Charles L Rice

List of Publications by Year
in descending order

128 papers	4,238 citations	126708 33 h-index	143772 57 g-index
128 all docs	128 docs citations	128 times ranked	3873 citing authors

#	Article	IF	Citations
1	Neural Contributions to Muscle Fatigue. Medicine and Science in Sports and Exercise, 2016, 48, 2294-2306.	0.2	330
2	Age-related changes in motor unit function. , 1997, 20, 679-690.		280
3	Motor unit firing rates and contractile properties in tibialis anterior of young and old men. Journal of Applied Physiology, 1999, 87, 843-852.	1.2	262
4	Innervation and neuromuscular control in ageing skeletal muscle. Journal of Physiology, 2016, 594, 1965-1978.	1.3	242
5	Neuromuscular fatigue and aging: Central and peripheral factors. Muscle and Nerve, 2002, 25, 785-796.	1.0	155
6	Motor Unit Number Estimates in Masters Runners. Medicine and Science in Sports and Exercise, 2010, 42, 1644-1650.	0.2	129
7	Human neuromuscular structure and function in old age: A brief review. Journal of Sport and Health Science, 2013, 2, 215-226.	3.3	117
8	Voluntary muscle activation varies with age and muscle group. Journal of Applied Physiology, 2002, 93, 457-462.	1.2	114
9	Motor Unit Survival in Lifelong Runners Is Muscle Dependent. Medicine and Science in Sports and Exercise, 2012, 44, 1235-1242.	0.2	99
10	Peripheral impairments cause a progressive age-related loss of strength and velocity-dependent power in the dorsiflexors. Journal of Applied Physiology, 2007, 102, 1962-1968.	1.2	97
11	Neuromuscular contributions to the age-related reduction in muscle power: Mechanisms and potential role of high velocity power training. Ageing Research Reviews, 2017, 35, 147-154.	5.0	81
12	Incomplete recovery of voluntary isometric force after fatigue is not affected by old age. Muscle and Nerve, 2001, 24, 1156-1167.	1.0	76
13	Factors That Influence Muscle Weakness Following Stroke and Their Clinical Implications: A Critical Review. Physiotherapy Canada Physiotherapie Canada, 2012, 64, 415-426.	0.3	76
14	Fatigue and recovery of power and isometric torque following isotonic knee extensions. Journal of Applied Physiology, 2005, 99, 1446-1452.	1.2	70
15	Motor unit number and transmission stability in octogenarian world class athletes: Can age-related deficits be outrun?. Journal of Applied Physiology, 2016, 121, 1013-1020.	1.2	70
16	Power loss is greater in old men than young men during fast plantar flexion contractions. Journal of Applied Physiology, 2010, 109, 1441-1447.	1.2	64
17	The age-related slowing of voluntary shortening velocity exacerbates power loss during repeated fast knee extensions. Experimental Gerontology, 2012, 47, 85-92.	1.2	64
18	Triceps surae contractile properties and firing rates in the soleus of young and old men. Journal of Applied Physiology, 2009, 107, 1781-1788.	1.2	63

