William Brent Edwards

List of Publications by Year
in descending order

82 papers	2,080 citations	270111 25 h-index	312153 41 g-index
83 all docs	83 docs citations	83 times ranked	1992 citing authors

#	Article	IF	Citations
1	The repeated bout effect influences lowerâ€extremity biomechanics during a 30â€min downhill run. European Journal of Sport Science, 2023, 23, 510-519.	1.4	1
2	Neuromuscular, biomechanical, and energetic adjustments following repeated bouts of downhill running. Journal of Sport and Health Science, 2022, 11, 319-329.	3.3	8
3	Internal Tibial Forces and Moments During Graded Running. Journal of Biomechanical Engineering, 2022, 144, .	0.6	8
4	A statistical shape model of the tibia-fibula complex: sexual dimorphism and effects of age on reconstruction accuracy from anatomical landmarks. Computer Methods in Biomechanics and Biomedical Engineering, 2022, 25, 875-886.	0.9	8
5	Internal Tibial Forces and Moments During Graded Running. Journal of Biomechanical Engineering, 2022, , .	0.6	1
6	Predicting continuous ground reaction forces from accelerometers during uphill and downhill running: a recurrent neural network solution. PeerJ, 2022, 10, e12752.	0.9	27
7	Tibial-fibular geometry and density variations associated with elevated bone strain and sex disparities in young active adults. Bone, 2022, 161, 116443.	1.4	5
8	Bone loss at the knee after spinal cord injury: Radiographic imaging, fracture risk, and treatment. , 2022, , 315-326.		0
9	Stiffness and Strength Predictions From Finite Element Models of the Knee are Associated with Lower-Limb Fractures After Spinal Cord Injury. Annals of Biomedical Engineering, 2021, 49, 769-779.	1.3	8
10	A biomechanical study of clamping technique on patellar tendon surface strain and material properties using digital image correlation. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 113, 104156.	1.5	3
11	Training Load and Injury: Causal Pathways and Future Directions. Sports Medicine, 2021, 51, 1137-1150.	3.1	56
12	Effects of body size and load carriage on lower-extremity biomechanical responses in healthy women. BMC Musculoskeletal Disorders, 2021, 22, 219.	0.8	8
13	Preventing Bone Stress Injuries in Runners with Optimal Workload. Current Osteoporosis Reports, 2021, 19, 298-307.	1.5	26
14	Magnitude, Frequency, and Accumulation: Workload Among Injured and Uninjured Youth Basketball Players. Frontiers in Sports and Active Living, 2021, 3, 607205.	0.9	4
15	Effects of cyclic loading on the mechanical properties and failure of human patellar tendon. Journal of Biomechanics, 2021, 120, 110345.	0.9	8
16	Mechanical fatigue of whole rabbit-tibiae under combined compression-torsional loading is better explained by strained volume than peak strain magnitude. Journal of Biomechanics, 2021, 122, 110434.	0.9	9
17	Bringing Mechanical Context to Image-Based Measurements of Bone Integrity. Current Osteoporosis Reports, 2021, 19, 542-552.	1.5	2
18	Reply to â€œComment on: Training Load and Injury: Causal Pathways and Future Directionsâ€. Sports Medicine, 2021, 51, 2451-2452.	3.1	3

