Lawrence L Spriet

List of Publications by Citations

131 papers	5,995 citations	46 h-index	73 g-index
139 ext. papers	6,949 ext. citations	4.4 avg, IF	6.19 L-index

#	Paper	IF	Citations
131	Repeated transient mRNA bursts precede increases in transcriptional and mitochondrial proteins during training in human skeletal muscle. *Journal of Physiology*, **2010**, 588, 4795-810	3.9	353
130	IOC consensus statement: dietary supplements and the high-performance athlete. *British Journal of Sports Medicine*, **2018**, 52, 439-455	10.3	237
129	IOC Consensus Statement: Dietary Supplements and the High-Performance Athlete. *International Journal of Sport Nutrition and Exercise Metabolism*, **2018**, 28, 104-125	4.4	159
128	Exercise and sport performance with low doses of caffeine. *Sports Medicine*, **2014**, 44 Suppl 2, S175-84	10.6	159
127	Nutritional modulation of training-induced skeletal muscle adaptations. *Journal of Applied Physiology*, **2011**, 110, 834-45	3.7	148
126	Mitochondrial long chain fatty acid oxidation, fatty acid translocase/CD36 content and carnitine palmitoyltransferase I activity in human skeletal muscle during aerobic exercise. *Journal of Physiology*, **2006**, 571, 201-10	3.9	136
125	Intramuscular triacylglycerol, glycogen and acetyl group metabolism during 4 h of moderate exercise in man. *Journal of Physiology*, **2002**, 541, 969-78	3.9	134
124	Regulation of skeletal muscle glycogen phosphorylase and PDH during maximal intermittent exercise. *American Journal of Physiology - Endocrinology and Metabolism*, **1999**, 277, E890-900	6	131
123	Skeletal muscle energy metabolism during exercise. *Nature Metabolism*, **2020**, 2, 817-828	14.6	128
122	Decreased PDH activation and glycogenolysis during exercise following fat adaptation with carbohydrate restoration. *American Journal of Physiology - Endocrinology and Metabolism*, **2006**, 290, E380-8	6	127
121	New insights into the interaction of carbohydrate and fat metabolism during exercise. *Sports Medicine*, **2014**, 44 Suppl 1, S87-96	10.6	125
120	Human skeletal muscle PDH kinase activity and isoform expression during a 3-day high-fat/low-carbohydrate diet. *American Journal of Physiology - Endocrinology and Metabolism*, **2001**, 281, E1151-8	6	124
119	Adrenaline increases skeletal muscle glycogenolysis, pyruvate dehydrogenase activation and carbohydrate oxidation during moderate exercise in humans. *Journal of Physiology*, **2001**, 534, 269-78	3.9	116
118	Intramuscular triacylglycerol utilization in human skeletal muscle during exercise: is there a controversy?. *Journal of Applied Physiology*, **2002**, 93, 1185-95	3.7	116
117	Identification of fatty acid translocase on human skeletal muscle mitochondrial membranes: essential role in fatty acid oxidation. *American Journal of Physiology - Endocrinology and Metabolism*, **2006**, 290, E509-15	6	104
116	Regulation of skeletal muscle glycogen phosphorylase and PDH at varying exercise power outputs. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **1998**, 275, R418-25	3.2	101
115	Beetroot juice supplementation does not improve performance of elite 1500-m runners. *Medicine and Science in Sports and Exercise*, **2014**, 46, 2326-34	1.2	95

