. These wrappings should not be removed by the receiving personnel.

3.1.2 Carefully unwrap and handle non-sterilized implants and instruments upon receipt to avoid scratching, marking, or abrasion by other implants, instruments, unpacking tools, or by dropping or otherwise endangering the surface finish or configuration.

3.2 *Transport*— Perform transport in a manner to preclude any damage or alteration to the received condition of the implant or instrument.

3.3 Storage:

3.3.1 Store implants or instruments prior to use in such a manner as to maintain the device’s surface finish or configuration, or both.

3.3.2 Many implants are identified by a serial or lot number, or both, on the package label, package insert, or surface of the device. Record these control numbers and retain for transfer to patient records, to facilitate inventory, stock rotation, medical device reporting, and possible traceability to the manufacturer.

3.3.3 *Stock Rotation*— The principle of first in, first out, is recommended.

3.3.4 Store implants in the operating room in such a manner as to isolate and protect the implant’s surface, sterility, and configuration. Keep implants made of different metals separated.

3.3.5 Store the implants and instruments in the operating room in such a manner as to isolate the instruments from the implants.

4. Handling

4.1 *Mixing Metals*— Maintain orthopedic implants and instruments of different metals separately to avoid the possibility of mixing during surgery.

4.2 Cleaning and Sterilization:

4.2.1 Prior to initial sterilization and promptly following each surgical procedure, thoroughly and carefully clean all instruments and implants. Ultrasonic cleaners, mechanized washers, or hand scrubbing are suitable methods, if carefully done. The method employed should be utilized to prevent impact, scratching, bending, or surface contact with any materials that might affect the implant or instrument surface or configuration.

4.2.2 Closely follow the manufacturer’s recommendations on cleaning. In hand scrubbing, use soft brushes and avoid harsh chemicals or harsh cleaning solutions.

4.2.3 After cleaning, rinse the orthopedic implants and instruments completely free of all residuals, soap, detergent, or cleaning solutions. Following rinsing, dry them thoroughly. Devote special attention to hinges, pivots, box locks, and other recesses since these are points that entrap both chemicals and rinse water.

¹ This practice is under the jurisdiction of ASTM Committee F04 on Medical and Surgical Materials and Devices, and is the direct responsibility of Subcommittee F04.21 on Osteosynthesis.

Current edition approved Nov. 10, 2000. Published January 2001. Originally published as F 565 – 78. Last previous edition F 565 – 85 (1996).