

## عنوان مقاله:

Bioactive Glass in Medicine: A Mini-Review of Composition, Properties, Bioactivity Mechanisms, and Clinical Applications

## محل انتشار:

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## خلاصه مقاله:

From ancient civilizations using gold and silver for healing to the metal surgical instruments of the Renaissance, the introduction of anesthetic and antiseptic treatments in the 19th century, and the 20th century medical device revolution, the history of medical materials is an inventive one. Today, modern healthcare is being shaped by materials like bioglass. Dr. Larry Hench invented bioglass in 1969, and it has since been used extensively in biological and medical application. This brief study covers composition, bioactivity mechanisms, and healthcare applications of bioglass. Bioglass has a wide range of applications, including bone regeneration, tissue engineering, implantable devices, and more thanks to its remarkable bioactivity, biocompatibility, and tissue bonding properties. The sol-gel synthesis method, offering lower processing temperatures and uniform compositions, has gained prominence. Although there are still issues with optimizing bioglass for various biomedical uses, current research and innovation show promise for the material's future advancement in healthcare.

## کلمات کلیدی:

Bioglass Materials, Bioactivity, Tissue Engineering, bioactive glass

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