The fastest runner on artificial legs: different limbs, sim

Journal of Applied Physiology
107, 903-911
DOI: 10.1152/japplphysiol.00174.2009

Citation Report

#	Article	IF	Citations
1	A simple method for assessing the energy cost of running during incremental tests. Journal of Applied Physiology, 2009, 107, 1068-1075.	1.2	42
2	Rebuttal from Kram, Grabowski, Mcgowan, Brown, Mcdermott, Beale, and Herr. Journal of Applied Physiology, 2010, 108, 1014-1015.	1.2	2
3	Point: Artificial limbs do make artificially fast running speeds possible. Journal of Applied Physiology, 2010, 108, 1011-1012.	1.2	38
4	Last Word on Point:Counterpoint: Artificial limbs do make artificially fast running speeds possible. Journal of Applied Physiology, 2010, 108, 1019-1019.	1.2	5
5	Fairer Sex: The Ethics of Determining Gender for Athletic Eligibility: Commentary on â€œBeyond the Caster Semenya Controversy: The Case of the Use of Genetics for Gender Testing in Sportâ€• Journal of Genetic Counseling, 2010, 19, 549-550.	0.9	9
6	Running-specific prostheses limit ground-force during sprinting. Biology Letters, 2010, 6, 201-204.	1.0	86
7	Comments on Point:Counterpoint: Artificial limbs do/do not make artificially fast running speeds possible. Journal of Applied Physiology, 2010, 108, 1016-1018.	1.2	6
9	The biological limits to running speed are imposed from the ground up. Journal of Applied Physiology, 2010, 108, 950-961.	1.2	204
10	Counterpoint: Artificial legs do not make artificially fast running speeds possible. Journal of Applied Physiology, 2010, 108, 1012-1014.	1.2	26
11	Enhancing disabilities: transhumanism under the veil of inclusion?. Disability and Rehabilitation, 2010, 32, 2222-2227.	0.9	22
12	Shifting boundaries in sports technology and disability: equal rights or unfair advantage in the case of Oscar Pistorius?. Disability and Society, 2011, 26, 643-654.	1.4	50
13	Paralympic sport: an emerging area for research and consultancy in sports biomechanics. Sports Biomechanics, 2011, 10, 234-253.	0.8	49
14	Commentaries on Viewpoint: The two-hour marathon: Who and when?. Journal of Applied Physiology, 2011, 110, 278-293.	1.2	25
15	Sprint running performance: comparison between treadmill and field conditions. European Journal of Applied Physiology, 2011, 111, 1695-1703.	1.2	68
16	Adaptations for economical bipedal running: the effect of limb structure on three-dimensional joint mechanics. Journal of the Royal Society Interface, 2011, 8, 740-755.	1.5	82
17	Technical Ability of Force Application as a Determinant Factor of Sprint Performance. Medicine and Science in Sports and Exercise, 2011, 43, 1680-1688.	0.2	312
18	Generalization of a Model Based on Biophysical Concepts of Muscle Activation, Fatigue and Recovery that Explains Exercise Performance. International Journal of Sports Medicine, 2012, 33, 258-267.	0.8	10
19	Leg stiffness of sprinters using running-specific prostheses. Journal of the Royal Society Interface, 2012, 9, 1975-1982.	1.5	76

