Frank W Booth

List of Publications by Year
in descending order

129 papers	10,721 citations	57681 46 h-index	48101 92 g-index
131 all docs	131 docs citations	131 times ranked	13344 citing authors

#	Article	IF	Citations
1	Lack of Exercise Is a Major Cause of Chronic Diseases. , 2012, 2, 1143-1211.		1,673
2	Neurobiology of Exercise. Obesity, 2006, 14, 345-356.	1.5	704
3	Waging war on modern chronic diseases: primary prevention through exercise biology. Journal of Applied Physiology, 2000, 88, 774-787.	1.2	571
4	Role of Inactivity in Chronic Diseases: Evolutionary Insight and Pathophysiological Mechanisms. Physiological Reviews, 2017, 97, 1351-1402.	13.1	422
5	Eating, exercise, and â€œthriftyâ€• genotypes: connecting the dots toward an evolutionary understanding of modern chronic diseases. Journal of Applied Physiology, 2004, 96, 3-10.	1.2	371
6	Control of the Size of the Human Muscle Mass. Annual Review of Physiology, 2004, 66, 799-828.	5.6	359
7	Understanding the Cellular and Molecular Mechanisms of Physical Activity-Induced Health Benefits. Cell Metabolism, 2015, 22, 4-11.	7.2	345
8	Waging war on physical inactivity: using modern molecular ammunition against an ancient enemy. Journal of Applied Physiology, 2002, 93, 3-30.	1.2	339
9	Health Benefits of Exercise. Cold Spring Harbor Perspectives in Medicine, 2018, 8, a029694.	2.9	300
10	Daily exercise increases hepatic fatty acid oxidation and prevents steatosis in Otsuka Long-Evans Tokushima Fatty rats. American Journal of Physiology - Renal Physiology, 2008, 294, G619-G626.	1.6	244
11	Metabolic Responses to Reduced Daily Steps in Healthy Nonexercising Men. JAMA - Journal of the American Medical Association, 2008, 299, 1261.	3.8	241
12	A 2-wk reduction of ambulatory activity attenuates peripheral insulin sensitivity. Journal of Applied Physiology, 2010, 108, 1034-1040.	1.2	236
13	IGF-I restores satellite cell proliferative potential in immobilized old skeletal muscle. Journal of Applied Physiology, 2000, 89, 1365-1379.	1.2	228
14	Insulin-like Growth Factor-I Extends in VitroReplicative Life Span of Skeletal Muscle Satellite Cells by Enhancing G1/S Cell Cycle Progression via the Activation of Phosphatidylinositol 3â€²-Kinase/Akt Signaling Pathway. Journal of Biological Chemistry, 2000, 275, 35942-35952.	1.6	194
15	Exercise and gene expression: physiological regulation of the human genome through physical activity. Journal of Physiology, 2002, 543, 399-411.	1.3	191
16	Fundamental questions about genes, inactivity, and chronic diseases. Physiological Genomics, 2007, 28, 146-157.	1.0	185
17	Reduced physical activity and risk of chronic disease: the biology behind the consequences. European Journal of Applied Physiology, 2008, 102, 381-390.	1.2	174
18	Multiple signaling pathways mediate LIF-induced skeletal muscle satellite cell proliferation. American Journal of Physiology - Cell Physiology, 2002, 283, C204-C211.	2.1	159

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19	Focal adhesion proteins FAK and paxillin increase in hypertrophied skeletal muscle. American Journal of Physiology - Cell Physiology, 1999, 277, C152-C162.	2.1	149
20	Lifetime sedentary living accelerates some aspects of secondary aging. Journal of Applied Physiology, 2011, 111, 1497-1504.	1.2	134
21	GSK-3Î² negatively regulates skeletal myotube hypertrophy. American Journal of Physiology - Cell Physiology, 2002, 283, C545-C551.	2.1	133
22	An Obligation for Primary Care Physicians to Prescribe Physical Activity to Sedentary Patients to Reduce the Risk of Chronic Health Conditions. Mayo Clinic Proceedings, 2002, 77, 165-173.	1.4	129
23	Myogenic regulatory factors during regeneration of skeletal muscle in young, adult, and old rats. Journal of Applied Physiology, 1997, 83, 1270-1275.	1.2	121
