

**KUVVET ANTRENMAN
YÖNTEMLERİNDE
KİNETİK ve
KİNEMATİKLER
ETKİLERİ**

Serdar BAYRAKDAROĞLU

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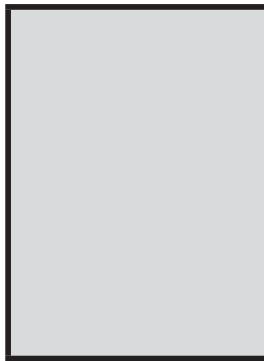
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1. Ratamess N. ACSM'S foundations of strength training and conditioning. Chine: Lippincott Williams and Wilkins, 2012: p.22-70.
2. Abernethy B, Hanrahan SJ, Kippers V, Mackinnon LT, Pandy MG, The biophysical foundations of human movement, 2nd ed. United States: Human Kinetics, 2005.
3. Cook, G. Movement: Functional movement systems: Screening, assessment, corrective strategies. On Target Publications, 2010.
4. Godfrey ACRMDOG, Conway R, Meagher D, ÓLaighin G. Direct measurement of human movement by accelerometry. Medical engineering & physics, 30(10), 1364-1386. 2008
5. Spirduso W. Physical dimensions of aging. Champaign: Human Kinetics, 1995.
6. Svoboda K, Li N. Neural mechanisms of movement planning: motor cortex and beyond. Current opinion in neurobiology, 2018: p.49, p.33-41.
7. Wang L, Silva L, Di Rosa M, Marques C, Barreiros J and Cabri J. The “Journal of Functional Morphology and Kinesiology” Journal Club Series: Highlights on Recent Papers in Movement Analysis, 2017.
8. Hamill J, Knutzen KM, Derrick TR (Eds). Biomechanical basis of human movement. 4nd Ed. Lippincott Williams and Wilkins, a Wolters Kluwer business, 2015; p.3-45.

9. Daniels S (Ed). Certified personal trainer: Optimum Performance Training for the Health and Fitness Professional. 2 nd ed. United States of America: National Academy of Sports Medicine, 2004.
10. Sherwood L. Human physiology: from cells to systems. 7.th ed. Brooks/Cole, Cengage learning, 2010.
11. Süzen B. İnsan anatomisi ve fizyolojisine giriş. Bedray Yıkılmazlar Basın Evi, İstanbul, 2014: p.387.
12. Calais-Germain B. Anatomy of movement. Revised ed. Eastland Press, Seattle;USA; 2007: p.12.
13. Bartlett R. Introduction to sports biomechanics: Analysing human movement patterns. 2 nd ed. USA and Canada: Routledge. 2007.
14. Haywood K. Skeletal system. Marshall Cavendish, New York , 2009 : p.5
15. Junqueira LC, Carneiro J, 2003, Basic histology. Temel histoloji, Aytekin Y, Solakoğlu S, Nobel tıp kitabı, İstanbul, 2006: p.191-205.
16. Aaberg E. Muscle mechanics. 2nd Ed. United States: Human Kinetics. 2006.
17. Houghton G. Muscles: The muscular system. New York: Rosen, 2007: p.4.
18. Sarsilmaz M (Ed). Anatomi. 2. Baskı. Ankara: Nobel , 2010: p.45.
19. Aktümsek A. İnsan Anatomisi ve Fizyolojisi. 3. Basım, Ankara: Nobel, 2017: p.25.
20. Stone MH, Stone M, Sands AW. Principle and practice of resistance training. United States: Human Kinetics. 2007: p.1-15.
21. Aktümsek A. Anatomi ve fizyoloji insan biyolojisi. 5. Basım, Ankara: Nobel, 2010: p.43-52.
22. Kenney WL, Wilmore JH, Costill DL. Physiology of sport and exercise, 5 th ed. Human kinetic. 2012: p.27-46.
23. Hill J, Olson E (Eds.). Muscle 2-Volume Set: Fundamental Biology and Mechanisms of Disease. Academic Press, 2012: p.3-4.
24. Solomon EP, 2003, Introduction to Human Anatomy and Physiology. İnsan Anatomisi ve Fizyolojisine Giriş, 2. Baskı, Ertuğrul L, Akademi Basın ve Yayıncılık, İstanbul, 2009: p.75.
25. Brown LE (Ed). Strength training and conditioning association. United states, Human kinetics, 2007.
26. Appleton B. Stretchin and flexibility: Everything you never wanted to know, 1993: p.3.
27. Haff GG, Triplett NT (Eds). Essential of strength training and conditioning. 4.th ed. Human kinetics, 2016: p.2-17.
28. Günay M, Tamer K, Cicioğlu İ. Spor Fizyolojisi ve Performans Olcumu, 3 baski, Ankara: Gazi kitapevi, 2013