#	Article	IF	Citations
20	Pistorious at the Olympics: the saga continues. British Journal of Sports Medicine, 2012, 46, 896-896.	3.1	2
21	Sprint prostheses used at the Paralympics. Prosthetics and Orthotics International, 2012, 36, 306-311.	0.5	2
23	Mechanical determinants of 100-m sprint running performance. European Journal of Applied Physiology, 2012, 112, 3921-3930.	1.2	313
24	Biomechanical Approach to Open-Loop Bipedal Running with a Musculoskeletal Athlete Robot. Advanced Robotics, 2012, 26, 383-398.	1.1	58
25	Recent trends in assistive technology for mobility. Journal of NeuroEngineering and Rehabilitation, 2012, 9, 20.	2.4	124
26	Amputation in the Diabetic to Maximize Function. Seminars in Vascular Surgery, 2012, 25, 115-121.	1.1	14
27	Sport prostheses and prosthetic adaptations for the upper and lower limb amputees. Prosthetics and Orthotics International, 2012, 36, 290-296.	0.5	34
28	Disability as Microcosm: the Boundaries of the Human Body. Societies, 2012, 2, 302-316.	0.8	2
29	Amputee locomotion: Spring-like leg behavior and stiffness regulation using running-specific prostheses. Journal of Biomechanics, 2013, 46, 2483-2489.	0.9	56
30	Gross Anatomy and Acupuncture: A Comparative Approach to Reappraise the Meridian System. Medical Acupuncture, 2013, 25, 5-22.	0.3	6
31	Modal analysis of composite prosthetic energy-storing-and-returning feet: an initial investigation. Proceedings of the Institution of Mechanical Engineers, Part P: Journal of Sports Engineering and Technology, 2013, 227, 39-48.	0.4	10
32	Preliminary Assessment of Balance With the Berg Balance Scale in Adults Who Have a Leg Amputation and Dwell in the Community: Rasch Rating Scale Analysis. Physical Therapy, 2013, 93, 1520-1529.	1.1	49
33	Does Specific Footwear Facilitate Energy Storage and Return at the Metatarsophalangeal Joint in Running?. Journal of Applied Biomechanics, 2013, 29, 583-592.	0.3	92
34	ForÃ§a de ReaÃ§Ã£o do Solo e atividade eletromiogrÃ¡fica da marcha de amputados transfemorais: uma sÃ©rie de casos. Revista Brasileira De Cineantropometria E Desempenho Humano, 2013, 15, .	0.5	1
35	Technology as A Way to Improve Performance for the Paralympic Athletes. Journal of Ergonomics, 2013, 03, .	0.2	0
36	A Statistical Perspective on Running with Prosthetic Lower-Limbs: An Advantage or Disadvantage?. Sports, 2014, 2, 76-84.	0.7	2
37	Running-specific prostheses: The history, mechanics, and controversy. Journal of the Society of Biomechanisms, 2014, 38, 105-110.	0.0	12
38	Are running speeds maximized with simple-spring stance mechanics?. Journal of Applied Physiology, 2014, 117, 604-615.	1.2	103

#	Article	IF	Citations
39	Energy Costs & Performance of Transtibial Amputees & Non-amputees during Walking & Running. International Journal of Sports Medicine, 2014, 35, 1223-1228.	0.8	21
40	Amputee Athletes, Part 2: Biomechanics and Common Running Injuries. International Journal of Athletic Therapy and Training, 2014, 19, 39-42.	0.1	1
41	Athletic Assistive Technology for Persons with Physical Conditions Affecting Mobility. Journal of Prosthetics and Orthotics, 2014, 26, 154-165.	0.2	3
42	Outcomes After 294 Transtibial Amputations With the Posterior Myocutaneous Flap. International Journal of Lower Extremity Wounds, 2014, 13, 33-40.	0.6	31
43	Foot speed, foot-strike and footwear:linking gait mechanics and running ground reaction forces. Journal of Experimental Biology, 2014, 217, 2037-40.	0.8	47
44	Amputees. , 2014, , 107-126.		1
45	Modeling the Effect of a Prosthetic Limb on 4-km Pursuit Performance. International Journal of Sports Physiology and Performance, 2015, 10, 3-10.	1.1	10
46	Paralympic Sprint Performance Between 1992 and 2012. International Journal of Sports Physiology and Performance, 2015, 10, 1052-1054.	1.1	22
47	The effects of changes in the sagittal plane alignment of running-specific transtibial prostheses on ground reaction forces. Journal of Physical Therapy Science, 2015, 27, 1347-1351.	0.2	11
49	The controversy of sports technology: a systematic review. SpringerPlus, 2015, 4, 524.	1.2	48
50	Sprint running research speeds up: A first look at the mechanics of elite acceleration. Scandinavian Journal of Medicine and Science in Sports, 2015, 25, 581-582.	1.3	9
51	The Potential Transformation of Our Species by Neural Enhancement. Journal of Motor Behavior, 2015, 47, 73-78.	0.5	13
52	Design and testing of a high-speed treadmill to measure ground reaction forces at the limit of human gait. Medical Engineering and Physics, 2015, 37, 892-897.	0.8	7
53	Effect of Running Speed and Leg Prostheses on Mediolateral Foot Placement and Its Variability. PLoS ONE, 2015, 10, e0115637.	1.1	13
54	Spatiotemporal Variables of Able-bodied and Amputee Sprinters in Menâ€™s 100-m Sprint. International Journal of Sports Medicine, 2015, 36, 494-497.	0.8	17
55	Sprinting with an amputation. Prosthetics and Orthotics International, 2015, 39, 300-306.	0.5	6
56	Spatiotemporal Parameters of 100-m Sprint in Different Levels of Sprinters with Unilateral Transtibial Amputation. PLoS ONE, 2016, 11, e0163712.	1.1	3
57	Energy Storage and Return Prostheses: A Review of Mechanical Models. Critical Reviews in Biomedical Engineering, 2016, 44, 269-292.	0.5	5

