

OPTIMAL DOSE PARAMETERS FOR TISSUE HEATING WITH ULTRASOUND

Tissue viscoelasticity is enhanced with heat. Apply therapeutic ultrasound prior to manual therapy techniques or stretching to create optimal tissue temperature. Tissue depth and type dictates dose parameters.

TISSUE TYPE	SUPERFICIAL TISSUE (<2.5 CM)	DEEP TISSUE (2.5–5 CM)
MUSCLE	3 MHz 1 W/cm ² 100% duty 7 min	1 MHz 1.5 W/cm ² 100% duty 14 min
TENDON	3 MHz 0.8–1.0 W/ cm ² 100% duty 4–5 min	1 MHz 1.5 W/cm ² 100% duty 10 min

AREA = 2x sound head size
RATE = 4 cm/second

Place tissue on stretch near end of US treatment, before manual therapy is initiated

*Stretching 'window' after US:
3 min. for muscle
5 min. for tendon/ligament*

Recommendations based on Gallo & Silva, 2018 and may vary by manufacturer

