Characteristics

- Resorbs faster than bone growth (3-6 weeks in soft tissue, 6-12 weeks in bone)\(^1\)
  - brittle and quickly loses strength\(^1\)
  - incites inflammation\(^2\)
  - may weaken structural support\(^1\)
  - post-operative wound drainage\(^3\)
- Unable to provide long-term mechanical support or act as a scaffold for tissue regeneration because it dissolves relatively quickly\(^1\)
- Temperature sensitive\(^1\)

Common Applications

- Voids
- Also used with infection in bone and soft tissue\(^4\)

Characteristics

- Resorbs at the rate of bone growth due to HA which slows the resorption of the CaS (6-12 months)\(^5,7\)
- Rapid and complete bone remodeling at 6-12 months\(^5,7\)
- Bone growth occurs from ‘outside-in’ and ‘inside-out’
- Will set in wet or dry field
- Highly visible under fluoroscopy
- Not temperature sensitive
- Not exothermic

Common Applications

- Large and small voids
- Benign bone cysts and tumors
- Fractures and non-unions
- Voids where bone remodeling is important for future intervention (revision procedures)

Characteristics

- Resorbs slower than bone growth (up to 24 months to several years)\(^8\)
- Highly dense material with limited porosity\(^8\)
- When mechanical strength is higher than surrounding bone it may result in stress shielding, delayed fractures and subsequent bone resorption at the bone-implant interface\(^8\)
- Bone growth through ‘creeping substitution’
- Temperature sensitivity impacts setting time\(^8\)

Common Applications

- Large and small voids
- Fractures and non-unions

---

2. Campana, 2014