



Clinic Parameters of Stim (for reference/practical use as needed)

	NMES	Sensory TENS	Motor TENS		Noxious	FES
Pulse width	400 μ s	Generally >150 μ s (enough for a strong sensory perception)	>200 μ s (low)	>200 μ s (high)	400 μ s At or above pain threshold but tolerable	400 μ s
Frequency	75 pps	<10 pps (low) >50 pps (high)	<10 (2-4) pps (low)	>50pps (high)	<10 (1-5) pps (low) >50 pps (high)	30 pps then increase as needed to counter fatigue
Intensity	Maximally Tolerated	$\sim \geq 3x$ sensory threshold	Max Tolerated	Max Tolerated	Max Tolerated	Enough to complete task then increase as needed to counter fatigue
On time	12 sec	30 sec	1min Or 45 sec	3sec	12 sec	Activity dependent
Off time	50 sec	0 sec (makes it continuous)	1min Or 15 sec	3sec	8 sec	Activity dependent
Ramp	2 sec	0 sec	2 sec	2-3sec	2 sec	Activity dependent
Treatment time	15 min	≥ 20 min	10-15 min	10-15min	10-20 min	Activity dependent
Additional things to keep in mind	Needs to be an isometric contraction – belt down hips for lumbar spine, belt down shin for quad, etc	May get motor involvement depending on stim pad locations (try to avoid muscles). To be used with activity or home use. Pt. on opioids-- no low frequency.	Should look like a “jumping” muscle for low frequency; helps to decrease pain. Used for hyperirritable palpation e.g trigger point. Pt. on opioids—no low frequency.		Use smaller pads to bracket the pinpoint pain. Pt. on opioids— no low frequency.	Hand switch turns stim ON; foot switch turns stim OFF

Iontophoresis:

- **Dose:** 40 mA*min
- **Amplitude:** Start @ 1.5 mA and build up to 4 mA based on patient tolerance
- Therefore, treatment time is 4 mA * 10 min (sets this automatically) because it’s not really reasonable for patients to spend more than 10 min doing this during treatment. There may be more to this explanation but hopefully that explains it somewhat

**This Clinical Guideline may need to be modified to meet the needs of a specific patient.
The model should not replace clinical judgment.**