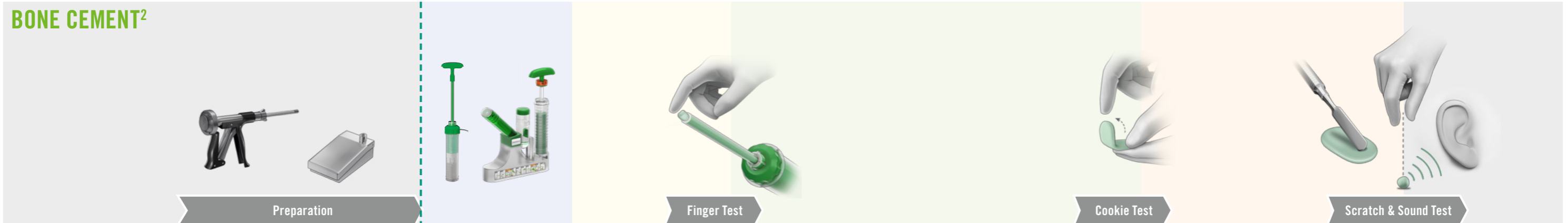
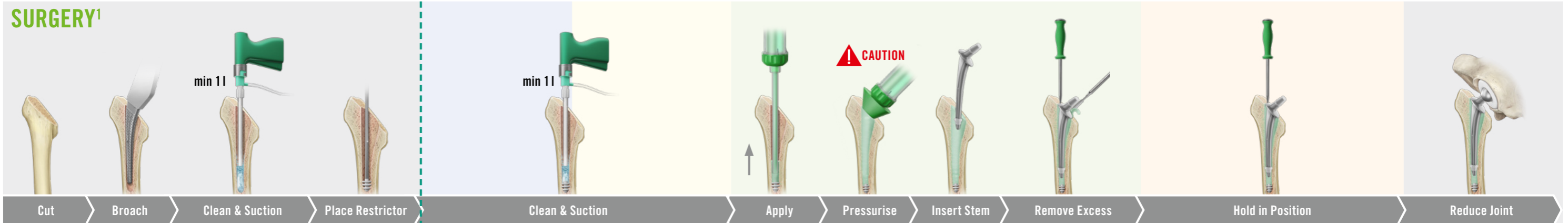


HOW TO CEMENT A HIP STEM

CEMENTING TECHNIQUE & HANDLING OF BONE CEMENT

HANDLING PHASES



TEAM TIMEOUT “BONE CEMENT”^{3,4}



CAUTION – PATIENTS AT HIGH RISK^{3, 5, 6}

Avoid vigorous pressurisation to mitigate risk for Implantation Syndrome

- Advanced age
- Male sex
- ASA III or IV
- Diuretic medication
- Significant cardiopulmonary disease
- Frail patients undergoing hemiarthroplasty
- Osteoporosis
- Bone metastases
- Chronic obstructive pulmonary disease (COPD)

PALACADEMY® eLearning

Looking for more insights on how to cement a hip stem? Access our eLearning including surgical videos!