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19	Increased motor unit potential shape variability across consecutive motor unit discharges in the tibialis anterior and vastus medialis muscles of healthy older subjects. Clinical Neurophysiology, 2015, 126, 2381-2389.	0.7	61
20	Motor unit loss and weakness in association with diabetic neuropathy in humans. Muscle and Nerve, 2013, 48, 298-300.	1.0	60
21	An age-related shift in the force-frequency relationship affects quadriceps fatigability in old adults. Journal of Applied Physiology, 2004, 96, 1026-1032.	1.2	58
22	Differential changes in muscle oxygenation between voluntary and stimulated isometric fatigue of human dorsiflexors. Journal of Applied Physiology, 2006, 100, 890-895.	1.2	54
23	Skeletal muscle morphology and contractile function in relation to muscle denervation in diabetic neuropathy. Journal of Applied Physiology, 2014, 116, 545-552.	1.2	50
24	Blood flow and muscle oxygenation during low, moderate, and maximal sustained isometric contractions. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2015, 309, R475-R481.	0.9	50
25	Length dependent loss of motor axons and altered motor unit properties in human diabetic polyneuropathy. Clinical Neurophysiology, 2014, 125, 836-843.	0.7	46
26	Increased Residual Force Enhancement in Older Adults Is Associated with a Maintenance of Eccentric Strength. PLoS ONE, 2012, 7, e48044.	1.1	44
27	Increased neuromuscular transmission instability and motor unit remodelling with diabetic neuropathy as assessed using novel near fibre motor unit potential parameters. Clinical Neurophysiology, 2015, 126, 794-802.	0.7	43
28	Physiology in Medicine: neuromuscular consequences of diabetic neuropathy. Journal of Applied Physiology, 2016, 121, 1-6.	1.2	43
29	Reliability of Isokinetic and Isometric Knee-Extensor Force in Older Women. Journal of Aging and Physical Activity, 2004, 12, 525-537.	0.5	40
30	Perceived exertion is elevated in old age during an isometric fatigue task. European Journal of Applied Physiology, 2003, 89, 191-197.	1.2	39
31	The slow component of pulmonary O₂ uptake accompanies peripheral muscle fatigue during high-intensity exercise. Journal of Applied Physiology, 2016, 121, 493-502.	1.2	37
32	Time-dependent neuromuscular parameters in the plantar flexors support greater fatigability of old compared with younger males. Experimental Gerontology, 2016, 74, 13-20.	1.2	36
33	Delayed recovery of velocity-dependent power loss following eccentric actions of the ankle dorsiflexors. Journal of Applied Physiology, 2010, 109, 669-676.	1.2	35
34	Decreased muscle endurance associated with diabetic neuropathy may be attributed partially to neuromuscular transmission failure. Journal of Applied Physiology, 2015, 118, 1014-1022.	1.2	35
35	Geometry of a Weight-Bearing and Non-Weight-Bearing Bone in the Legs of Young, Old, and Very Old Men. Calcified Tissue International, 2009, 85, 22-30.	1.5	34
36	The effect of contraction intensity on motor unit number estimates of the tibialis anterior. Clinical Neurophysiology, 2005, 116, 1342-1347.	0.7	33

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37	The altered vestibular-evoked myogenic and whole-body postural responses in old men during standing. Experimental Gerontology, 2014, 60, 120-128.	1.2	33
38	Motor unit number estimation and neuromuscular fidelity in 3 stages of sarcopenia. Muscle and Nerve, 2017, 55, 676-684.	1.0	33
39	Shortening-induced torque depression in old men: Implications for age-related power loss. Experimental Gerontology, 2014, 57, 75-80.	1.2	32
40	Estimating Contraction Level Using Root Mean Square Amplitude in Control Subjects and Patients With Neuromuscular Disorders. Archives of Physical Medicine and Rehabilitation, 2008, 89, 711-718.	0.5	30
41	Residual force enhancement following eccentric induced muscle damage. Journal of Biomechanics, 2012, 45, 1835-1841.	0.9	28
42	Comparison of 3D reconstructive technologies used for morphometric research and the translation of knowledge using a decision matrix. Anatomical Sciences Education, 2013, 6, 393-403.	2.5	28
43	Reduced skeletal muscle quantity and quality in patients with diabetic polyneuropathy assessed by magnetic resonance imaging. Muscle and Nerve, 2016, 53, 726-732.	1.0	28
44	Motor unit firing rates of the gastrocnemii during maximal and sub-maximal isometric contractions in young and old men. Neuroscience, 2016, 330, 376-385.	1.1	27
45	The effect of knee joint angle on plantar flexor power in young and old men. Experimental Gerontology, 2014, 52, 70-76.	1.2	26
46	Maintaining motor units into old age: running the final common pathway. European Journal of Translational Myology, 2017, 27, 6597.	0.8	26
47	Neuromuscular changes of the aged human hamstrings. Journal of Neurophysiology, 2018, 120, 480-488.	0.9	26
48	Neuromuscular adaptations to healthy aging. Applied Physiology, Nutrition and Metabolism, 2018, 43, 1158-1165.	0.9	26
49	Contractile function and motor unit firing rates of the human hamstrings. Journal of Neurophysiology, 2017, 117, 243-250.	0.9	25
50	Recovery of Motoneuron Output Is Delayed in Old Men Following High-Intensity Fatigue. Journal of Neurophysiology, 2010, 103, 977-985.	0.9	24
51	The effect of postactivation potentiation on the mechanomyogram. European Journal of Applied Physiology, 2006, 96, 17-23.	1.2	22
52	Fatigue-Induced Reductions of Torque and Shortening Velocity Are Muscle Dependent. Medicine and Science in Sports and Exercise, 2010, 42, 1651-1659.	0.2	22
53	Digital preservation of anatomical variation: 3D-modeling of embalmed and plastinated cadaveric specimens using uCT and MRI. Annals of Anatomy, 2017, 209, 69-75.	1.0	22
54	Isometric versus Dynamic Measurements of Fatigue: Does Age Matter? A Meta-analysis. Medicine and Science in Sports and Exercise, 2018, 50, 2132-2144.	0.2	22

