



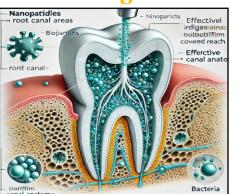


# "ENHANCING ENDODONTIC OUTCOMES: HARNESSING NANOPARTICLES FOR SUPERIOR IRRIGATION."

## WHY NANO-PARTICLES IN IRRIGATION?

Penetration in **Bio-flim** complex area **Tissue** 

**Anti**bacterial **Enhanced action Regenration Irrigation effect** 





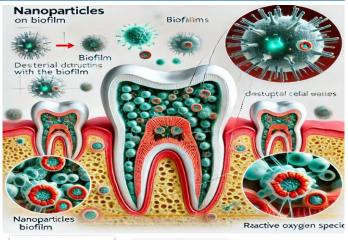
### TYPES OF NANO-PARTICLES:

Silver nanoparticles Gold nanoparticles

Zinc oxide nanoparticles

Chitosan nanoparticles

## BENEFITS

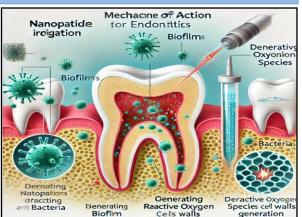


# **MECHANISM OF ACTION:**

1.Physical **Disruption** 

2.Chemical Action

3.Enhanced **Penetration** 



Higher efficacy

**Better tissue** compatibility **Sustained** release

#### **FUTURE SCOPE:**

1.Combination **Therapies** 

2.Customized **Nanoparticles** 

3.Long-Term Clinical Studies

### CHALLENGES AND CONSIDERATION:

**1.Saftey Concerns** 

2.Optimal concentration

3.Standardization

### **CONCLUSION:**

1.Superior Advancement

2.Anti-Microbial Property

3. Revolutionize root canal disinfection.