114	Exercise training increases sarcolemmal and mitochondrial fatty acid transport proteins in human skeletal muscle. *American Journal of Physiology - Endocrinology and Metabolism*, **2010**, 299, E180-8	6	93
113	Regulation of skeletal muscle mitochondrial fatty acid metabolism in lean and obese individuals. *American Journal of Clinical Nutrition*, **2009**, 89, 455S-62S	7	90
112	An enzymatic approach to lactate production in human skeletal muscle during exercise. *Medicine and Science in Sports and Exercise*, **2000**, 32, 756-63	1.2	90
111	Sensitivity of CPT I to malonyl-CoA in trained and untrained human skeletal muscle. *American Journal of Physiology - Endocrinology and Metabolism*, **2000**, 278, E462-8	6	83
110	Human skeletal muscle carnitine palmitoyltransferase I activity determined in isolated intact mitochondria. *Journal of Applied Physiology*, **1998**, 85, 148-53	3.7	79
109	Omega-3 Fatty Acid Supplementation for 12 Weeks Increases Resting and Exercise Metabolic Rate in Healthy Community-Dwelling Older Females. *PLoS ONE*, **2015**, 10, e0144828	3.7	78
108	Pyruvate dehydrogenase activation and kinase expression in human skeletal muscle during fasting. *Journal of Applied Physiology*, **2004**, 96, 2082-7	3.7	74
107	Seven days of oral taurine supplementation does not increase muscle taurine content or alter substrate metabolism during prolonged exercise in humans. *Journal of Applied Physiology*, **2008**, 105, 643-51	3.7	68
106	Fat adaptation in well-trained athletes: effects on cell metabolism. *Applied Physiology, Nutrition and Metabolism*, **2011**, 36, 12-22	3	67
105	Negligible direct lactate oxidation in subsarcolemmal and intermyofibrillar mitochondria obtained from red and white rat skeletal muscle. *Journal of Physiology*, **2007**, 582, 1317-35	3.9	66
104	Sport-specific nutrition: practical strategies for team sports. *Journal of Sports Sciences*, **2011**, 29 Suppl 1, S115-25	3.6	64
103	Regulation of pyruvate dehydrogenase (PDH) activity in human skeletal muscle during exercise. *Exercise and Sport Sciences Reviews*, **2002**, 30, 91-5	6.7	64
102	Conjugated linoleic acid improves insulin sensitivity in young, sedentary humans. *Medicine and Science in Sports and Exercise*, **2004**, 36, 814-20	1.2	63
101	Regulation of skeletal muscle fat oxidation during exercise in humans. *Medicine and Science in Sports and Exercise*, **2002**, 34, 1477-84	1.2	63
100	Dietary carbohydrate, muscle glycogen content, and endurance performance in well-trained women. *Journal of Applied Physiology*, **2000**, 88, 2151-8	3.7	60
99	Muscle fiber type comparison of PDH kinase activity and isoform expression in fed and fasted rats. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2001**, 280, R661-8	3.2	58
98	Mitochondrial creatine kinase activity and phosphate shuttling are acutely regulated by exercise in human skeletal muscle. *Journal of Physiology*, **2012**, 590, 5475-86	3.9	57
97	Significant intramyocellular lipid use during prolonged cycling in endurance-trained males as assessed by three different methodologies. *American Journal of Physiology - Endocrinology and Metabolism*, **2007**, 292, E1715-23	6	57

