39th IACDE National Conference

CODE: PGE 302

"ENHANCING REMINERALIZATION:THE ROLE OF ELECTRIC FIELDS"

INTRODUCTION: Electric field in remineralization is one of the many innovative strategies that have been developed to remineralize a tooth in a short period of time without compromising the mineral content that is being deposited.

REMINERALIZATION

REMINERALISING AGENTS

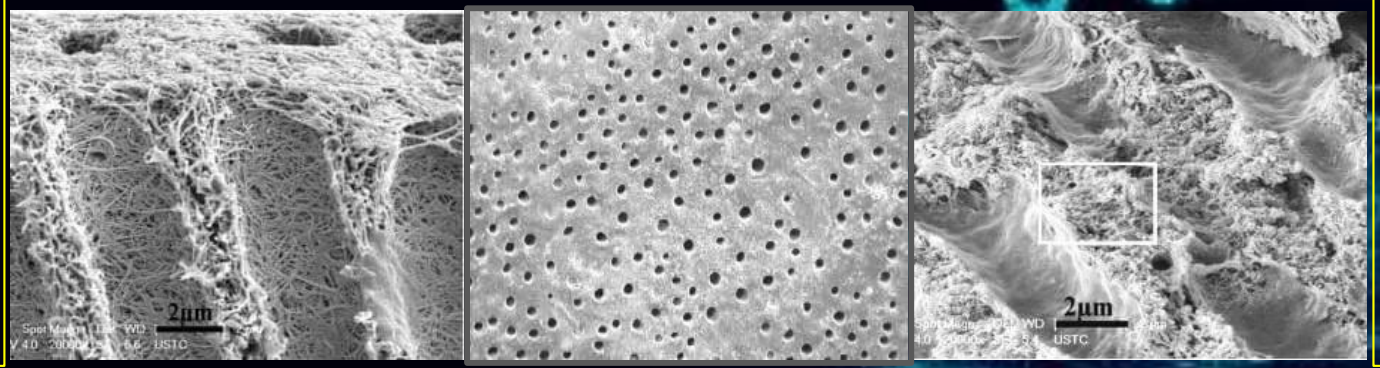
TAKES AROUND 8-12 WEEKS TO REMINERALISE A INITIAL ENAMEL LESION

Demineralization ⇄ **Remineralization**

- sugars
- pH<5.5

- Diet
- pH>5.5

DENTINAL TUBULES SEEN UNDER SCANNING ELECTRON MICROSCOPY



REMINERALIZATION

ELECTRIC FIELD {20mA for 5 min}

TIME PERIOD IS REDUCED.
MINERAL CONTENT IS NOT COMPROMISED.
REMINERALISES BOTH INTER AND INTRA TUBULES.
REMINERALIZES A COMPLETELY DEMINERALISED DENTINAL TUBULE.

CONCLUSION: Electric field-induced remineralization reduces the time required for remineralization,increases the hardness of newly formed mineral layer and maintains mineral quality ,unique feature is that it remineralizes in absence of non-collagenous proteins.

REFERENCES