#	Article	IF	Citations
58	Effect of Different Mounting Angles of Prosthetic Feet Dedicated to Sprinting on Reaction Forces. Procedia Engineering, 2016, 147, 490-495.	1.2	5
59	Amputee Locomotion: Ground Reaction Forces During Submaximal Running With Running-Specific Prostheses. Journal of Applied Biomechanics, 2016, 32, 287-294.	0.3	24
60	Normative Spatiotemporal Parameters During 100-m Sprints in Amputee Sprinters Using Running-Specific Prostheses. Journal of Applied Biomechanics, 2016, 32, 93-96.	0.3	12
62	Simulation of gait asymmetry and energy transfer efficiency between unilateral and bilateral amputees. Sports Engineering, 2016, 19, 163-170.	0.5	9
63	Maximum-speed curve-running biomechanics of sprinters with and without unilateral leg amputations. Journal of Experimental Biology, 2016, 219, 851-858.	0.8	26
64	Step Frequency and Step Length of 200-m Sprint in Able-bodied and Amputee Sprinters. International Journal of Sports Medicine, 2016, 37, 165-168.	0.8	8
65	The Importance of Muscular Strength in Athletic Performance. Sports Medicine, 2016, 46, 1419-1449.	3.1	658
66	Resisted Sled Sprint Training to Improve Sprint Performance: A Systematic Review. Sports Medicine, 2016, 46, 381-400.	3.1	135
67	Energy-efficacy comparisons and multibody dynamics analyses of legged robots with different closed-loop mechanisms. Multibody System Dynamics, 2017, 40, 123-153.	1.7	19
68	How Biomechanical Improvements in Running Economy Could Break the 2-hour Marathon Barrier. Sports Medicine, 2017, 47, 1739-1750.	3.1	76
69	Regulation of step frequency in transtibial amputee endurance athletes using a running-specific prosthesis. Journal of Biomechanics, 2017, 51, 42-48.	0.9	16
70	Ground Reaction Forces During Sprinting in Unilateral Transfemoral Amputees. Journal of Applied Biomechanics, 2017, 33, 406-409.	0.3	19
71	Prosthetic model, but not stiffness or height, affects the metabolic cost of running for athletes with unilateral transtibial amputations. Journal of Applied Physiology, 2017, 123, 38-48.	1.2	25
72	Reduced prosthetic stiffness lowers the metabolic cost of running for athletes with bilateral transtibial amputations. Journal of Applied Physiology, 2017, 122, 976-984.	1.2	25
73	Relationship between body height and spatiotemporal parameters during a 100-m sprint in able-bodied and unilateral transtibial sprinters. Prosthetics and Orthotics International, 2017, 41, 492-497.	0.5	2
74	Biomechanics in Paralympics: Implications for Performance. International Journal of Sports Physiology and Performance, 2017, 12, 578-589.	1.1	34
75	From assistive to enhancing technology: should the treatment-enhancement distinction apply to future assistive and augmenting technologies?. Journal of Medical Ethics, 2017, 44, medethics-2016-104014.	1.0	0
76	Amputee locomotion: Frequency content of prosthetic vs. intact limb vertical ground reaction forces during running and the effects of filter cut-off frequency. Journal of Biomechanics, 2017, 60, 248-252.	0.9	11