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55	Neuroprotective effects of exercise on the aging human neuromuscular system. Experimental Gerontology, 2021, 152, 111465.	1.2	22
56	Neural and Muscular Determinants of Dorsiflexor Weakness in Chronic Stroke Survivors. Motor Control, 2013, 17, 283-297.	0.3	21
57	Exercise training enhances insulin-stimulated nerve arterial vasodilation in rats with insulin-treated experimental diabetes. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2014, 306, R941-R950.	0.9	21
58	Muscle Function at the Motor Unit Level: Consequences of Aging. Topics in Geriatric Rehabilitation, 2000, 15, 70-82.	0.2	19
59	Effect of shoulder angle on the activation pattern of the elbow extensors during a submaximal isometric fatiguing contraction. Muscle and Nerve, 2010, 42, 514-521.	1.0	18
60	The genu effect on plantar flexor power. European Journal of Applied Physiology, 2013, 113, 1431-1439.	1.2	18
61	Neuromuscular function in different stages of sarcopenia. Experimental Gerontology, 2016, 81, 28-36.	1.2	18
62	Motor unit firing rates during constant isometric contraction: establishing and comparing an age-related pattern among muscles. Journal of Applied Physiology, 2021, 130, 1903-1914.	1.2	17
63	Perspective on neuromuscular factors in poststroke fatigue. Disability and Rehabilitation, 2012, 34, 2291-2299.	0.9	16
64	Motor unit firing rates of the gastrocnemii during maximal brief steady-state contractions in humans. Journal of Electromyography and Kinesiology, 2016, 26, 82-87.	0.7	16
65	Obstruction of Small Arterioles in Patients with Critical Limb Ischemia due to Partial Endothelial-to-Mesenchymal Transition. IScience, 2020, 23, 101251.	1.9	16
66	Potentiation of the triceps brachii during voluntary submaximal contractions. Muscle and Nerve, 2011, 43, 859-865.	1.0	15
67	Allometric scaling of strength in an independently living population age 55-86 years. American Journal of Human Biology, 2003, 15, 48-60.	0.8	14
68	Characteristics of a MR-compatible ankle exercise ergometer for a 3.0T head-only MR scanner. Medical Engineering and Physics, 2006, 28, 489-494.	0.8	14
69	Decay of force transients following active stretch is slower in older than young men: Support for a structural mechanism contributing to residual force enhancement in old age. Journal of Biomechanics, 2014, 47, 3423-3427.	0.9	14
70	<i>In vivo</i> measurement of fascicle length and pennation of the human anconeus muscle at several elbow joint angles. Journal of Anatomy, 2014, 225, 502-509.	0.9	13
71	Effect of knee joint position on triceps surae motor unit recruitment and firing rates. Experimental Brain Research, 2019, 237, 2345-2352.	0.7	13
72	Structure of Population Activity in Primary Motor Cortex for Single Finger Flexion and Extension. Journal of Neuroscience, 2020, 40, 9210-9223.	1.7	13

