

Optimizing orthodontic wire protocols with OrthoPulse®

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- OrthoPulse® photobiomodulation increases blood flow and osteoclastic activity leading to faster bone remodeling and tooth movement.
- Photobiomodulation also decreases patient discomfort when using higher unloading force wires and protects from root resorption.
- Wire selection and sequencing can be updated to take photobiomodulation into consideration to optimize and reduce treatment time without changing appointment intervals.
- **KEY: Increase initial wire unloading force -> Start with square or rectangular wire for immediate torque control. Use round only if necessary.**
- Maintain traditional appointment intervals
- Wire unloading forces vary between brands and companies.
- Depending on the severity of the case, alignment is often complete within 6 months. This includes torque control.
- Beginning detailing within 6 months allows 6 months to finish

Tips:

- Start elastics at bonding even if only anterior triangle – night time only
- Place the largest wire possible that fully engages at each appointment (yes, the wire will be slightly more difficult to tie in)
- Wire tie arch under the wire to keep spaces closed
- Progress to square or rectangular wire by 2nd appointment if not used initially.

Questions:

Email drd@smilemoreaz.com

Disclaimer:

The views expressed here are those of Dr. Todd Dickerson and do not reflect the official policy or position of Biolux Research Ltd.

.022 Slot Brackets Mild to Moderate Crowding

Wire Size	Unloading Force	Appointment Interval
18x18 Niti	< 200g	maintain*
19x25 or 20x20 TMA/SS		4-6 weeks

.018 Slot Brackets Mild to Moderate Crowding

Wire Size	Unloading Force	Appointment Interval
.016 or 16x16 Niti	~150g	maintain*
16x22 TMA/SS		4-6 weeks

.022 Slot Brackets Severe Crowding

Wire Size	Unloading Force	Appointment Interval
16x16 Niti	< 200g	maintain*
19x25 or 20x20 TMA/SS		4 weeks

.018 Slot Brackets Severe Crowding

Wire Size	Unloading Force	Appointment Interval
014 Niti	~150g	maintain*
16x16 Niti	< 200g	6-10 weeks
16x22 TMA/SS		4 weeks

* usual/customary interval for non-accelerated treatment