24	Selected Contribution: Skeletal muscle focal adhesion kinase, paxillin, and serum response factor are loading dependent. Journal of Applied Physiology, 2001, 90, 1174-1183.	1.2	114
25	Insulin-like growth factor 1 and muscle growth: implication for satellite cell proliferation. Proceedings of the Nutrition Society, 2004, 63, 337-340.	0.4	107
26	Lowering Physical Activity Impairs Glycemic Control in Healthy Volunteers. Medicine and Science in Sports and Exercise, 2012, 44, 225-231.	0.2	107
27	Physically Active Subjects Should Be the Control Group. Medicine and Science in Sports and Exercise, 2006, 38, 405-406.	0.2	100
28	Temporal alterations in protein signaling cascades during recovery from muscle atrophy. American Journal of Physiology - Cell Physiology, 2003, 285, C391-C398.	2.1	99
29	Physiology of Sedentary Behavior and Its Relationship to Health Outcomes. Medicine and Science in Sports and Exercise, 2015, 47, 1301-1305.	0.2	92
30	An Obligation for Primary Care Physicians to Prescribe Physical Activity to Sedentary Patients to Reduce the Risk of Chronic Health Conditions. Mayo Clinic Proceedings, 2002, 77, 165-173.	1.4	89
31	Cessation of daily exercise dramatically alters precursors of hepatic steatosis in Otsuka Longâ€Evans Tokushima Fatty (OLETF) rats. Journal of Physiology, 2008, 586, 4241-4249.	1.3	88
32	Endurance Exercise and the Regulation of Skeletal Muscle Metabolism. Progress in Molecular Biology and Translational Science, 2015, 135, 129-151.	0.9	83
33	Biological/Genetic Regulation of Physical Activity Level. Medicine and Science in Sports and Exercise, 2018, 50, 863-873.	0.2	80
34	Forkhead transcription factor FoxO1 transduces insulin-like growth factor's signal to p27Kip1 in primary skeletal muscle satellite cells. Journal of Cellular Physiology, 2003, 196, 523-531.	2.0	78
35	Transcriptional profiling identifies extensive downregulation of extracellular matrix gene expression in sarcopenic rat soleus muscle. Physiological Genomics, 2003, 15, 34-43.	1.0	77
36	Alterations in insulin receptor signalling in the rat epitrochlearis muscle upon cessation of voluntary exercise. Journal of Physiology, 2005, 562, 829-838.	1.3	76

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37	High-fat, high-fructose, high-cholesterol feeding causes severe NASH and cecal microbiota dysbiosis in juvenile Ossabaw swine. American Journal of Physiology - Endocrinology and Metabolism, 2018, 314, E78-E92.	1.8	73
38	Dopamine D1 receptor modulation in nucleus accumbens lowers voluntary wheel running in rats bred to run high distances. Physiology and Behavior, 2012, 105, 661-668.	1.0	71
39	Anti-TNF treatment reduces rat skeletal muscle wasting in monocrotaline-induced cardiac cachexia. Journal of Applied Physiology, 2008, 105, 1950-1958.	1.2	69
40	Postdinner resistance exercise improves postprandial risk factors more effectively than predinner resistance exercise in patients with type 2 diabetes. Journal of Applied Physiology, 2015, 118, 624-634.	1.2	67
41	Cessation of daily wheel running differentially alters fat oxidation capacity in liver, muscle, and adipose tissue. Journal of Applied Physiology, 2009, 106, 161-168.	1.2	64
42	Overexpression of IGF-I in skeletal muscle of transgenic mice does not prevent unloading-induced atrophy. American Journal of Physiology - Endocrinology and Metabolism, 1998, 275, E373-E379.	1.8	63
43	Inactivity induces increases in abdominal fat. Journal of Applied Physiology, 2007, 102, 1341-1347.	1.2	63
44	Lack of regular physical exercise or too much inactivity. Current Opinion in Clinical Nutrition and Metabolic Care, 2011, 14, 374-378.	1.3	60
