Medical device

There is a wide range of medical devices used for diagnosis, treatment, and monitoring. These include pacemakers, implantable cardioverter-defibrillators (ICDs), insulin pumps, prosthetics, hearing aids, and various monitoring devices such as blood pressure monitors, glucose meters, and wearable fitness trackers.

A device is usually a constructed tool

Examples: Anti-siphon device, Interspinous device, Pipeline embolization device

Financial and nonfinancial relationships between pharmaceutical or medical device industry, physicians, investigators, and academic institutions are common and generally considered essential for development of new technology and advancement in medicine [1) 2)].

The clinical introduction of novel medical devices often occurs without evidence of good methodological quality and with relatively little oversight and regulation. As a consequence, the safety, efficacy, and long-term effects of devices are frequently insufficiently known upon device approval. Recent controversies surrounding the Poly Implant Prothèse (PIP) breast implants, metal-on-metal hip implants, and interspinous implants underscore the need to reconsider how innovation in medical devices can adhere to sound ethical standards without inhibiting surgical research and development.

The introduction of spinal implants is taken as an example to firstly discuss the scientific and ethical challenges of developing, testing, and introducing novel medical devices and to secondly identify avenues for improving the existing regulatory frameworks for such innovation. Two measures for improvement are most feasible in the short term: demanding prospective studies before device introduction and developing registries to monitor and evaluate new medical devices.Level of Evidence: 5 [3)].

Finder

https://accessgudid.nlm.nih.gov/devices

Products

See Products.

Neuroprosthetic device

Neuroprostheses

Embolization device

Embolization device.

Spinal instrumentation

See Spinal instrumentation.

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2)
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