29. Guyton AC, Hall JE, 2011, Guyton and Hall textbook of medical physiology. Tibbi Fizyoloji, 12. Baskı, Çağlayan Yeğen B, Nobel Tip Kitabevleri, İstanbul, 2013.
30. Hall JE. Guyton and Hall textbook of medical physiology e Book, Elsevier health sciences, 2015:p.75-80
31. Smith LD, Plowman AS. Understanding muscle contraction. In: Sports-specific rehabilitation, Donatelli R (Ed), Philadelphia: Churchill Livinstone Elsevier; 2007:p.15-38
32. Barrett KE, Barman SM, Boitano S, Brooks HL, 2009, Ganong's review of medical physiology. Ganong' un tibbi fizyolojisi, 23. Baskı, Gökböl H, Nobel Tip Kitabevi, 2011: p.97- 104.
33. Chandler TJ, Brown LE, Conditioning for strength and human performance, Wolters kluwer; Philadelphia, 2008:p.48-52
34. Kroemer KHE, Kroemer HJ, Kromer KE. Engineering physiology: Bases of human factors engineering/ ergonomics, 4nd Ed. Hiedelberg: Springer, 2010:p.27-40
35. Sevim Y. Antrenman bilgisi. 8. Baskı, Fil yayınevi, Ankara, 2010:p.38.39
36. Powers SK, Howley ET. Exercise physiology: theory and application to fitness, 7th Ed. New York: McGraw-Hill Higher Education, 2009:p.160-161
37. Hamill J, Knutzen KM. Biomechanical basis of human movement. 2nd Ed. USA: Philadelphia, Lippincott Williams & Wilkins, a Wolters Kluwer business, 2003:p.6-9
38. İnal HS. Spor ve egzersizde vücut mekaniği, 2. Baskı. İstanbul: Papatya Yayıncılık Eğitim, 2013: p.17-74.
39. Souza AL, Shimada SD, Koontz A. Ground reaction forces during the power clean. J. Strength Cond. Res. 2002, p.3, p.423-427.
40. Chu DA. Jumping into plyometrics: 100 exercises for power & strength 2nd Eds. United States: Human Kinetics, 1998.
41. Brumitt J. Core assessment and training. United States: Human Kinetics. 2010
42. Marullo F. Plyometric training: The link between speed and strength training. The Coach, 1999: p.1, p.10-15.
43. Yessin M, and Hatfield F. Plyometric Training: Achieving explosive power in sports 3rd Eds.. United States: Human Kinetics, 2007.
44. Hoffman J. Physiological aspects of sport training and performance. United States: Human Kinetics. 2002.
45. Bompa TO. Plyometrik: Sporda çabuk kuvvet antrenmanı Bağırgan T. Ankara: Spor Yayınevi ve Kitapevi. 2013.

