



During the Setting Phase, the bone cement hardens and reaches its final properties

What happens during the Setting Phase?

During the Setting Phase a thermal reaction takes place: the bone cement hardens and heat is emitted. During this phase the bone cement cannot be shaped any longer. The prosthesis must be pressed against the bone cement mantle until the bone cement has completely set. This phase is also referred to as Curing Phase.

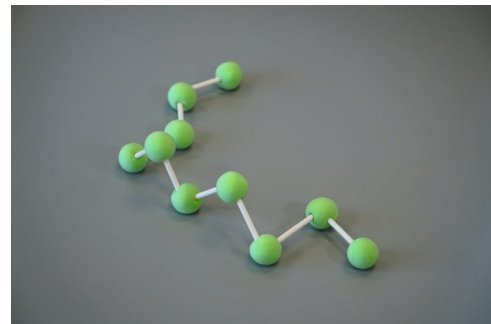


End of the Setting Phase

After the Setting Phase, the bone cement is hardened and cool again.

The chemistry behind the Setting Phase

During the Setting Phase, the polymer chains in the bone cement matrix reach their limit and the bone cement starts to solidify. In an exothermic reaction, the temperature rises to a peak and finally drops again while the cement is hardening.

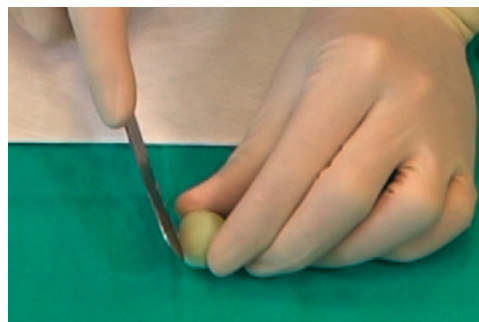
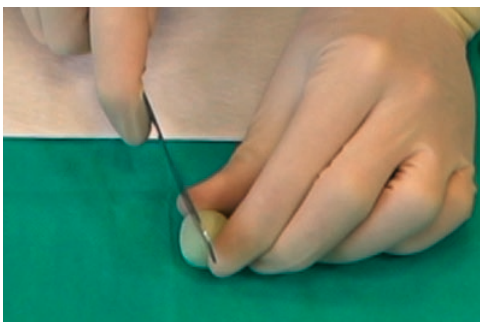


Chain formation is completed (molecular model)

When is the Setting Phase over? Incision test and sound test

By preparing a small sample from excess bone cement, one can monitor the end of the Setting Phase:

- If the sample cannot be incised with scissors or a spatula, the bone cement is hardened
- or
- If the sample makes a metallic sound when hit against a surface, the bone cement is hardened.



Incision test: hardened bone cement cannot be incised

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