

### *Musculoskeletal (Osteoarthritis / Joint Pain)*

- *Corsini et al. 2025: Optimal therapeutic outcomes achieved when platelet doses exceed 3.5 billion per injection, with cumulative doses of 10–12 billion. Low red blood cell contamination and leukocyte-poor PRP yield superior results.*
- *Bensa et al. 2025 (Meta-analysis): High-platelet PRP produced clinically significant pain relief and functional improvement in knee OA at 3, 6, and 12 months, while low-platelet PRP did not meet MCID.*
- *Chen et al. 2017: PRP reduced synovial fluid proteins linked to inflammation; 2 monthly injections recommended for moderate knee OA.*
- *Xu et al. 2021: PRP combined with hyaluronic acid led to superior pain relief, improved joint function, and reduced inflammation markers compared to PRP or HA alone. Confirmed by imaging and cytokine analysis over 12–24 months.*

### *Skin Rejuvenation / Aesthetics*

- *Phoebe et al. 2024: PRP significantly improved texture, wrinkles, collagen density, and UV protection. Best results seen after 1–3 sessions, with synergy from combining with HA.*
- *Xiao et al. 2021 (Systematic Review): PRP used successfully for scarring, pigmentation, wrinkles, and tissue volume loss. PRP + microneedling effective for acne scars and facial aging.*
- *Ibrahim et al. 2017 / Asif et al. 2016: PRP + microneedling yielded better clinical results and fewer side effects (e.g., erythema, edema) than microneedling alone.*
- *Dayan et al. 2023: Topical PRP (CALM serum) post-CO2 laser reduced downtime, crusting, and pain; resulted in brighter, more youthful skin within 14–30 days.*

### *Tissue Repair and Collagen Stimulation*

- *Min et al. 2017: PRP + fractional CO2 laser increased TGF- $\beta$ 1, C-myc, collagen I, and reduced inflammation. Shown via biopsy and fibroblast culture.*
- *Lee et al. 2011 / Abdel et al. 2017: PRP injections post-laser accelerated healing, reduced erythema and edema, and improved scar appearance more than laser alone.*
- *El-Domyati et al. 2018: PRP outperformed TCA peels in skin rejuvenation when paired with microneedling.*

### *PRP in Sexual Function*

- *Poulios et al. 2021: Double-blind RCT of 60 men with ED found PRP injections led to clinically significant improvements in erectile function in 69% of participants at 6 months, compared to 27% in placebo.*

- *Dankova et al. 2023: Systematic review showed PRP improved FSFI, VHI, and incontinence scores in women with FSD and SUI, but called for higher-quality trials.*
- *Neto et al. 2017: Pilot study of 68 women (aged 32–97) using O-Shot PRP injections reported 94% satisfaction across symptoms of stress incontinence, lubrication, arousal, and libido.*
- *Chang et al. 2024: PRP-derived platelet lysate significantly improved erectile function (IIEF-5, EHS) and penile Doppler indices in 26 men with moderate ED.*
- *Atlihan et al. 2025: PRP injections outperformed topical estrogen in improving FSFI, VSQ, and mucosal hydration in postmenopausal women with vulvovaginal atrophy.*