46. Radcliffe JC, and Parentinos, RC. High-powered plyometrics: 77 advanced exercises for explosive sports training. United States: Human Kinetics, 1999.
47. Newberry L, and Bishop MD. Plyometric and agility training into the regimen of a patient with post-surgical anterior knee pain. *Physical Therapy in sport*, 2006: p.3, p.161-167.
48. Godfrey R, and Whyte G (Eds). Training specificity (Chapter 2). *The physiology of training*. Philadelphia Churchill Livingstone Elsevier, 2006: p.23-44.
49. Bevan, HR, Cunningham DJ, Tooley EP, Owen NJ, Cook CJ, and Kildruff LP. Influence of postactivation potentiation on sprinting performance in professional rugby players. *Journal of Strength and Conditioning Research*, 2010. p.3, p.701-704.
50. Gambetta V. *Athletic development: The art & science of functional sports conditioning*. United States: Human Kinetics, 2007.
51. Potach DH, and Chu DA (Eds). *Plyometric training*. In Baechle, T. R., and Early R. W. (eds). *Essentials of Strength Training and Conditioning*, 2008: p.413-456.
52. Clark MA. and Lucett SC. *Plyometric training concepts for performance enhancement*. In Clark, M. A. and Lucett, S.C. (Eds). *NASM Essentials of Sports Performance Training*. Philadelphia: Lippincott Williams / Wilkins. 2010. p. 207-226.
53. Flanagan EP, and Comyns TM.. The Use of Contact Time and the Reactive Strength Index to Optimize Fast Stretch-Shortening Cycle Training. *Strength and Conditioning Journal*, 2008. p.5, p.32-38.
54. Chmielewski LT, Myer DG, Kauffman D, and Tillman, MS. *Plyometric exercise in the rehabilitation of athletes: Physiological responses and clinical application*. *Journal of Orthopaedic & Sports Physical Therapy*, 2006. p35, p.308-319.
55. Wathen, D. *Literature review: Explosive / plyometric exercises*. National Strength and Conditioning Association, 1993: p.3, p.17-19.
56. Reilly T. *The science of training - soccer: A scientific approach to developing strength, speed and endurance*. Oxon: Routledge. 2007.
57. Fleck JS, and Kraemer JW. *Designing resistance training programs*, 3rd. Eds. United State of America: Champaign IL, Human Kinetics, 2004.
58. Ebben WP. Complex training: A brief review. *Journal of Sports Science and Medicine*, 2002: p.1, p.42-46v.
59. Ebben WP And Watts PB. A review of combined weight training and plyometric training modes: Complex training. *Strength and Conditioning Journal*, 1998: p.5, p18-27.

60. Fleck JS and Kontor K. Complex training. National Strength and Conditioning Association Journal, 1986: p.5, p.66-72.
61. Newton RU and Kraemer JW. Developing explosive muscular power: Implications for a mixed methods training strategy. Strength and Conditioning Journal, 1994: p.5, p.20-31.
62. Chu DA. Explosive power and strength: Complex training for maximum results. United States: Human Kinetics. 1996.
63. Wathen D, Beachle TR, Earle RW. Periodization. In Beachle, T. R., and Earle, R. W. (Eds). Essentials of strength training and conditioning 3rd (Eds). p.507-522. United States: Human Kinetics. (2008).
64. Ebben WP and Blackard DO. Complex training with combined explosive weight and plyometric exercise. Olympic Coach, 1997: p.4, p.11-12.
65. Adams K, O'Shea JP, O'Shea KL, and Climsteln M. The effect of six weeks of squat, plyometric and squat-plyometric training power production. Journal of Applied Sport Science Research, 1992: p.1, p.36-41.
66. Fleck SJ, Kraemer WJ. Designing resistance training programs, 4.th ed. Human Kinetic, 2014
67. Swank AM, Hagerman P. Resitance training for special populations, USA: Delmar, Cengage Learning, 2009: p.4.
68. McGinnis PM. Biomechanics of sport and exercise, 3nd eds. United States: Human Kinetics, 2013: p.20.
69. Fox EL, Bowers RW, and Foss ML, 1988, The physiologcal basis of physical education. Beden eğitimi ve sporun fizyolojik temelleri. Cerit M, Spor yayınevi ve kitapevi, Ankara, 2012: p.120-135.
70. Cardinale M, Newton R, Nosaka K (Eds.). Strength and conditio-ning: Biological principles and practical applications, Wiley- Blackwell, john wiley and Sons ltd, 2011: p.90.
71. Muratlı S, Hindistan İE, Sporda kuvvet antrenmani, Ankara: Spor yayınevi ve kitabevi, 2018.
72. Bompa TO, 1994, Theory and Methodology of Training, Dönemleme: Antrenman kuramı ve yöntemi,4. Basım, Bağırgan T, Spor yayınevi ve kitabevi, Ankara, 2011: p.307-320.
73. Bompa TO, Haff GG, 2009, Theory and Methodology of Training: Periodization, Dönemleme: Antrenman kuramı ve yöntemi, Bağırgan T, Spor yayınevi ve kitabevi, Ankara, 2015: p.331-350.
74. Günay M, Şiktar E, Şiktar E, Antrenman bilimi. Batman belediyesi spor kulübü eğitim, kültür ve spor yayınları, 2017: p.95-110.