96	The effect of acute taurine ingestion on endurance performance and metabolism in well-trained cyclists. *International Journal of Sport Nutrition and Exercise Metabolism*, **2010**, 20, 322-9	4.4	56
95	Narrative Review of Hydration and Selected Health Outcomes in the General Population. *Nutrients*, **2019**, 11,	6.7	56
94	Regulation of glycogen phosphorylase and PDH during exercise in human skeletal muscle during hypoxia. *American Journal of Physiology - Endocrinology and Metabolism*, **2000**, 278, E522-34	6	55
93	Administration of Caffeine in Alternate Forms. *Sports Medicine*, **2018**, 48, 79-91	10.6	54
92	Fatty acid binding protein facilitates sarcolemmal fatty acid transport but not mitochondrial oxidation in rat and human skeletal muscle. *Journal of Physiology*, **2007**, 582, 393-405	3.9	54
91	Effects of dynamic exercise intensity on the activation of hormone-sensitive lipase in human skeletal muscle. *Journal of Physiology*, **2003**, 547, 301-8	3.9	53
90	Enzymatic regulation of glucose disposal in human skeletal muscle after a high-fat, low-carbohydrate diet. *Journal of Applied Physiology*, **2005**, 98, 100-7	3.7	52
89	Skeletal muscle malonyl-CoA content at the onset of exercise at varying power outputs in humans. *American Journal of Physiology - Endocrinology and Metabolism*, **1998**, 274, E1080-5	6	51
88	Skeletal muscle fat and carbohydrate metabolism during recovery from glycogen-depleting exercise in humans. *Journal of Physiology*, **2003**, 548, 919-27	3.9	51
87	Hormone-sensitive lipase activity and fatty acyl-CoA content in human skeletal muscle during prolonged exercise. *Journal of Applied Physiology*, **2003**, 95, 314-21	3.7	50
86	Hyperoxia decreases muscle glycogenolysis, lactate production, and lactate efflux during steady-state exercise. *American Journal of Physiology - Endocrinology and Metabolism*, **2006**, 290, E1180-90	6	49
85	Beetroot Juice Increases Human Muscle Force without Changing Ca2+-Handling Proteins. *Medicine and Science in Sports and Exercise*, **2017**, 49, 2016-2024	1.2	46
84	Taurine and skeletal muscle function. *Current Opinion in Clinical Nutrition and Metabolic Care*, **2015**, 18, 96-101	3.8	46
83	Anaerobic metabolism in human skeletal muscle during short-term, intense activity. *Canadian Journal of Physiology and Pharmacology*, **1992**, 70, 157-65	2.4	44
82	Triacylglycerol lipases and metabolic control: implications for health and disease. *American Journal of Physiology - Endocrinology and Metabolism*, **2010**, 299, E162-8	6	43
81	Rosiglitazone increases fatty acid oxidation and fatty acid translocase (FAT/CD36) but not carnitine palmitoyltransferase I in rat muscle mitochondria. *Journal of Physiology*, **2008**, 586, 1755-66	3.9	42
80	Effects of plasma adrenaline on hormone-sensitive lipase at rest and during moderate exercise in human skeletal muscle. *Journal of Physiology*, **2003**, 550, 325-32	3.9	40
79	Effects of PDH activation by dichloroacetate in human skeletal muscle during exercise in hypoxia. *American Journal of Physiology - Endocrinology and Metabolism*, **2000**, 279, E752-61	6	39

78	Effects of dehydration during cycling on skeletal muscle metabolism in females. *Medicine and Science in Sports and Exercise*, **2012**, 44, 1949-57	1.2	38
77	Nutritional strategies to influence adaptations to training. *Journal of Sports Sciences*, **2004**, 22, 127-41	3.6	38
76	Exercise Metabolism: Fuels for the Fire. *Cold Spring Harbor Perspectives in Medicine*, **2018**, 8,	5.4	37
75	Effects of increased fat availability on fat-carbohydrate interaction during prolonged exercise in men. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **1998**, 274, R894-902	2.3	37
74	The effect of dehydration on muscle metabolism and time trial performance during prolonged cycling in males. *Physiological Reports*, **2015**, 3, e12483	2.6	36
73	Time course of insulin sensitivity and skeletal muscle glycogen synthase activity after a single bout of exercise in horses. *Journal of Applied Physiology*, **2007**, 103, 1063-9	3.7	35
72	Pyruvate overrides inhibition of PDH during exercise after a low-carbohydrate diet. *American Journal of Physiology - Endocrinology and Metabolism*, **2000**, 279, E275-83	6	35
71	Skeletal muscle glycogen phosphorylase a kinetics: effects of adenine nucleotides and caffeine. *Journal of Applied Physiology*, **2001**, 91, 2071-8	3.7	35
70	Ablating the protein TBC1D1 impairs contraction-induced sarcolemmal glucose transporter 4 redistribution but not insulin-mediated responses in rats. *Journal of Biological Chemistry*, **2017**, 292, 16653-16664	5.4	34
69	Fasting activates the gene expression of UCP3 independent of genes necessary for lipid transport and oxidation in skeletal muscle. *Biochemical and Biophysical Research Communications*, **2002**, 294, 301-8	3.4	34
68	Fish oil supplementation alters circulating eicosanoid concentrations in young healthy men. *Metabolism: Clinical and Experimental*, **2013**, 62, 1107-13	12.7	33
67	Effects of alkalosis on muscle ions at rest and with intense exercise. *Canadian Journal of Physiology and Pharmacology*, **1990**, 68, 820-9	2.4	33
66	High intensity interval and endurance training have opposing effects on markers of heart failure and cardiac remodeling in hypertensive rats. *PLoS ONE*, **2015**, 10, e0121138	3.7	33
65	The effects of training in hyperoxia vs. normoxia on skeletal muscle enzyme activities and exercise performance. *Journal of Applied Physiology*, **2007**, 102, 1022-7	3.7	32
64	Effects of hyperoxia on skeletal muscle carbohydrate metabolism during transient and steady-state exercise. *Journal of Applied Physiology*, **2005**, 98, 250-6	3.7	32
63	Regulation and role of hormone-sensitive lipase activity in human skeletal muscle. *Proceedings of the Nutrition Society*, **2004**, 63, 315-22	2.9	29
62	Effects of high fat provision on muscle PDH activation and malonyl-CoA content in moderate exercise. *Journal of Applied Physiology*, **2000**, 89, 2352-8	3.7	29
61	Regulation of muscle glycogenolytic flux during intense aerobic exercise after caffeine ingestion. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **1998**, 275, R596-603	3.2	29