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73	Velocity dependence of eccentric strength in young and old men: the need for speed!. Applied Physiology, Nutrition and Metabolism, 2015, 40, 703-710.	0.9	12
74	Effect of very old age on anconeus motor unit loss and compensatory remodelling. Muscle and Nerve, 2018, 57, 659-663.	1.0	12
75	Torque loss induced by repetitive maximal eccentric contractions is marginally influenced by work-to-rest ratio. European Journal of Applied Physiology, 2004, 91, 579-585.	1.2	11
76	Reductions in muscle quality and quantity in chronic inflammatory demyelinating polyneuropathy patients assessed by magnetic resonance imaging. Muscle and Nerve, 2018, 58, 396-401.	1.0	11
77	Human motor unit characteristics of the superior trapezius muscle with age-related comparisons. Journal of Neurophysiology, 2019, 122, 823-832.	0.9	11
78	The effect of blood flow occlusion during acute low-intensity isometric elbow flexion exercise. European Journal of Applied Physiology, 2019, 119, 587-595.	1.2	11
79	Abnormal motor unit firing rates in chronic inflammatory demyelinating polyneuropathy. Journal of the Neurological Sciences, 2020, 414, 116859.	0.3	11
80	Neuromuscular fatigability at high altitude: Lowlanders with acute and chronic exposure, and native highlanders. Acta Physiologica, 2022, 234, e13788.	1.8	11
81	Human <i>COL5A1</i> polymorphisms and quadriceps muscleâ€"tendon mechanical stiffness <i>in vivo</i>. Experimental Physiology, 2016, 101, 1581-1592.	0.9	10
82	Fiber type composition of the palmaris brevis muscle: implications for palmar function. Journal of Anatomy, 2017, 231, 626-633.	0.9	10
83	Electrophysiological and neuromuscular stability of persons with chronic inflammatory demyelinating polyneuropathy. Muscle and Nerve, 2017, 56, 413-420.	1.0	10
84	Structural and functional anatomy of the palmaris brevis: grasping for answers. Journal of Anatomy, 2017, 231, 939-946.	0.9	10
85	If you don't use it you'll likely lose it. Clinical Physiology and Functional Imaging, 2016, 36, 497-498.	0.5	9
86	Firing rate trajectories of human motor units during activity-dependent muscle potentiation. Journal of Applied Physiology, 2022, 132, 402-412.	1.2	9
87	Anconeus motor unit number estimates using decompositionâ€based quantitative electromyography. Muscle and Nerve, 2014, 50, 52-59.	1.0	8
88	Power reserve following ramp-incremental cycling to exhaustion: implications for muscle fatigue and function. Journal of Applied Physiology, 2018, 125, 304-312.	1.2	8
89	Effect of ankle joint position on triceps surae contractile properties and motor unit discharge rates. Physiological Reports, 2021, 8, e14680.	0.7	8
90	The influence of muscle length on the fatigue-related reduction in joint range of motion of the human dorsiflexors. European Journal of Applied Physiology, 2010, 109, 405-415.	1.2	7

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91	Nerve dysfunction leads to muscle morphological abnormalities in chronic inflammatory demyelinating polyneuropathy assessed by MRI. Clinical Anatomy, 2020, 33, 77-84.	1.5	7
92	State-of-the-art review: spinal and supraspinal responses to muscle potentiation in humans. European Journal of Applied Physiology, 2021, 121, 1271-1282.	1.2	7
93	Ageâ€related changes in motor unit function. Muscle and Nerve, 1997, 20, 679-690.	1.0	7
94	Differences in leg bone geometry in young, old and very old women. European Journal of Applied Physiology, 2011, 111, 2865-2871.	1.2	6
95	Rate modulation of human anconeus motor units during high-intensity dynamic elbow extensions. Journal of Applied Physiology, 2016, 121, 475-482.	1.2	6
96	Effect Of Elbow Joint Angle On Anconeus Fascicle Length And Motor Unit Firing Rates. Medicine and Science in Sports and Exercise, 2010, 42, 584-585.	0.2	5
97	Voluntary rate of torque development is impaired after a voluntary versus tetanic conditioning contraction. Muscle and Nerve, 2014, 49, 218-224.	1.0	5
98	Revisiting the functional anatomy of the palmaris longus as a thenar synergist. Clinical Anatomy, 2018, 31, 760-770.	1.5	5
99	Anconeus motor unit firing rates during isometric and muscle shortening contraction comparing young and very old adults. Journal of Neurophysiology, 2021, 126, 1122-1136.	0.9	5
100	Differential Modulation of Motor Unit Properties from the Separate Components of the Triceps Surae in Humans. Neuroscience, 2020, 428, 192-198.	1.1	4
101	Coexistence of peripheral potentiation and corticospinal inhibition following a conditioning contraction in human first dorsal interosseous muscle. Journal of Applied Physiology, 2020, 129, 926-931.	1.2	4
102	Firing rate trajectories of human occipitofrontalis motor units in response to triangular voluntary contraction intensity. Experimental Brain Research, 2021, 239, 3661-3670.	0.7	4
103	Comments on Point:Counterpoint: Skeletal muscle mechanical efficiency does/does not increase with age. Journal of Applied Physiology, 2013, 114, 1114-1118.	1.2	3
104	A threeâ€dimensional measurement approach for the morphology of the femoral head. Journal of Anatomy, 2014, 225, 358-366.	0.9	3
105	Fiber type composition of contiguous palmaris longus and abductor pollicis brevis muscles: Morphological evidence of a functional synergy. Journal of Anatomy, 2021, 238, 53-62.	0.9	3
106	The relationship of agonist muscle single motor unit firing rates and elbow extension limb movement kinematics. Experimental Brain Research, 2021, 239, 2755-2766.	0.7	3
107	Postâ€activation potentiation induced by concentric contractions at three speeds in humans. Experimental Physiology, 2021, 106, 2489-2501.	0.9	3
108	The relationship between blood pressure and sciatic nerve blood flow velocity in rats with insulin-treated experimental diabetes. Diabetes and Vascular Disease Research, 2014, 11, 281-289.	0.9	2