75. Muratlı S, Kalyoncu O, Şahin G. Antrenman ve müsabaka. 3. Basıtı, Kalyoncu spor ve danışmanlık San. Tic. Ltd. Şti, İstanbul, 2011: p.279-320.
76. Cotterman ML, Darby LA, Skelly WA. Comparison of muscle force production using the Smith machine and free weights for bench press and squat exercises. *Journal of Strength and Conditioning Research*, 2005:p.19(1), 169.
77. Sanchez-Medina L, Pérez C E , González-Badillo JJ . Importance of the propulsive phase in strength assessment . *Int J Sports Med* 2010; 31 :123 – 129
78. Sanchez-Medina L, González-Badillo JJ. Velocity loss as an indicator of neuromuscular fatigue during resistance training. *Med Sci Sports Exerc* 2011; 43: 1725– 1734
79. Sanchez-Medina L, González-Badillo JJ, Perez C, Pallarés JG. Velocity-and power-load relationships of the bench pull vs. bench press exercises. *International journal of sports medicine*, 35(03), (2014:p. 209-216.
80. Garnacho-Castaño MV, López-Lastra S, Maté-Muñoz JL. Reliability and validity assessment of a linear position transducer. *Journal of sports science & medicine*, 14(1), 2015:p.128.
81. Can, İ. Tam Squat Hareketinin İtme Evresindeki Kinetik – Kinematiklerin Sprint Ve Sıkrama Performansı İle İlişkisi. 2014. Karadeniz Teknik Üniversitesi. Eğitim Bilimleri Enstitüsü Doktora Tezi. Trabzon (Dr. Öğr. Üyesi Hamit CİHAN).
82. Sanchez-Medina L, Gonzales-Badillo JJ. (2011). Velocity Loss As An Indicator Of Neuromuscular Fatigue During Resistance Training. *Medicine And Science İn Sports And Exercise*, 2011:43(9), 1725-1734.
83. Beachle TR, Earle RW, Wathen D (Eds.). *Resistance Training*. In Beachle TR, Earle, RW. *Essentials Of Strength Training And Conditioning* (3rd Edition) United States: Human Kinetics. 2008: p.381-412
84. Chu DA. *Jumping Into Plyometrics: 100 Exercises For Power & Strength* 2nd. Edition United States: Human Kinetics. 1998.
85. Harman, E. Beachle, T.R., And Earle, W.R. (Ed.) *Biomechanics Of Resistance Exercise. Essentials Of Strength Training And Conditioning*, 3rd edition. Champaign, Il:Human Kinetics. 2008.
86. Baker D. Acute And Long-Term Power Response To Power Training: Observations On The Training Of An Elite Power Athlete. *National Strength And Conditioning Association*, 2001:23(1), 47-56.

87. Newton R. U and Dugan E. Application Of Strength Diagnosis. Strength And Conditioning Association Journal, 2002: 24(5), 50-59.
88. Kraemer WJ, Newton R.U. Training For Muscular Power, Scientific Principles Of Sports Rehabilitation, 2000:341-368.
89. Sankarmani B. Sheriff S. I. Rajeev K. R. and Alagesan J. Effectiveness Of Plyometrics And Weight Training İn Anaerobic Power And Muscle Strength İn Female Athletes. International Journal Of Pharmaceutical Science And Health Care, 2012:2(2), 172-180.
90. Can I. Comparison Of Power, Velocity And Force Parameters During Loaded Squat Jump Exercise İn The Handball And Arm Wrestling Players. Journal Of Education And Training Studies, 2017b. 5(12): 92-98.
91. Can I, Özmen M, Bayrakdaroglu S. Antrenmanlı Sporcularda Çeviklik Ve Ağırlıklı Squat Sıçrama Egzersizi Esnasındaki Hız Ve Güç Değerleri Arasındaki İlişki. Celal Bayar Üniversitesi Beden Eğitimi Ve Spor Bilimleri Dergisi, 2017:12(2): 136-144.
92. Can I, Cihan H, Ari E, Bayrakdaroglu, S. Comparison Of The Velocity And Power Parameters During Loaded-Squat Jump Exercise Of National Athletes İn Different Branches. Journal Of Education And Training Studies, . 2018a5(5): 16-20.
93. Can, I., Sadık, S., and Bayrakdaroglu, S. The Relationship Between Repeated Sprint Performance And Velocity Values During Loaded-Squat Jump Exercise. Journal Of Education And Learning; 2018b:7(2): 280-286.
94. Loturco I, Pereira La, Kobal R, Kitamura K, Cal Abad Cc, Nakamura Fy, Pai Cn. Peak Versus Mean Propulsive Power Outputs: Which Variable Is More Related To Jump Squat Performance? The Journal Of Sports Medicine And Physical Fitness. J Sports Med Phys Fitness. 2017f. 57(11):1432-1444.
95. Loturco I, Kobal R, Maldonado T, Piazzi A.F, Bottino A, Kitamura K, Abad, C.C.C, Pereira LA and Nakamura F.Y. Jump Squat Is More Related To Sprinting And Jumping Abilities Than Olympic Push Press Authors. 2015a
96. Cronin JB, Hansen KT. Strength And Power Predictors Of Sports Speed. J Strength Cond Res 2005;19:349-57.
97. Loturco I, Pereira L.A, Abad C.C.C, D'angelo R.A, Fernandes V, Kitamura, K., Kobal, R., Nakamura, F.Y. Vertical And Horizontal Jump Tests Are Strongly Associated With Competitive Performance In 100-M Dash Events. 2018c.