60	AMP-activated protein kinase is required for exercise-induced peroxisome proliferator-activated receptor co-activator 1 translocation to subsarcolemmal mitochondria in skeletal muscle. *Journal of Physiology*, **2013**, 591, 1551-61	3.9	28
59	Fluid and electrolyte supplementation after prolonged moderate-intensity exercise enhances muscle glycogen resynthesis in Standardbred horses. *Journal of Applied Physiology*, **2009**, 106, 91-100	3.7	28
58	Energy cost and metabolic regulation during intermittent and continuous tetanic contractions in human skeletal muscle. *Canadian Journal of Physiology and Pharmacology*, **1988**, 66, 134-9	2.4	28
57	Low and moderate doses of caffeine late in exercise improve performance in trained cyclists. *Applied Physiology, Nutrition and Metabolism*, **2016**, 41, 850-5	3	28
56	Oral acetate supplementation after prolonged moderate intensity exercise enhances early muscle glycogen resynthesis in horses. *Experimental Physiology*, **2009**, 94, 888-98	2.4	27
55	Interaction of diet and training on endurance performance in rats. *Experimental Physiology*, **2001**, 86, 499-508	2.4	27
54	Phosphofructokinase activity and acidosis during short-term tetanic contractions. *Canadian Journal of Physiology and Pharmacology*, **1991**, 69, 298-304	2.4	27
53	Guelph Family Health Study: pilot study of a home-based obesity prevention intervention. *Canadian Journal of Public Health*, **2018**, 109, 549-560	3.2	26
52	Acute endurance exercise increases plasma membrane fatty acid transport proteins in rat and human skeletal muscle. *American Journal of Physiology - Endocrinology and Metabolism*, **2012**, 302, E183-9	6	26
51	Increase in skeletal-muscle glycogenolysis and perceived exertion with progressive dehydration during cycling in hydrated men. *International Journal of Sport Nutrition and Exercise Metabolism*, **2013**, 23, 220-9	4.4	25
50	Influence of diet on the metabolic responses to exercise. *Proceedings of the Nutrition Society*, **1998**, 57, 25-33	2.9	25
49	Skeletal muscle metabolism during high-intensity sprint exercise is unaffected by dichloroacetate or acetate infusion. *Journal of Applied Physiology*, **1999**, 87, 1747-51	3.7	25
48	Rapid upregulation of pyruvate dehydrogenase kinase activity in human skeletal muscle during prolonged exercise. *Journal of Applied Physiology*, **2004**, 97, 1261-7	3.7	23
47	Pyruvate ingestion for 7 days does not improve aerobic performance in well-trained individuals. *Journal of Applied Physiology*, **2000**, 89, 549-56	3.7	23
46	On-ice sweat rate, voluntary fluid intake, and sodium balance during practice in male junior ice hockey players drinking water or a carbohydrate-electrolyte solution. *Applied Physiology, Nutrition and Metabolism*, **2010**, 35, 328-35	3	22
45	Incorporation of Omega-3 Fatty Acids Into Human Skeletal Muscle Sarcolemmal and Mitochondrial Membranes Following 12 Weeks of Fish Oil Supplementation. *Frontiers in Physiology*, **2019**, 10, 348	4.6	20
44	A call for adult congenital heart disease patient participation in cardiac rehabilitation. *International Journal of Cardiology*, **2011**, 150, 345-6	3.2	19
43	No effect of beetroot juice supplementation on exercise economy and performance in recreationally active females despite increased torque production. *Physiological Reports*, **2019**, 7, e13982	2.6	17