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19	Durability and delayed treatment effects of zoledronic acid on bone loss after spinal cord injury: a randomized, controlled trial. Journal of Bone and Mineral Research, 2021, 36, 2127-2138.	3.1	8
20	Effect of Knee Angle and Quadriceps Muscle Force on Shear-Wave Elastography Measurements at the Patellar Tendon. Ultrasound in Medicine and Biology, 2021, 47, 2167-2175.	0.7	13
21	Are subject-specific models necessary to predict patellar tendon fatigue life? A finite element modelling study. Computer Methods in Biomechanics and Biomedical Engineering, 2021, , 1-11.	0.9	1
22	Validation of Bone Density and Microarchitecture Measurements of the Load-Bearing Femur in the Human Knee Obtained Using In Vivo HR-pQCT Protocol. Journal of Clinical Densitometry, 2021, 24, 651-657.	0.5	10
23	083â€…Workload weighted for tissue damage results in higher acute:chronic workload ratio for injured vs. uninjured athletes. , 2021, , .		0
24	Subject-Specific Finite Element Models of the Tibia With Realistic Boundary Conditions Predict Bending Deformations Consistent With In Vivo Measurement. Journal of Biomechanical Engineering, 2020, 142, .	0.6	17
25	Regular changes in foot strike pattern during prolonged downhill running do not influence neuromuscular, energetics, or biomechanical parameters. European Journal of Sport Science, 2020, 20, 495-504.	1.4	6
26	Individual Differences in Women During Walking Affect Tibial Response to Load Carriage: The Importance of Individualized Musculoskeletal Finite-Element Models. IEEE Transactions on Biomedical Engineering, 2020, 67, 545-555.	2.5	12
27	Step length and grade effects on energy absorption and impact attenuation in running. European Journal of Sport Science, 2020, 20, 756-766.	1.4	14
28	Joint Contact Forces with Changes in Running Stride Length and Midsole Stiffness. Journal of Science in Sport and Exercise, 2020, 2, 69-76.	0.4	2
29	Cumulative Metrics of Tendon Load and Damage Vary Discordantly with Running Speed. Medicine and Science in Sports and Exercise, 2020, 52, 1549-1556.	0.2	19
30	Lower-limb joint kinetics in jump rope skills performed by competitive athletes. Sports Biomechanics, 2020, , 1-14.	0.8	9
31	Biomechanics of graded running: Part I â€•Stride parameters, external forces, muscle activations. Scandinavian Journal of Medicine and Science in Sports, 2020, 30, 1632-1641.	1.3	16
32	Biomechanics of graded running: Part IIâ€"Joint kinematics and kinetics. Scandinavian Journal of Medicine and Science in Sports, 2020, 30, 1642-1654.	1.3	23
33	Effects of load carriage on biomechanical variables associated with tibial stress fractures in running. Gait and Posture, 2020, 77, 190-194.	0.6	16
34	Association between intracortical microarchitecture and the compressive fatigue life of human bone: A pilot study. Bone Reports, 2020, 12, 100254.	0.2	13
35	The Effects of Increased Midsole Bending Stiffness of Sport Shoes on Muscle-Tendon Unit Shortening and Shortening Velocity: a Randomised Crossover Trial in Recreational Male Runners. Sports Medicine - Open, 2020, 6, 9.	1.3	27
36	Reply to Letter to the Editor Regarding â€œDurability and Delayed Treatment Effects of Zoledronic Acid on Bone Loss After Spinal Cord Injury: A Randomized, Controlled Trialâ€• Journal of Bone and Mineral Research, 2020, 37, 169-170.	3.1	0

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37	Trabecular Bone Score at the Distal Femur and Proximal Tibia in Individuals With Spinal Cord Injury. Journal of Clinical Densitometry, 2019, 22, 249-256.	0.5	8
38	The Role of Lower-Limb Geometry in the Pathophysiology of Atypical Femoral Fracture. Current Osteoporosis Reports, 2019, 17, 281-290.	1.5	19
39	Does increased midsole bending stiffness of sport shoes redistribute lower limb joint work during running?. Journal of Science and Medicine in Sport, 2019, 22, 1272-1277.	0.6	36
40	From Canmore to Kananaskis: where has the last 20 years in footwear science brought us?. Footwear Science, 2019, 11, S1-S2.	0.8	0
41	Effects of basketball court construction and shoe stiffness on countermovement jump landings. Footwear Science, 2019, 11, 171-179.	0.8	2
42	Open-label clinical trial of alendronate after teriparatide therapy in people with spinal cord injury and low bone mineral density. Spinal Cord, 2019, 57, 832-842.	0.9	10
43	Effect of Shoe and Surface Stiffness on Lower Limb Tendon Strain in Jumping. Medicine and Science in Sports and Exercise, 2019, 51, 1895-1903.	0.2	16
44	The Influence of Reconstruction Kernel on Bone Mineral and Strength Estimates Using Quantitative Computed Tomography and Finite Element Analysis. Journal of Clinical Densitometry, 2019, 22, 219-228.	0.5	11
45	New Considerations for Wearable Technology Data: Changes in Running Biomechanics During a Marathon. Journal of Applied Biomechanics, 2019, 35, 401-409.	0.3	30
46	Influence of geometry on proximal femoral shaft strains: Implications for atypical femoral fracture. Bone, 2018, 110, 295-303.	1.4	38
47	Practical considerations for obtaining high quality quantitative computed tomography data of the skeletal system. Bone, 2018, 110, 58-65.	1.4	19
48	Assessment of Bone Mineral Density at the Distal Femur and the Proximal Tibia by Dual-Energy X-ray Absorptiometry in Individuals With Spinal Cord Injury: Precision of Protocol and Relation to Injury Duration. Journal of Clinical Densitometry, 2018, 21, 338-346.	0.5	12
49	Mechanical Fatigue of Bovine Cortical Bone Using Ground Reaction Force Waveforms in Running. Journal of Biomechanical Engineering, 2018, 140, .	0.6	28
50	Modeling Overuse Injuries in Sport as a Mechanical Fatigue Phenomenon. Exercise and Sport Sciences Reviews, 2018, 46, 224-231.	1.6	139
51	Joint kinematics and ground reaction forces in overground versus treadmill graded running. Gait and Posture, 2018, 63, 109-113.	0.6	39
52	Effects of Teriparatide and Vibration on Bone Mass and Bone Strength in People with Bone Loss and Spinal Cord Injury: A Randomized, Controlled Trial. Journal of Bone and Mineral Research, 2018, 33, 1729-1740.	3.1	54
53	A comparison of the ground reaction force frequency content during rearfoot and non-rearfoot running patterns. Gait and Posture, 2017, 56, 54-59.	0.6	34
54	Experimental validation of finite element predicted bone strain in the human metatarsal. Journal of Biomechanics, 2017, 60, 22-29.	0.9	13

