**Modalities** - procedures and treatment interventions that use light, sound, water, temperature, and electricity to modify factors that limit client/patient ability to perform occupations

Are considered a preparatory method for intervention and should be used alongside purposeful occupational interventions

**Types of Modalities**

**Cryotherapy** - cools tissue to 1-2 cm depth/superficial agent

* **Examples** - ice massage, ice, towels, cold packs, cold water immersion baths, cool whirlpools, cold compression units, and vapocoolant sprays
* **Effects on Client/Patient**- pain relief, decrease edema, decrease muscle spasms, decrease inflammation, decrease spasticity
* **Contraindications/Precautions** - avoid use with clients/patients with hypersensitivity to cold, impaired circulation, open wounds, sensory deficits, or infections.

**Thermotherapy** - heats tissue to 1-2 cm depth/superficial agent, external heat source applied directly to injury

* **Examples** - warm whirlpools, fluidotherapy, hot packs, contrast baths, paraffin baths
* **Effects on Client/Patient** - increase blood flow, increase range of motion, decrease pain, decrease muscle spasms, decrease joint stiffness
* **Contraindications/Precautions** - avoid use with clients/patients with acute inflammation, edema, sensory impairment, cancer, blood clots, infection, cardiac problems, impaired cognition

**Ultrasound** - heats tissue to 1-5 cm depth/deeper agent

* **Examples** - thermal, nonthermal, phonophoresis
* **Effects on Client/Patient**
  + **Thermal** - increase tissue extensibility and blood flow and decrease pain, joint stiffness, muscle spasm, and chronic inflammation
  + **Nonthermal** - increase protein synthesis and bone healing, decrease inflammation
  + **Phonophoresis** - use of ultrasound to promote absorption of topically applied medication to accelerate tissue repair and decrease inflammation
* **Contraindications/Precautions** - avoid use with pregnancy, over eyes, pacemaker, bleeding, infections, cancer, over blood clots, and growth plates of bones in children. Be cautious when using with inflammation, fractures, breast implants, and clients with cognitive, language, or sensory impairments

**Electrical Stimulation**

* **Examples** - neuromuscular electrical stimulation (NMES), transcutaneous electrical nerve stimulation (TENS), iontophoresis
* **Effects on Client/Patient**
  + **NMES** - promotes wound healing, maintains muscle mass, increases ROM, decreases edema, facilitates voluntary motor control, decreases spasm and spasticity
  + **TENS** - primarily controls pain
  + **Iontophoresis** - decreases inflammation and controls pain
* **Contraindications/Precautions** - do not use over pacemakers, carotid sinus, pregnant uterus, eyes, and clients/patients with epilepsy, cancer, infection, decreased sensation, cardiac disease and stroke. With iontophoresis use, be aware of possible drug allergies.