98. Sleivert G, Taingahue M. The Relationship Between Maximal Jump-Squat Power And Sprint Acceleration In Athletes. *Eur J Appl Physiol* 2004;91:46-52.
99. Samozino P, Edouard P, Sangnier S, Brughelli M, Gimenez P, Morin JB. Forcevelocity Profile: Imbalance Determination And Effect On Lower Limb Ballistic Performance. *Int J Sports Med* 2014;35:505-10.
100. Pereira L, Nimpfius S., Kobal R, Kitamura K, Turisco Lal Orsi R, Cal Abad C, Loturco J. Strength Cond Res. Epub Ahead Of Print Relationship Between Change Of Direction, Speed And Power In Male And Female National Olympic Team Handball Athletes. 2018.
101. Loturco I, Artioli G, Kobal R, Gil S and Franchini E. Predicting Punching Acceleration From Selected Strength And Power Variables In Elite Karate Athletes: A Multiple Regression Analysis. *J Strength Cond Res* 2014a;28: 1826-1832.
102. Loturco I, Nakamura FY, Artioli GG, Kobal R, Kitamura K, Abad CCC, Cruz IF, Romano F, Pereira LA, Franchini E. Strength And Power Qualities Are Highly Associated With Punching Impact In Elite Amateur Boxers. 2015e.
103. Loturco I, Kobal R, Kitamura K, Fernandes F, Moura N, Siqueira F, Abad C.C.C. Pereira L.A. Predictive Factors Of Elite Sprint Performance: Influences Of Muscle Mechanical Properties And Functional Parameters, 2018b.
104. Loturco I, Kobal R, Gil S, Pivetti B, Kitamura K, Pereira La, Abad Cc, And Nakamura Fy. Differences In Loaded And Unloaded Vertical Jumping Ability And Sprinting Performance Between Brazilian Elite Under-20 And Senior Soccer Players. *Am J Sports Sci* 2014b;2: 8-13.
105. Loturco I, Winckler C, Kobal R, Cal Abad Cc, Kitamura K, Verissimo Aw, Pereira La, And Nakamura Fy. Performance Changes And Relationship Between Vertical Jump Measures And Actual Sprint Performance In Elite Sprinters With Visual Impairment Throughout A Parapan American Games Training Season. *Front Physiol* 2015d;6: 323.
106. Kilgallon M And Beard A. The Assisted Jump Squat: An Alternative Method For Developing Power In Adolescent Athletes. *Strength Cond J* 2010; 32: 26-29, 2010
107. Sheppard Jm, Dingley Aa, Janssen I, Spratford W, Chapman Dw, And Newton Ru. The Effect Of Assisted Jumping On Vertical Jump Height In High-Performance Volleyball Players. *J Sci Med Sport* 2011;14: 85- 89.

