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3D PRINTING IN MEDICAL SPHERE

3D printing technology appeared thanks to the discovery of the American inventor Charles Hull in 1983 and gradually spread to all areas of production. The technology has been used in world health since the 2000s. The use of 3D printing for medical purposes has evolved significantly.

Medicine does not stand still, constantly improving and developing. Already today, extremely promising techniques are being developed in this area that can completely transform the world.

Basically, these are achievements in the field of bioprinting - a potentially successful technology that allows you to create living tissues, bones and organs identical to human ones. Printed organs are better than prostheses and transplanted parts of the body. Their capabilities are identical to their relatives and they are not rejected by the immune system if they are created from the patient's DNA. Bioprinting will reduce the time to get the right organ and save the lives of patients who need an immediate transplant.

At the moment, more real opportunities are available, which are already widely used around the world.3D scan significantly simplifies the manufacturing process of auxiliary structures, and also eliminates the possibility of postoperative complications. Universal organic materials have already been developed that are optimal for implantation in the human body and other medical applications. The results of 3D scanning allow you to visually assess the condition of the patient and more accurately make a diagnosis.

Sterile surgical instruments, such as forceps, hemostats, scalpel handles and clamps, can also be produced using 3D printers. These instruments can be used to operate on tiny areas without causing unnecessary extra damage to the patient.

3D printing in medicine is helping in the development of prosthetic limbs. The ultimate goal is to design comfortable prostheses that both suit specific patient's needs and are also cost-effective.

Tissues and organs can also be 3D printed. Skin tissue repair and reconstruction, limb replacement, kidney transplant, and heart transplant, among others, are being successfully achieved thanks to 3D printing in medicine.

The different dental areas currently integrating 3D printing are fabricating customized and accurate braces, dental restorations, castable crowns, dental bridges, and denture frameworks and bases.

3D printing in medicine is accelerating the health care industry at an impressive rate. The result is more comfort for the patient, better understanding for the doctor, and an easier time for the pocketbook.