Walls-Kaufman D. Is the human body a musical instrument that needs to be precisely tuned? Asia-Pac Chiropr J. 2026;7.3 https://www.apcj.site/Walls-KaufmanInstrument.pdf

MANUS Summary

Walls-Kaufman proposes the Human Musical Instrument Hypothesis, arguing that the functional integrity of the human frame may depend on precise structural relationships, much as an instrument's performance depends on appropriate tuning. Building on Shiga's attractor-state interpretation of vertebral subluxation and Chiropractic BioPhysics® research, the paper suggests that a spinal configuration can be mechanically stable yet biologically suboptimal. Unlike an instrument, the body can conceal structural disturbance through muscular, ligamentous and neurological compensation, potentially maintaining function while accumulating physiological cost. The author therefore proposes a Human Geometric Envelope: a bounded range of relatively efficient whole-body configurations that accommodates individual anatomical variation rather than prescribing a single ideal skeleton.

The central biomechanical argument is that spinal, pelvic and lower-extremity alignment must be considered as an integrated kinetic system, because the consequences of a regional displacement depend on its relationships with surrounding structures. Structural cost is proposed to reflect not only the magnitude of deviation but also its duration, loading conditions and the individual's adaptive reserve. Persistent subluxation or postural displacement may consequently become an endogenous stressor after the initiating external stress has resolved, perpetuating compensatory activity and tissue remodelling. The author draws on mechanobiology, mechanotransduction and established principles of load-dependent tissue adaptation to explain how altered geometry could influence cellular activity, sensorimotor function and degenerative processes. These mechanisms provide biological plausibility, but do not establish that every structural displacement produces systemic disease.

Clinically, the paper argues for assessing structural dysfunction beyond isolated regional measurements or symptom intensity, with attention to whole-body relationships, cumulative mechanical stress and measurable responses to corrective care. Cited chiropractic rehabilitation studies are presented as supporting the potential correctability of selected spinal deviations and associated improvements in pain, disability and other functional outcomes. However, the proposed whole-body framework remains a testable hypothesis rather than a validated diagnostic instrument or established explanation of longevity. The author calls for diverse longitudinal datasets and prospective studies to determine whether integrated structural assessment improves outcome prediction beyond age, symptoms and conventional regional measures, and whether measurable correction reduces compensatory and biological costs. Its principal contribution is a research framework linking chiropractic concepts of tone, subluxation and structural correction with contemporary biomechanics and adaptive physiology.

The important qualification is that these mechanisms establish biological plausibility, not a proven causal chain from vertebral subluxation to particular cellular changes. The paper proposes that altered spinal geometry could engage these pathways through changes in loading, but does not directly measure their activation in spinal tissues or demonstrate that Chiropractic structural correction reverses them.