#	Article	IF	Citations
77	How do prosthetic stiffness, height and running speed affect the biomechanics of athletes with bilateral transtibial amputations?. Journal of the Royal Society Interface, 2017, 14, 20170230.	1.5	27
78	Characterisation of the responsive properties of two running-specific prosthetic models. Prosthetics and Orthotics International, 2017, 41, 141-148.	0.5	6
79	On improving gait analysis data. , 2017, , .		0
80	Towards a better understanding of human sprinting motions with and without prostheses. , 2017, , .		3
81	Hierachical sliding mode control for balancing athlete robot. , 2017, , .		0
82	Paralympic Philosophy and Ethics. , 2018, , 461-478.		3
83	Mechanical stiffness of running-specific prostheses in consideration of clamped position. Mechanical Engineering Letters, 2018, 4, 17-00452-17-00452.	0.2	2
84	Sport-Specific Limb Prostheses in Para Sport. Physical Medicine and Rehabilitation Clinics of North America, 2018, 29, 371-385.	0.7	5
85	Mechanical Limitations to Sprinting and Biomechanical Solutions: A Constraints-Led Framework for the Incorporation of Resistance Training to Develop Sprinting Speed. Strength and Conditioning Journal, 2018, 40, 47-67.	0.7	26
86	Lower extremity kinematics of curve sprinting displayed by runners using a transtibial prosthesis. Journal of Sports Sciences, 2018, 36, 293-302.	1.0	1
87	The biomechanics of the fastest sprinter with a unilateral transtibial amputation. Journal of Applied Physiology, 2018, 124, 641-645.	1.2	10
88	Slender origami with complex 3D folding shapes. Europhysics Letters, 2018, 124, 58001.	0.7	6
89	Stepping-stones to Transhumanism: An EMG-controlled Low-cost Prosthetic Hand for Academia. , 2018, , .		9
90	Comparison of lower limb segment forces during running on artificial turf and natural grass. Journal of Rehabilitation and Assistive Technologies Engineering, 2019, 6, 205566831983570.	0.6	3
91	Comparison of Sprinting With and Without Running-Specific Prostheses Using Optimal Control Techniques. Robotica, 2019, 37, 2176-2194.	1.3	4
92	Vertical stiffness during one-legged hopping with and without using a running-specific prosthesis. Journal of Biomechanics, 2019, 86, 34-39.	0.9	5
93	The foot and ankle structures reveal emergent properties analogous to passive springs during human walking. PLoS ONE, 2019, 14, e0218047.	1.1	9
94	Effective locomotion at multiple stride frequencies using proprioceptive feedback on a legged microrobot. Bioinspiration and Biomimetics, 2019, 14, 056001.	1.5	19

#	Article	IF	Citations
95	Age-Related Changes in Para and Wheelchair Racing Athleteâ€™s Performances. Frontiers in Physiology, 2019, 10, 256.	1.3	9
96	Three-Dimensional Takeoff Step Kinetics of Long Jumpers with and without a Transtibial Amputation. Medicine and Science in Sports and Exercise, 2019, 51, 716-725.	0.2	11
97	Teaching locomotion biomechanics: from concepts to applications. European Journal of Physics, 2019, 40, 024004.	0.3	1
98	Athletes With Versus Without Leg Amputations: Different Biomechanics, Similar Running Economy. Exercise and Sport Sciences Reviews, 2019, 47, 15-21.	1.6	10
99	Amputee Locomotion. American Journal of Physical Medicine and Rehabilitation, 2019, 98, 182-190.	0.7	9
100	A biomechanical comparison of initial sprint acceleration performance and technique in an elite athlete with cerebral palsy and able-bodied sprinters. Sports Biomechanics, 2020, 19, 189-200.	0.8	9
101	A Limb-specific Strategy across a Range of Running Speeds in Transfemoral Amputees. Medicine and Science in Sports and Exercise, 2020, 52, 892-899.	0.2	7
102	Collection of Structural Loads Acting on Instrumented Running Specific Prostheses during Field Tests on Elite Atletes. Proceedings (mdpi), 2020, 49, .	0.2	3
103	Conceptual Design of a New Multi-Component Test Bench for the Dynamic Characterization of Running Specific Prostheses. Proceedings (mdpi), 2020, 49, .	0.2	4
104	Prosthetic shape, but not stiffness or height, affects the maximum speed of sprinters with bilateral transtibial amputations. PLoS ONE, 2020, 15, e0229035.	1.1	6
105	Effect of step frequency on leg stiffness during running in unilateral transfemoral amputees. Scientific Reports, 2020, 10, 5965.	1.6	5
106	How to run 50% faster without external energy. Science Advances, 2020, 6, eaay1950.	4.7	21
107	SprÃ¼nge. , 2021, , 167-240.		0
108	Asymmetry in Three-Dimensional Sprinting with and without Running-Specific Prostheses. Symmetry, 2021, 13, 580.	1.1	3
109	Two different Variants of Leg Repositioning at maximal Sprint Speed of high Performance Junior Sprinters. International Journal of Performance Analysis in Sport, 2021, 21, 713-727.	0.5	0
110	How Can Biomechanics Improve Physical Preparation and Performance in Paralympic Athletes? A Narrative Review. Sports, 2021, 9, 89.	0.7	10
111	The Impact of Blade Technology on Paralympic Sprint Performance Between 1996 and 2016: Bilateral Amputeesâ€™ Competitive Advantage. Adapted Physical Activity Quarterly, 2021, 38, 494-505.	0.6	3
112	Fairness, technology and the ethics of Paralympic sport classification. European Journal of Sport Science, 2021, 21, 1510-1517.	1.4	6