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55	Effects of footwear and stride length on metatarsal strains and failure in running. Clinical Biomechanics, 2017, 49, 8-15.	0.5	21
56	Biomechanics and Physiology of Uphill and Downhill Running. Sports Medicine, 2017, 47, 615-629.	3.1	162
57	Intra-rater reliability of footwear-related comfort assessments. Footwear Science, 2016, 8, 155-163.	0.8	17
58	An integrative modeling approach for the efficient estimation of cross sectional tibial stresses during locomotion. Journal of Biomechanics, 2016, 49, 429-435.	0.9	35
59	Fatigue associated with prolonged graded running. European Journal of Applied Physiology, 2016, 116, 1859-1873.	1.2	72
60	The influence of minimalist footwear and stride length reduction on lower-extremity running mechanics and cumulative loading. Journal of Science and Medicine in Sport, 2016, 19, 975-979.	0.6	28
61	Femoral strain during walking predicted with muscle forces from static and dynamic optimization. Journal of Biomechanics, 2016, 49, 1206-1213.	0.9	31
62	Reduction in Torsional Stiffness and Strength at the Proximal Tibia as a Function of Time Since Spinal Cord Injury. Journal of Bone and Mineral Research, 2015, 30, 1422-1430.	3.1	30
63	Bone Imaging and Fracture Risk after Spinal Cord Injury. Current Osteoporosis Reports, 2015, 13, 310-317.	1.5	22
64	Energy expended and knee joint load accumulated when walking, running, or standing for the same amount of time. Gait and Posture, 2015, 41, 326-328.	0.6	12
65	Reduction in Proximal Femoral Strength in Patients With Acute Spinal Cord Injury. Journal of Bone and Mineral Research, 2014, 29, 2074-2079.	3.1	36
66	The preferred walk to run transition speed in actual lunar gravity. Journal of Experimental Biology, 2014, 217, 3200-3203.	0.8	14
67	Why Donâ€™t Most Runners Get Knee Osteoarthritis? A Case for Per-Unit-Distance Loads. Medicine and Science in Sports and Exercise, 2014, 46, 572-579.	0.2	76
68	The mechanical consequence of actual bone loss and simulated bone recovery in acute spinal cord injury. Bone, 2014, 60, 141-147.	1.4	31
69	Predicting surface strains at the human distal radius during an in vivo loading task â€" Finite element model validation and application. Journal of Biomechanics, 2014, 47, 2759-2765.	0.9	23
70	Torsional stiffness and strength of the proximal tibia are better predicted by finite element models than DXA or QCT. Journal of Biomechanics, 2013, 46, 1655-1662.	0.9	51
71	A linear-actuated torsional device to replicate clinically relevant spiral fractures in long bones. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2012, 226, 729-733.	1.0	3
72	Lower Extremity Joint Moments During Carrying Tasks in Children. Journal of Applied Biomechanics, 2012, 28, 156-164.	0.3	3

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73	Musculoskeletal Attenuation of Impact Shock in Response to Knee Angle Manipulation. Journal of Applied Biomechanics, 2012, 28, 502-510.	0.3	42
74	Finite element prediction of surface strain and fracture strength at the distal radius. Medical Engineering and Physics, 2012, 34, 290-298.	0.8	55
75	On the filtering of intersegmental loads during running. Gait and Posture, 2011, 34, 435-438.	0.6	28
76	Number Crunching: How and When Will Numerical Models Be Used in the Clinical Setting?. Current Osteoporosis Reports, 2011, 9, 1-3.	1.5	4
77	Simulating Distal Radius Fracture Strength Using Biomechanical Tests: A Modeling Study Examining the Influence of Boundary Conditions. Journal of Biomechanical Engineering, 2011, 133, 114501.	0.6	14
78	Effects of running speed on a probabilistic stress fracture model. Clinical Biomechanics, 2010, 25, 372-377.	0.5	80
79	The Use of External Transducers for Estimating Bone Strain at the Distal Tibia During Impact Activity. Journal of Biomechanical Engineering, 2009, 131, 051009.	0.6	14
80	Effects of Stride Length and Running Mileage on a Probabilistic Stress Fracture Model. Medicine and Science in Sports and Exercise, 2009, 41, 2177-2184.	0.2	153
81	Internal femoral forces and moments during running: Implications for stress fracture development. Clinical Biomechanics, 2008, 23, 1269-1278.	0.5	92
82	The Relationship between Joint Kinetic Factors and the Walkâ€“Run Gait Transition Speed during Human Locomotion. Journal of Applied Biomechanics, 2008, 24, 149-157.	0.3	32