108. Loturco I, Pereira L A, Kobal R, Nakamura F. Strength & Conditioning Journal: Using Loaded And Unloaded Jumps To Increase Speed And Power Performance In Elite Young And Senior Soccer Players. 2018a: Volume 40 - Issue 3 - P 95–103
109. Loturco I, Nakamura FY, Winckler C, Braganca JR, Fonseca RA, Moreas-Filho J, Zaccani WA, Kobal R, Abad CCC, Kitamura K, Pereira L,A. Strength-Power Performance Of Visually Impaired Paralympic And Olympic Judo Athletes From The Brazilian National Team: A Comparative Study: 2017e.
110. Loturco I, Pereira L.A. Moreas J.E. Kitamura K. Abad C.C.C. Kobal R. Nakamura, Y.K. Jump-Squat And Half-Squat Exercises: Selective Influences On Speed-Power Performance Of Elite Rugby Sevens Players, 2017d.
111. Hennessy L, Kilty J. [Relationship Of The Stretch - Shortening Cycle To Sprint Performance In Trained Female Athletes]. Journal Of Strength And Conditioning Research, 2001; 15(3), 326-331
112. Bret C, Rahmani A, Dufour A, Messonnier L, Lacour JR. Leg Strength And Stiffness As Ability Factors In 100 M Sprint Running, J Sports Med Phys Fitness, 2002: 42: 274–281
113. Swinton, Pa, Lloyd, R, Keogh, Jw, Agouris, I, And Stewart, Ad. Regression Models Of Sprint, Vertical Jump, And Change Of Direction Performance. J Strength Cond Res 2014:28: 1839–1848.
114. Newton RU, Rogers RA, Volek JS, Hakkinen K and Kraemer WJ. Four Weeks Of Optimal Load Ballistic Resistance Training At The End Of Season Attenuates Declining Jump Performance Of Women Volleyball Players. J Strength Cond Res 2006:20: 955–961.
115. Cormie P, Mcguigan MR, Newton RU. Developing Maximal Neuromuscular Power: Part 2-Training Considerations For Improving Maximal Power Production. Sports Med 2011:41:125–146.
116. Kaneko M, Fuchimoto T, Toji H And Suei K. Training Effect Of Different Loads On The Force–Velocity Relationship And Mechanical Power Output In Human Muscle. Scand J Sports Sci 1983: 5: 50–55.
117. Moritani T And Muro M. Motor Unit Activity And Surface Electromyogram Power Spectrum During Increasing Force Of Contraction. Eur J Appl Physiol 1987:56: 260–265.
118. Holcomb WR, Lander, JE, Rutland RM, Wilson GD. The Effectiveness Of A Modified Plyometric Program On Power And Vertical Jump. J Strength Cond Res 1996: 10: 89–92.
119. Baker D, Nance S. The Relation Between Strength And Power In Professional Rugby League Players, Journal Of Strength And Conditioning Research, 1999:13(3), 224-229.

120. Elliott, B.C., Wilson, G.J. and Kerr, G.K. A Biomechanical Analysis Of The Sticking Region In The Bench Press, Medicine And Science In Sports And Exercise, 1989; 21(4); 450-462.
121. Newton R.U. Kraemer W.J. Hakkinen K.,Humphries B.J. Murphy A.J. Kinematics, Kinetics And Muscle Activation During Explosive Upper Body Movements, Journal Of Applied Biomechanics, 1996: 12(1); 31-43.
122. Assmussen FC, Petersen, BF. Storage Of Elastic Energy In Skeletal Muscles In Man, Acta Physiologica Scandanavica, 1974;(3); 385-392.
123. Bauer T, Thayer RE, Baras G. Comparison Of Training Modalities For Power Development In The Lower Extremity. Journal Of Applied Sport Science Research, 1990: 4(4): 115-121.
124. Berger PA. Comparison Of The Effect Of Various Weight Training Loads On Strength. Res. Q. 1965: 21: 83-93.
125. Promoli F. and Holt L.E. Effects Of Isotonic And Isokinetic Exercise, At A Fast Repetition Rate, On Jumping And Running. Reh. Med. 1979;28: 175-181.
126. Bauer T, Thayer RE, Baras G. Comparison Of Training Modalities For Power Development In The Lower Extremity. Journal Of Applied Sport Science Research, 1990: 4(4): 115-121.
127. Hakkinen K, PV. Komi M, Alen, and H. Kauhanen. Emg, Muscle Fibre And Force Production Characteristics During A 1 Year Training Period In Elite Weight Lifters. Eur. J. Appl. Physiol. Occup. Physiol. 1987: 56:419-427.
128. Canavan, P.K., G.E. Garrett, And L.E. Armstrong. Kinematic And Kinetic Relationships Between An Olympic-Style Lift And The Vertical Jump. J. Strength Cond. Res. 1996;2:127-130.
129. Tan B. Manipulating Resistance Training Program Variables To Optimize Maximum Strength In Men: A Review. J. Strength Cond. Res. 1999;13:189-304.
130. Beachle TR, Earle RW, Wathen D. (Eds.) Resistance Training. In Beachle TR, Earle RW. Essentials Of Strength Training And Conditioning (3rd Edition) United States: Human Kinetics. 2008: p.381-412
131. Kobal R. Pereira L.A. Zanetti W. Ramirez-Campillo and R. Loturco I. Effects Of Unloaded Vs. Loaded Plyometrics On Speed And Power Performance Of Elite Young Soccer Players. 2017.
132. Loturco, I., Pereira, L. A., Kobal, R., Maldonado, T., Piazzi, A. F., Bottino, A., et al. Improving sprint performance in soccer: effectiveness of jump squat and olympic push press exercises. PLoS ONE 11:e0153958. doi: 10.1371, 2016