45	Selected Contribution: Identification of differentially expressed genes between young and old rat soleus muscle during recovery from immobilization-induced atrophy. Journal of Applied Physiology, 2003, 95, 2171-2179.	1.2	57
46	Responsiveness of cell signaling pathways during the failed 15-day regrowth of aged skeletal muscle. Journal of Applied Physiology, 2004, 96, 398-404.	1.2	52
47	Time course of the MAPK and PI3-kinase response within 24 h of skeletal muscle overload. Journal of Applied Physiology, 2001, 91, 2079-2087.	1.2	47
48	Phenotypic and molecular differences between rats selectively bred to voluntarily run high vs. low nightly distances. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2013, 304, R1024-R1035.	0.9	47
49	Sustained rise in triacylglycerol synthesis and increased epididymal fat mass when rats cease voluntary wheel running. Journal of Physiology, 2005, 565, 911-925.	1.3	46
50	Changes in skeletal muscle mitochondria in response to the development of type 2 diabetes or prevention by daily wheel running in hyperphagic OLETF rats. American Journal of Physiology - Endocrinology and Metabolism, 2010, 298, E1179-E1187.	1.8	46
51	FoxO3a preferentially induces p27^{Kip1} expression while impairing muscle precursor cellâ€cycle progression. Muscle and Nerve, 2008, 37, 84-89.	1.0	44
52	Exercise-induced attenuation of obesity, hyperinsulinemia, and skeletal muscle lipid peroxidation in the OLETF rat. Journal of Applied Physiology, 2008, 104, 708-715.	1.2	43
53	SRF protein is upregulated during stretch-induced hypertrophy of rooster ALD muscle. Journal of Applied Physiology, 1999, 86, 1793-1799.	1.2	42
54	Gold standards for scientists who are conducting animal-based exercise studies. Journal of Applied Physiology, 2010, 108, 219-221.	1.2	42

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55	Expression profiling identifies dysregulation of myosin heavy chains IIb and IIx during limb immobilization in the soleus muscles of old rats. Journal of Physiology, 2003, 553, 357-368.	1.3	38
56	Nucleus accumbens neuronal maturation differences in young rats bred for low <i>versus</i> high voluntary running behaviour. Journal of Physiology, 2014, 592, 2119-2135.	1.3	38
57	Unique transcriptomic signature of omental adipose tissue in Ossabaw swine: a model of childhood obesity. Physiological Genomics, 2014, 46, 362-375.	1.0	37
58	Vascular transcriptional alterations produced by juvenile obesity in Ossabaw swine. Physiological Genomics, 2013, 45, 434-446.	1.0	36
59	Running from Disease: Molecular Mechanisms Associating Dopamine and Leptin Signaling in the Brain with Physical Inactivity, Obesity, and Type 2 Diabetes. Frontiers in Endocrinology, 2017, 8, 109.	1.5	35
60	Age-dependent FOXO regulation of p27Kip1 expression via a conserved binding motif in rat muscle precursor cells. American Journal of Physiology - Cell Physiology, 2008, 295, C1238-C1246.	2.1	33
61	Daily exercise prevents diastolic dysfunction and oxidative stress in a female mouse model of western diet induced obesity by maintaining cardiac heme oxygenase-1 levels. Metabolism: Clinical and Experimental, 2017, 66, 14-22.	1.5	32
62	Exercise Biology and Medicine: Innovative Research to Improve Global Health. Mayo Clinic Proceedings, 2014, 89, 148-153.	1.4	31
63	Effects of intrinsic aerobic capacity and ovariectomy on voluntary wheel running and nucleus accumbens dopamine receptor gene expression. Physiology and Behavior, 2016, 164, 383-389.	1.0	30
64	Differential changes in vascular mRNA levels between rat iliac and renal arteries produced by cessation of voluntary running. Experimental Physiology, 2013, 98, 337-347.	0.9	29
65	Long-term insulin-like growth factor-I expression in skeletal muscles attenuates the enhanced in vitro proliferation ability of the resident satellite cells in transgenic mice. Mechanisms of Ageing and Development, 2001, 122, 1303-1320.	2.2	26