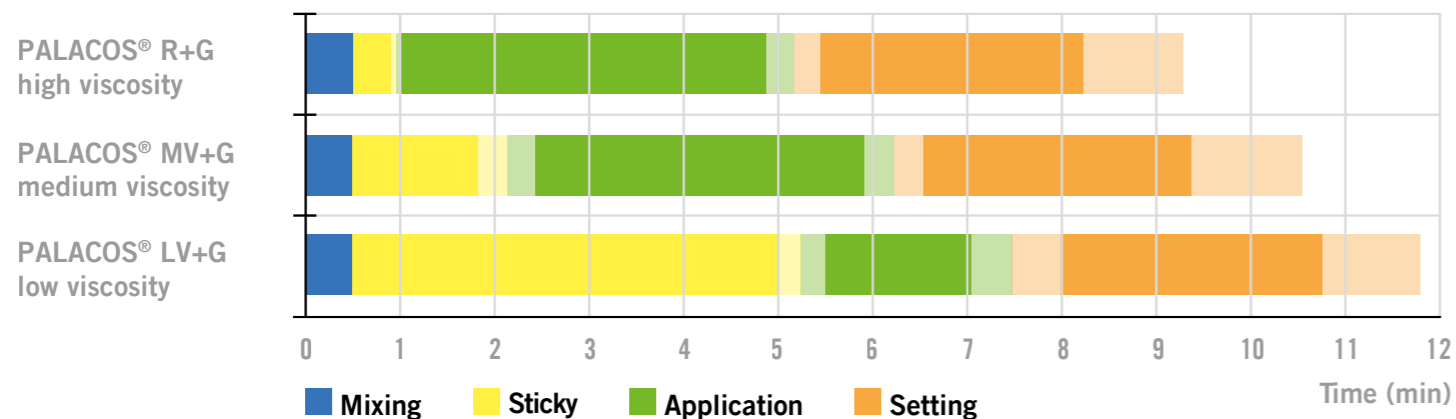


BONE CEMENT

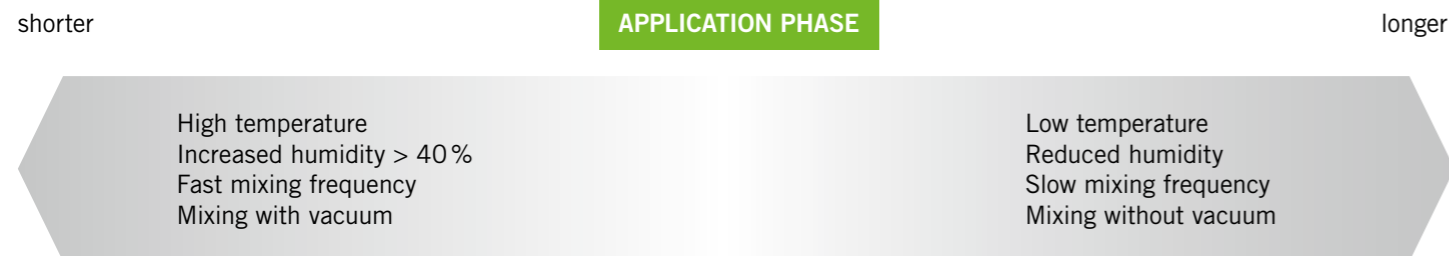
DIFFERENT VISCOSITIES – SAME HANDLING PHASES²

Handling phases (bone cement not pre-chilled)

Room temperature (19°C)



FACTORS INFLUENCE THE DURATION OF THE APPLICATION PHASE²



TEAM TIMEOUT “BONE CEMENT”³

Align the team, focus on the cementation process and the patient’s status

The surgeon asks. The team responds.

- Is the patient haemodynamically stable?
- Is the cement mixing system ready?
- Does the cement gun work?
- Is the pulse-lavage system with suction ready?
- Is the timer ready?
- Has the implant been unpacked and mounted on the introducer, including the centraliser?
- Can the implant be released from the introducer?
- Is the cement restrictor inserted into the femur?
- Is a long spatula ready for any removal of excess bone cement?
- Is the team ready? (surgeon, anaesthetist, theatre team)

TESTS

PHASE ADEQUATE HANDLING OF BONE CEMENT²

The following tests can be performed to determine the handling phases of the bone cement. The bone cement’s reaction to these tests can indicate the next steps in the cementation process.

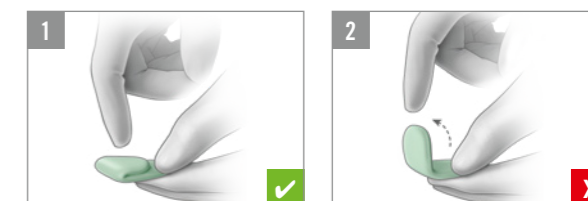
Finger Test

- Is the bone cement ready for application?
- Bone cement sticks to the glove → not yet ready
 - Bone cement is no longer sticky → ready



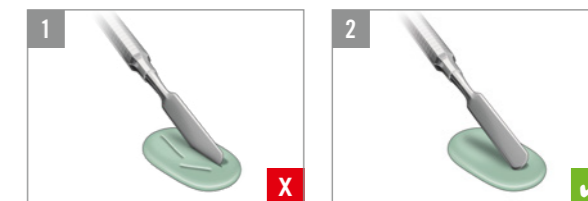
Cookie Test

- Is it still possible to insert/reposition the prosthesis?
- Cookie sticks → bone cement is still workable
 - Cookie unfolds → prosthesis must be held in position



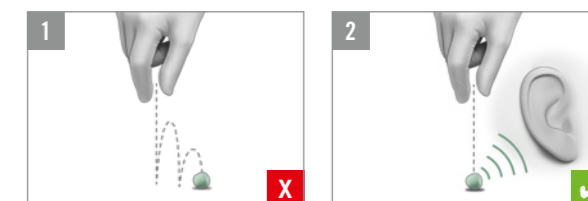
Scratch Test

- Can I start to reduce the joint?
- Scratching possible → hold prosthesis in position
 - Scratching not possible → bone cement is completely hardened, start with joint reduction



Sound Test

- Can I start to reduce the joint?
- Bone cement bounces & soft sound → hold prosthesis in position
 - Clear metallic sound → bone cement is completely hardened, start with joint reduction



Looking for more insights on how to perform these tests?

Access our PALACADEMY® video tutorials

