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When Thumbs Revolt: why Orthopaedics must take Videogame–Related Injuries Seriously

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Abstract

Video games used to be a shrug, a harmless way for kids to pass rainy afternoons. That image is obsolete. Today a billion people worldwide play games on phones, consoles and PCs; a growing subset play professionally in tightly scheduled, high-intensity esports programs. As an orthopaedic surgeon who treats the hands, wrists, necks and spines of active people every week, I've begun to see a pattern: repetitive, high frequency microtrauma and postural overload from gaming are producing recognizable, sometimes disabling musculoskeletal problems. These are not quaint curiosities (the old "nintendinitis" anecdotes); they are a modern public-health issue that deserves systematic attention from clinicians, designers and policy makers (1).

Keywords: thumbs, revolt, orthopaedics, videogame, related, injuries, seriously

Summery

The spectrum of injury is familiar to any clinician who knows overuse syndromes: tendinopathies of the thumb and wrist (so-called "gamer's thumb" / De Quervain-type symptoms), carpal tunnel symptoms, extensor tendon irritation, epicondylalgia, neck and shoulder pain from sustained forward head posture, and low back pain from prolonged, static sitting. In addition, motion-based platforms and virtual-reality setups have yielded acute injuries — fractures and sprains — when players move rapidly in constrained spaces or lose situational awareness. Published case reports reach back decades: the coinage "Nintendinitis" appeared in the New England Journal of Medicine in 1990 as a real, diagnosed repetitive-strain case, and subsequent reports have documented fractures linked to active consoles such as the Wii (2,3). These are not only amusing headlines; they demonstrate that gaming mechanics directly determine injury patterns.

What does the evidence say about scale? Systematic reviews and recent epidemiologic work show consistent signal: greater daily playtime and higher intensity correlate with higher odds of musculoskeletal complaints. A 2022 systematic

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review found that most studies (11/12) demonstrated a negative impact of gaming time on the musculoskeletal system, and several larger contemporary cross-sectional studies of collegiate and professional players report high prevalences of wrist/hand, neck and back pain (4–6). In short: when sessions routinely exceed a few hours, risk climbs. That matters because the esports ecosystem actively pushes those hours.

Why Orthopaedics Should Lead — Not Just Patch Wounds

Traditionally, orthopaedics has reacted: splinting an inflamed tendon, decompressing a nerve, fixing a fracture. But gaming-related injury demands a broader approach:

1. Prevention by ergonomics and conditioning:

Simple changes, controller layout, seat and desk geometry, scheduled microbreaks, hand/wrist strengthening and stretching protocols — reduce load and can lower incidence of chronic tendinopathy and nerve compression. Physical therapists and orthopaedic clinics already offer such programs for occupational RSI; it's quick work to adapt them to gamers and esports teams (4).

2. Surveillance and guideline development: Unlike soccer or swimming, gaming lacks agreed injury-surveillance models and return-to-play standards. We need registries (collegiate, amateur, pro) to define thresholds for safe exposure and to track outcomes after conservative or surgical care.

3. Multidisciplinary care: Many problems are mixed: tendinopathy plus postural neck strain plus poor sleep and psychosocial stress from competitive environments. Orthopaedics must partner with physiatry, PT, occupational health, sleep medicine and sports psychology to produce durable functional recovery.

4. Industry engagement: Game and hardware designers can change button sensitivity, aim assist, haptic force and recommended session prompts. Orthopaedic clinicians should be in the conversation — ergonomic design prevents injuries at scale (7).

Clinical vignettes matter: from a child with De Quervain-type pain after marathon mobile gaming to competitive players reporting recurrent wrist pain that eroded tournament performance, the patterns are consistent with what we know about repeated microtrauma. Many patients improve with education, activity modification and targeted therapy, but delays in recognition convert treatable overload into chronic tendinopathy or persistent nerve entrapment that may require surgery.

A Practical Call to Action

• **Clinics:** start asking patients about device and game use during routine musculoskeletal visits. A few screening questions (hours/day, dominant hand tasks, presence of numbness/tingling, pain with gameplay) identify at-risk individuals.
• **Teams/colleges:** implement ergonomic setups, scheduled microbreaks (even 5 minutes every hour), and baseline conditioning programs for hands/neck/core.
• **Researchers:** establish prospective cohorts and standardized injury definitions so we can move from case series to causal inference. Systematic reviews already show a signal; now we must quantify dose–response and test interventions (4–6).

Gaming is no longer a pastime confined to pajamas and single-player campaigns. It is an organised activity with training schedules, coaches and careers. As the activity professionalizes, orthopaedics — together with rehabilitation and ergonomics experts — must move from amused curiosity to engaged stewardship. If we treat gaming injuries as trivial, we risk trivializing the pain, lost productivity and career-threatening disability they cause. If we respond proactively, we can keep players healthy, competitive and clicking for decade

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