66	Mu opioid receptor modulation in the nucleus accumbens lowers voluntary wheel running in rats bred for high running motivation. Neuropharmacology, 2015, 97, 171-181.	2.0	24
67	Comparative adaptations in oxidative and glycolytic muscle fibers in a low voluntary wheel running rat model performing three levels of physical activity. Physiological Reports, 2015, 3, e12619.	0.7	23
68	Cytochrome c mRNA in skeletal muscles of immobilized limbs. Journal of Applied Physiology, 1996, 81, 1941-1945.	1.2	21
69	Increased mitochondrial glycerol-3-phosphate acyltransferase protein and enzyme activity in rat epididymal fat upon cessation of wheel running. American Journal of Physiology - Endocrinology and Metabolism, 2006, 290, E480-E489.	1.8	21
70	Effects of voluntary running on oxygen consumption, RQ, and energy expenditure during primary prevention of diet-induced obesity in C57BL/6N mice. Journal of Applied Physiology, 2012, 113, 473-478.	1.2	21
71	Mu-opioid receptor inhibition decreases voluntary wheel running in a dopamine-dependent manner in rats bred for high voluntary running. Neuroscience, 2016, 339, 525-537.	1.1	19
72	Sex determines effect of physical activity on diet preference: Association of striatal opioids and gut microbiota composition. Behavioural Brain Research, 2017, 334, 16-25.	1.2	19

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73	Hepatic steatosis development with four weeks of physical inactivity in previously active, hyperphagic OLETF rats. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2013, 304, R763-R771.	0.9	18
74	The force-frequency relationship is altered in regenerating and senescent rat skeletal muscle. , 1998, 21, 1265-1274.		17
75	Resistance-exercise training ameliorates LPS-induced cognitive impairment concurrent with molecular signaling changes in the rat dentate gyrus. Journal of Applied Physiology, 2019, 127, 254-263.	1.2	17
76	Recovery of neuromuscular junction morphology following 16 days of spaceflight. Synapse, 2001, 42, 177-184.	0.6	16
77	Early depression of Ankrd2 and Csrp3 mRNAs in the polyribosomal and whole tissue fractions in skeletal muscle with decreased voluntary running. Journal of Applied Physiology, 2012, 112, 1291-1299.	1.2	15
78	Understanding multi-organ pathology from insufficient exercise. Journal of Applied Physiology, 2011, 111, 1199-1200.	1.2	14
79	Cocaine-induced locomotor activity in rats selectively bred for low and high voluntary running behavior. Psychopharmacology, 2015, 232, 673-681.	1.5	14
80	AMPK agonist AICAR delays the initial decline in lifetime-apex VÌ‡<scp>o</scp>_{2 peak}, while voluntary wheel running fails to delay its initial decline in female rats. Physiological Genomics, 2016, 48, 101-115.	1.0	14
81	Maternal Western diet ageâ€specifically alters female offspring voluntary physical activity and dopamineâ€and leptinâ€related gene expression. FASEB Journal, 2017, 31, 5371-5383.	0.2	14
82	Potential clinical translation of juvenile rodent inactivity models to study the onset of childhood obesity. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2012, 303, R247-R258.	0.9	13
83	Mechanisms Associated With Physical Activity Behavior: Insights From Rodent Experiments. Exercise and Sport Sciences Reviews, 2017, 45, 217-222.	1.6	13
84	The biochemical basis of the health effects of exercise: an integrative view. Proceedings of the Nutrition Society, 2004, 63, 199-203.	0.4	12
85	Ovariectomized Highly Fit Rats Are Protected against Diet-Induced Insulin Resistance. Medicine and Science in Sports and Exercise, 2016, 48, 1259-1269.	0.2	12