42	Adrenergic regulation of HSL serine phosphorylation and activity in human skeletal muscle during the onset of exercise. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2006**, 291, R1094-9	3.2	17
41	Caffeine for Sports Performance **2013**,		17
40	Effects of reduced free fatty acid availability on hormone-sensitive lipase activity in human skeletal muscle during aerobic exercise. *Journal of Applied Physiology*, **2004**, 97, 1938-45	3.7	16
39	Rat skeletal muscle triacylglycerol utilization during exhaustive swimming. *Canadian Journal of Physiology and Pharmacology*, **1985**, 63, 614-8	2.4	16
38	Regulation of substrate use during the marathon. *Sports Medicine*, **2007**, 37, 332-6	10.6	15
37	Epinephrine infusion does not enhance net muscle glycogenolysis during prolonged aerobic exercise. *Applied Physiology, Nutrition, and Metabolism*, **1996**, 21, 271-84		15
36	Maintaining hydration with a carbohydrate-electrolyte solution improves performance, thermoregulation, and fatigue during an ice hockey scrimmage. *Applied Physiology, Nutrition and Metabolism*, **2014**, 39, 1214-21	3	14
35	Activation of AMPKα2 Is Not Required for Mitochondrial FAT/CD36 Accumulation during Exercise. *PLoS ONE*, **2015**, 10, e0126122	3.7	14
34	Carbohydrate ingestion reduces skeletal muscle acetylcarnitine availability but has no effect on substrate phosphorylation at the onset of exercise in man. *Journal of Physiology*, **2002**, 544, 949-56	3.9	14
33	Human skeletal muscle creatine transporter mRNA and protein expression in healthy, young males and females. *Molecular and Cellular Biochemistry*, **2003**, 244, 151-157	4.2	14
32	Anaerobic ATP provision, glycogenolysis and glycolysis in rat slow-twitch muscle during tetanic contractions. *Pflugers Archiv European Journal of Physiology*, **1990**, 417, 278-84	4.6	14
31	CrossTalk opposing view: High intensity interval training does not have a role in risk reduction or treatment of disease. *Journal of Physiology*, **2015**, 593, 5219-21	3.9	13
30	Muscle Glycogen Metabolism and High-Intensity Exercise Performance: A Narrative Review. *Sports Medicine*, **2021**, 51, 1855-1874	10.6	13
29	Lack of effects of fish oil supplementation for 12 weeks on resting metabolic rate and substrate oxidation in healthy young men: A randomized controlled trial. *PLoS ONE*, **2017**, 12, e0172576	3.7	12
28	Effects of reduced free fatty acid availability on skeletal muscle PDH activation during aerobic exercise. Pyruvate dehydrogenase. *American Journal of Physiology - Endocrinology and Metabolism*, **2003**, 284, E589-96	6	11
27	Legal pre-event nutritional supplements to assist energy metabolism. *Essays in Biochemistry*, **2008**, 44, 27-43	7.6	11
26	Estimated Sweat Loss, Fluid and Carbohydrate Intake, and Sodium Balance of Male Major Junior, AHL, and NHL Players During On-Ice Practices. *International Journal of Sport Nutrition and Exercise Metabolism*, **2019**, 29, 612-619	4.4	5
25	Effects of Caffeine on Exertion, Skill Performance, and Physicality in Ice Hockey. *International Journal of Sports Physiology and Performance*, **2019**, 14, 1422-1429	3.5	5