#	Article	IF	Citations
113	Metabolic Cost and Performance of Athletes With Lower Limb Amputation and Nonamputee Matched Controls During Running. American Journal of Physical Medicine and Rehabilitation, 2022, 101, 584-589.	0.7	2
114	Asymmetry in sprinting: An insight into subâ€10 and subâ€11 s men and women sprinters. Scandinavian Journal of Medicine and Science in Sports, 2022, 32, 69-82.	1.3	12
115	Adaptive Running. , 2018, , 93-102.		1
116	Characterizing the Mechanical Properties of Running-Specific Prostheses. PLoS ONE, 2016, 11, e0168298.	1.1	51
117	Werte und Regeln: Fair Play. , 2021, , 115-130.		0
118	Rebuttal from Weyand and Bundle. Journal of Applied Physiology, 2010, 108, 1014-1014.	1.2	1
119	Textual Analysis on the Issues Related to Oscar Pistorius' Eligibility of Participation in an Able-bodied Sporting Event. Journal of Adapted Physical Activity and Exercise, 2011, 19, 77-93.	0.1	0
120	VARIABLE STIFFNESS HAND PROSTHESIS: A SYSTEMATIC REVIEW. Investigacion & Desarrollo, 2017, 17, 99-108.	0.3	2
121	Werte und Regeln: Fair Play. , 2018, , 1-16.		0
122	Werte und Regeln: Fair Play. , 2019, , 1-16.		3
123	Oxygen Consumption and Speed Performance of a Runner with Amputation Wearing an Elevated Vacuum Running Prosthesis. Journal of Prosthetics and Orthotics, 2021, 33, 73-79.	0.2	0
124	Cyborgization of Actual Social Relations. Advances in Human and Social Aspects of Technology Book Series, 2022, , 202-231.	0.3	0
125	Biomechanical factors affecting individuals with lower limb amputations running using running-specific prostheses: A systematic review. Gait and Posture, 2022, 92, 83-95.	0.6	3
126	Analysis Method for The Design and Manufacture of Sports Transtibial Prostheses. , 2020, , .		0
127	3D Printed Prosthetic Arm. , 2020, , .		3
128	Sprinting with prosthetic versus biological legs: insight from experimental data. Royal Society Open Science, 2022, 9, 211799.	1.1	10
129	Effects of step frequency during running on the magnitude and symmetry of ground reaction forces in individuals with a transfemoral amputation. Journal of NeuroEngineering and Rehabilitation, 2022, 19, 33.	2.4	3
131	Could Prosthesis Use Provide a Competitive Advantage in Darts?. Prosthesis, 2022, 4, 244-252.	1.1	3

#	Article	IF	Citations
132	Artificially long legs directly enhance long sprint running performance. Royal Society Open Science, 2022, 9, .	1.1	3
133	Designing Custom Mechanics in Running-Specific Prosthetic Feet via Shape Optimization. IEEE Transactions on Biomedical Engineering, 2023, 70, 747-755.	2.5	2
134	External loading of common training drills: Ranking drills to design progressive return-to-run programs. Physical Therapy in Sport, 2022, 58, 167-172.	0.8	1
135	Understanding human gait. , 2023, , 1-241.		0