86	Loss of Cdk5 function in the nucleus accumbens decreases wheel running and may mediate ageâ€related declines in voluntary physical activity. Journal of Physiology, 2017, 595, 363-384.	1.3	12
87	Sex dependent effects of physical activity on diet preference in rats selectively bred for high or low levels of voluntary wheel running. Behavioural Brain Research, 2019, 359, 95-103.	1.2	12
88	Rapid Alterations in Perirenal Adipose Tissue Transcriptomic Networks with Cessation of Voluntary Running. PLoS ONE, 2015, 10, e0145229.	1.1	11
89	High and low nightly running behavior associates with nucleus accumbens N-Methyl-d-aspartate receptor (NMDAR) NR1 subunit expression and NMDAR functional differences. Neuroscience Letters, 2018, 671, 50-55.	1.0	10
90	Creatine Supplementation Upregulates mTORC1 Signaling and Markers of Synaptic Plasticity in the Dentate Gyrus While Ameliorating LPS-Induced Cognitive Impairment in Female Rats. Nutrients, 2021, 13, 2758.	1.7	10

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91	Nerve-responsive troponin I slow promoter does not respond to unloading. Journal of Applied Physiology, 1998, 84, 1083-1087.	1.2	9
92	Cytochrome<i>c</i>promoter activity in soleus and white vastus lateralis muscles in rats. Journal of Applied Physiology, 1998, 85, 973-978.	1.2	9
93	Differences in transcriptional patterns of extracellular matrix, inflammatory, and myogenic regulatory genes in myofibroblasts, fibroblasts, and muscle precursor cells isolated from old male rat skeletal muscle using a novel cell isolation procedure. Biogerontology, 2012, 13, 383-398.	2.0	9
94	Hypothalamic Npy mRNA is correlated with increased wheel running and decreased body fat in calorie-restricted rats. Neuroscience Letters, 2016, 618, 83-88.	1.0	9
95	Maternal Physical Activity and Sex Impact Markers of Hepatic Mitochondrial Health. Medicine and Science in Sports and Exercise, 2018, 50, 2040-2048.	0.2	9
96	Overexpression of Protein Kinase Inhibitor Alpha Reverses Rat Low Voluntary Running Behavior. Molecular Neurobiology, 2019, 56, 1782-1797.	1.9	9
97	Genes, environment, and exercise. Advances in Experimental Medicine and Biology, 2001, 502, 13-20.	0.8	9
98	Sudden decrease in physical activity evokes adipocyte hyperplasia in 70- to 77-day-old rats but not 49- to 56-day-old rats. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2013, 305, R1465-R1478.	0.9	8
99	Reduced metabolic disease risk profile by voluntary wheel running accompanying juvenile Western diet in rats bred for high and low voluntary exercise. Physiology and Behavior, 2015, 152, 47-55.	1.0	8
100	Herbal adaptogens combined with protein fractions from bovine colostrum and hen egg yolk reduce liver TNF-Î± expression and protein carbonylation in Western diet feeding in rats. Nutrition and Metabolism, 2014, 11, 19.	1.3	7
101	The role of nucleus accumbens CREB attenuation in rescuing low voluntary running behavior in female rats. Journal of Neuroscience Research, 2020, 98, 2302-2316.	1.3	7
102	The many flavors of IGF-I. Journal of Applied Physiology, 2006, 100, 1755-1756.	1.2	7
103	Control of gene expression in adult skeletal muscle by changes in the inherent level of contractile activity. Biochemical Society Transactions, 1991, 19, 374-378.	1.6	6
104	Five months of voluntary wheel running downregulates skeletal muscle LINE-1 gene expression in rats. American Journal of Physiology - Cell Physiology, 2019, 317, C1313-C1323.	2.1	6
105	Exercise Has a Bone to Pick with Skeletal Muscle. Cell Metabolism, 2016, 23, 961-962.	7.2	5
106	Voluntary wheel running effects on intra-accumbens opioid high-fat feeding and locomotor behavior in Sprague-Dawley and Wistar rat strains. Physiology and Behavior, 2019, 206, 67-75.	1.0	4
