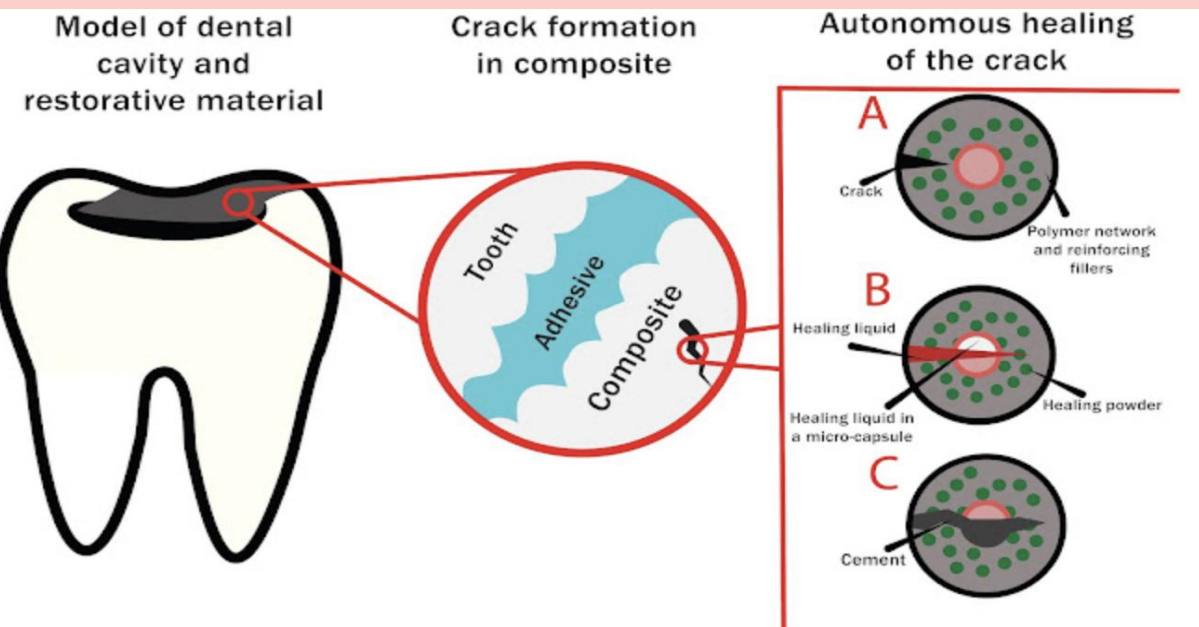


SELF HEALING DENTAL COMPOSITE

A self-healing dental composite (SHDC) is not only made from contemporary dental filling components, but it also contains healing agents that are encapsulated in nano- and micro-sized capsules. When a SHDC is “injured,” a growing crack ruptures capsules in its path from which “healing cargo” is released to “coagulate” the damaged site. Self-healing materials are generally designed to halt, impede, and repair fractures from increasing, thus leading to greater durability.



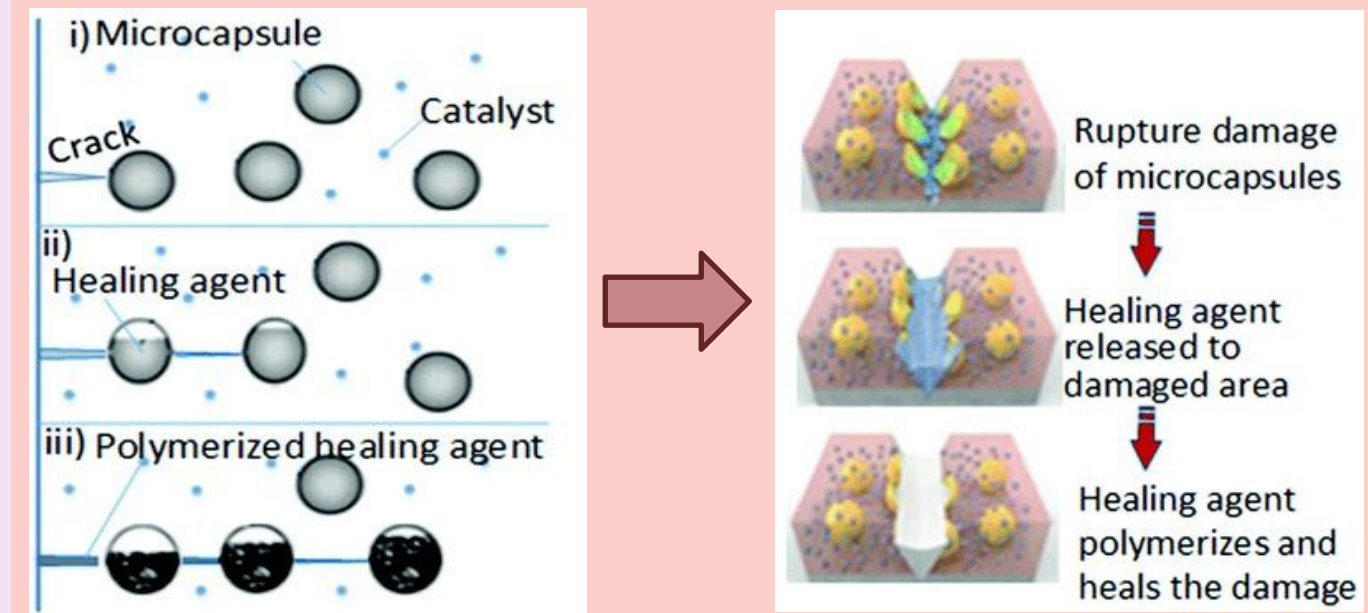
ADVANTAGES

- Materials used are clinically tested and biocompatible which improves service life for dental restoratives.
- Maintains initial fracture toughness of the restoratives.
- Elastic modulus is similar to commercial dental resin composites.



DISADVANTAGES

- Broken microcapsules can act as defects and damage the material's strength over time
- The manufacturing process for self-healing composites with microvascular grids can be tedious.



SELF- HEALING METHODS