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109	Rare muscular variations identified in a single cadaveric upper limb: a four-headed biceps brachii and muscular elevator of the latissimus dorsi tendon. Anatomical Science International, 2018, 93, 311-316.	0.5	2
110	The effect of blood flow on tibialis anterior motor unit firing rates during sustained low-intensity isometric contractions. Applied Physiology, Nutrition and Metabolism, 2021, 46, 63-68.	0.9	2
111	Firing rate trajectories of human motor units during isometric ramp contractions to 10, 25 and 50% of maximal voluntary contraction. Neuroscience Letters, 2021, 762, 136118.	1.0	2
112	Length-dependent changes of lower limb muscle morphology in Chronic Inflammatory Demyelinating Polyneuropathy assessed with magnetic resonance imaging. European Journal of Translational Myology, 2021, , .	0.8	2
113	Reply. Muscle and Nerve, 2017, 55, 930-931.	1.0	1
114	ATP2A2 rs3026468 does not associate with quadriceps contractile properties and acute muscle potentiation in humans. Physiological Genomics, 2019, 51, 10-11.	1.0	1
115	Changes in Anconeus Motor Unit Firing Rates During High-Intensity Dynamic Elbow Extensor Fatiguing Contractions. Medicine and Science in Sports and Exercise, 2015, 47, 322.	0.2	1
116	Local and systemic transcriptomic responses from acute exercise induced muscle damage of the human knee extensors. Physiological Genomics, 2022, 54, 305-315.	1.0	1
117	Mechanomyographic and Electromyographic Responses to Intermittent Voluntary Fatigue in Human Dorsiflexors. Medicine and Science in Sports and Exercise, 2006, 38, S178-S179.	0.2	0
118	Reply to Senefeld and Hunter: Physiology in Medicine: Neuromuscular consequences of diabetic neuropathy. The authors' reply. Journal of Applied Physiology, 2016, 121, 361-361.	1.2	0
119	Reply to Drs. Sacco et al.. Journal of Applied Physiology, 2017, 122, 1525-1525.	1.2	0
120	Response to â€œAn objective criterion for stimulation intensity may be necessary to properly assess muscle contractile propertiesâ€. Journal of Neurophysiology, 2018, 120, 3288-3288.	0.9	0
121	The Effect of Age on Tibia and Fibula Cross-sectional Areas in Young, Old, and Very Old Men. Medicine and Science in Sports and Exercise, 2007, 39, S41-S42.	0.2	0
122	Effect of Decreases in Joint Excursion on the Torque-Length Relationship and Velocity after Shortening Contractions.. Medicine and Science in Sports and Exercise, 2008, 40, S348.	0.2	0
123	Voluntary Activation At Short And Long Muscle Lengths In The Human Elbow Extensors. Medicine and Science in Sports and Exercise, 2009, 41, 197-198.	0.2	0
124	Velocity-dependent Power Loss In The Knee Extensors Of Young And Old Men. Medicine and Science in Sports and Exercise, 2010, 42, 340.	0.2	0
125	Validity and Reliability of a Novel 3D Measurement Approach of the Acetabulum. FASEB Journal, 2012, 26, 722.16.	0.2	0
126	Leg Bone Geometry in Human Diabetic Neuropathy. FASEB Journal, 2015, 29, 545.5.	0.2	0

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127	An MRI Investigating of the Lower Limb Musculature in Patients with Chronic Inflammatory Demyelinating Polyneuropathy. FASEB Journal, 2019, 33, lb155.	0.2	0
128	Response to letter: Preventing age-related motor unit loss: Is exercise the answer?. Experimental Gerontology, 2022, 159, 111696.	1.2	0