107	Medial preoptic estrogen receptor-beta blunts the estrogen receptor-alpha mediated increases in wheel-running behavior of female rats. Behavioural Brain Research, 2020, 379, 112341.	1.2	4
108	Resistance-exercise training attenuates LPS-induced astrocyte remodeling and neuroinflammatory cytokine expression in female Wistar rats. Journal of Applied Physiology, 2022, 132, 317-326.	1.2	4

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109	Hepatocyteâ€specific eNOS deletion impairs exerciseâ€induced adaptations in hepatic mitochondrial function and autophagy. Obesity, 2022, 30, 1066-1078.	1.5	3
110	Is Health One Future for Kinesiology?. Kinesiology Review, 2014, 3, 13-18.	0.4	2
111	5â€Aminoimidazoleâ€4â€carboxamide ribonucleotide prevents fat gain following the cessation of voluntary physical activity. Experimental Physiology, 2017, 102, 1474-1485.	0.9	2
112	Medial habenula maturational deficits associate with low motivation for voluntary physical activity. Brain Research, 2018, 1698, 187-194.	1.1	2
113	RNA-sequencing and behavioral testing reveals inherited physical inactivity co-selects for anxiogenic behavior without altering depressive-like behavior in Wistar rats. Neuroscience Letters, 2021, 753, 135854.	1.0	2
114	Molecular Mechanisms of Adaptations to Training. , 0, , 202-211.		1
115	Left ventricle transcriptomic analysis reveals connective tissue accumulation associates with initial age-dependent decline in VÌ‡o2peak from its lifetime apex. Physiological Genomics, 2017, 49, 53-66.	1.0	1
116	Rats Selectively Bred for High Voluntary Physical Activity Behavior are Not Protected from the Deleterious Metabolic Effects of a Western Diet When Sedentary. Current Developments in Nutrition, 2019, 3, nzz017.	0.1	1
117	Ethical dilemmas. Nature, 1989, 340, 672-672.	13.7	0
118	Local adaptation in human trained skeletal muscle could preferentially bind blood interleukinâ€6. Experimental Physiology, 2009, 94, 1099-1100.	0.9	0
119	Last Word on Viewpoint: Gold standards for scientists who are conducting animal-based exercise studies. Journal of Applied Physiology, 2010, 108, 226-226.	1.2	0
120	Timing and intensity of exercise for glucose control. Reply to Chacko E. [letter]. Diabetologia, 2014, 57, 2427-2427.	2.9	0
121	State of Fitness: Overview of the Clinical Consequences of Low Cardiorespiratory Fitness. Contemporary Diabetes, 2018, , 3-16.	0.0	0
122	A tribute to Charles M. â€œTipâ€•Tipton (1927â€"2021). Journal of Applied Physiology, 2021, 131, 192-193.	1.2	0
123	p21 ^{Cip1} Expression is Increased in Ambient Oxygen, Compared to Estimated Physiological (5%) Levels in Rat Primary Muscle Precursor Cell Culture. FASEB Journal, 2007, 21, .	0.2	0
124	Adipose tissue compensates to maintain whole body insulin sensitivity 173 hours following the cessation of voluntary running in rats. FASEB Journal, 2007, 21, .	0.2	0
125	Effect of moderate fat/high sucrose diet on glycogen synthesis rates in rat skeletal muscle upon the cessation of voluntary wheel running. FASEB Journal, 2007, 21, A691.	0.2	0
126	Physical activity prevents endothelial dysfunction induced by sedentary life style and high fat diet in murine coronary microcirculation. FASEB Journal, 2009, 23, 952.4.	0.2	0

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127	Effects of Endurance Exercise Training, Metformin, and Their Combination on Adipose Tissue Cytokine Secretion in a Rat Model of Type 2 Diabetes (T2D). FASEB Journal, 2012, 26, 1142.13.	0.2	0
128	Cocaineâ€induced locomotor activity in rats selectivelyâ€bred for high and low motivation to voluntarily run. FASEB Journal, 2013, 27, 1098.11.	0.2	0
129	Ketogenic diet in combination with voluntary exercise impacts markers of hepatic metabolism and oxidative stress in male and female rats. FASEB Journal, 2019, 33, 699.4.	0.2	0