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METALS AND THEIR ALLOYS IN PROSTHETIC DENTISTRY

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Introduction

Metals and their alloys play a fundamental role in prosthetic dentistry. Despite the development of metal-free technologies, metal structures remain in demand due to their high strength, reliability and durability. The effective use of metallic materials is closely related to the technological processes of their manufacture and processing.

Metals and Alloys in Prosthetic Dentistry

In dental practice, both pure metals and their alloys are used. Noble and base alloys are most widely used. Noble alloys are characterized by high corrosion resistance and biocompatibility. Base alloys have high mechanical strength and economic availability.

Metal Material Requirements

Metallic materials must have biocompatibility, corrosion resistance, high strength, rigidity and manufacturability. Important characteristics are casting properties and the ability to various types of processing.

Metal Alloy Casting

Casting is one of the main methods of making orthopedic structures. The process involves creating a model, forming a casting mold, and injecting molten metal. Casting allows you to obtain structures of complex shapes with high accuracy.

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Stamping of metal structures

Stamping is a method of plastic deformation of metal. In dentistry, this method is used in the manufacture of individual prosthetic elements. The method is economical, but has limitations in accuracy.

Metal Alloy Machining Processes

After the structure is manufactured, various types of processing are carried out, including grinding, polishing and heat treatment. These processes ensure the accuracy and quality of the surface.

Conclusion

Metals and their alloys remain an important part of prosthetic dentistry. Modern technologies ensure high accuracy and reliability of orthopedic structures.

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