24	Ischemic Preconditioning: No Influence on Maximal Sprint Acceleration Performance. *International Journal of Sports Physiology and Performance*, **2018**, 13, 986-990	3.5	5
23	Mild Dehydration Does Not Influence Performance Or Skeletal Muscle Metabolism During Simulated Ice Hockey Exercise In Men. *International Journal of Sport Nutrition and Exercise Metabolism*, **2017**, 27, 169-177	4.4	4
22	Dietary Supplement Use among Non-athlete Students at a Canadian University: A Pilot-Survey. *Nutrients*, **2020**, 12,	6.7	4
21	Elevated muscle citrate does not reduce carbohydrate utilization during tetanic stimulation. *Canadian Journal of Physiology and Pharmacology*, **1994**, 72, 117-25	2.4	3
20	Sweat Loss and Fluid Intake of Female Varsity Ice Hockey Players During On-Ice Practices and Games. *Journal of Strength and Conditioning Research*, **2020**, 34, 389-395	3.2	3
19	Assessment of Na+/K+ ATPase Activity in Small Rodent and Human Skeletal Muscle Samples. *Medicine and Science in Sports and Exercise*, **2019**, 51, 2403-2409	1.2	3
18	Performance Effects of Carbohydrate Ingestion Between Bouts of Intense Aerobic Interval Exercise. *International Journal of Sports Physiology and Performance*, **2020**, 15, 262-267	3.5	3
17	Nutritional Support for Athletic Performance. *Sports Medicine*, **2015**, 45 Suppl 1, S3-4	10.6	2
16	Resting metabolic rate and skeletal muscle SERCA and Na /K ATPase activities are not affected by fish oil supplementation in healthy older adults. *Physiological Reports*, **2020**, 8, e14408	2.6	2
15	Caffeine and Exercise Performance **2013**, 313-323		2
14	Effect of aging on the buffering capacity of fast-twitch skeletal muscle. *Mechanisms of Ageing and Development*, **1991**, 59, 243-52	5.6	2
13	Impairment of Thermoregulation and Performance via Mild Dehydration in Ice Hockey Goaltenders. *International Journal of Sports Physiology and Performance*, **2020**, 15, 833-840	3.5	2
12	External Training Demands in Women's Varsity Rugby Union Players Quantified by Wearable Microtechnology With Individualized Speed Thresholds. *Journal of Strength and Conditioning Research*, **2021**,	3.2	2
11	Nutrition for training and performance. *Sports Medicine*, **2014**, 44 Suppl 2, S115-6	10.6	1
10	Origins of arterial and femoral venous acid-base responses during moderate-intensity bicycling exercise after glycogen depletion in men. *Equine and Comparative Exercise Physiology*, **2007**, 4, 123-133		1
9	Effects of microhydrin supplementation on endurance performance and metabolism in well-trained cyclists. *International Journal of Sport Nutrition and Exercise Metabolism*, **2004**, 14, 560-73	4.4	1
8	The torque-frequency relationship is impaired similarly following two bouts of eccentric exercise: No evidence of a protective repeated bout effect. *Journal of Biomechanics*, **2021**, 122, 110448	2.9	1
7	Dietary Macronutrient and Micronutrient Intake over a 7-Day Period in Female Varsity Ice Hockey Players. *Nutrients*, **2021**, 13,	6.7	1

List of Publications

6	Internal Physiological Load Measured Using Training Impulse in Varsity Men's and Women's Ice Hockey Players Between Game Periods. *Journal of Strength and Conditioning Research*, **2021**, 35, 2824-2832	3.2	1
5	Local Positioning System-Derived External Load of Female and Male Varsity Ice Hockey Players During Regular Season Games.. *Frontiers in Physiology*, **2022**, 13, 831723	4.6	1
4	Rebuttal from Tanya M. Holloway and Lawrence L. Spriet. *Journal of Physiology*, **2015**, 593, 5225	3.9	0
3	Anaerobic Metabolism During Exercise. *Physiology in Health and Disease*, **2022**, 51-70	0.2	0
2	Oral taurine supplementation does not increase muscle taurine content or alter substrate metabolism during prolonged submaximal cycling in active males. *FASEB Journal*, **2007**, 21, A715	0.9	
1	Dietary Intake over a 7-Day Training and Game Period in Female Varsity Rugby Union Players. *Nutrients*, **2022**, 14, 2281	6.7	