133. Loturco I, Pereira La, Kobal R, Zanetti V, Gil S, Kitamura K, Abad Cc, And Nakamura Fy. Half-Squat Or Jump Squat Training Under Optimum Power Load Conditions To Counteract Power And Speed Decrements In Brazilian Elite Soccer Players During The Preseason. *J Sports Sci* 2015c:33: 1283–1292,
134. Loturco I, Lucas A, Pereira I, Ronaldo Kobal 1, Katia Kitamura 1, Rodrigo Ramírezcampillo 4, Vinicius Zanetti 5, Cesar C, Cal Abad 1 And Fabio Y, Nakamura 1,3 ©Journal Of Sports Science And Medicine 15, 483-491 Muscle Contraction Velocity: A Suitable Approach To Analyze The Functional Adaptations In Elite Soccer Players. 2016a.
135. Loturco I, Pereira L, A, Kobal, R, Zanetti V, Kitamura K and Abad, C. C. Transference Effect Of Vertical And Horizontal Plyometrics On Sprint Performance Of High-Level U-20 Soccer Players. *J. Sports Sci.* 2015f:33, 2182–2191. Doi: 10.1080/02640414.2015.1081394
136. Ramirez-Campillo R, Gallardo F, Henriquez-Olguin C, Meylan C, M, Martinez C, Alvarez C. Effect Of Vertical, Horizontal, And Combined Plyometric Training On Explosive, Balance, And Endurance Performance Of Young Soccer Players. *J. Strength Cond. Res.* 2015a:29, 1784–1795. Doi: 10.1519/Jsc.0000000000000827
137. Ramirez-Campillo R, Burgos C, H, Henriquez-Olguin C, Andrade D, C, Martinez C, Alvarez, C. Effect Of Unilateral, Bilateral, And Combined Plyometric Training On Explosive And Endurance Performance Of Young Soccer Players. *J. Strength Cond. Res.* 2015b:29, 1317–1328. Doi: 10.1519/Jsc.0000000000000762
138. Rosas F, Ramirez-Campillo R, Diaz D, Abad-Colil F, Martinez-Salazar C, Caniuqueo A. Jump Training In Youth Soccer Players: Effects Of Haltere Type Handheld Loading. *Int. J. Sports Med.* 2016: 37, 1060–1065. Doi: 10.1055/S-0042-111046
139. Issurin VB. Training Transfer: Scientific Background And Insights For Practical Application. *Sportsmed.* 2013: 43, 675–694. Doi: 10.1007/S40279-013-0049-6
140. Cronin JB, Brughelli, M, Gamble P, Brown SR, McKenzie C. Acute kinematic and kinetic augmentation in horizontal jump performance using haltere type handheld loading. *J. Strength Cond. Res.* 28, 1559–1564, 2014
141. Thomas, K., French, D., Hayes, P.R. (2009). The Effect Of Two Plyometric Training Techniques On Muscular Power And Agility In Youth Soccer Players. *Journal Of Strength And Conditioning Research*, 2009;23(1): 332-335.

142. Chelly, M.S., Fathloun, M., Cherif, N., Amar, M.B., Tabka, Z., Pragh, E.V. Effects Of A Back Squat Training Program On Leg Power, Jump, And Sprint Performances In Junior Soccer Players. 2009.
143. Chtara M, Chaouachi A, Levin GT, Chaouachi M, Chamari, K, Amri, M, Laursen PB. Effect Of Concurrent Endurance And Circuit Resistance Training Sequence On Muscular Strength And Power Development. *Journal Strength And Conditioning Research*, 2008;22(4): 1037-1045.
144. Young Wb. Mclean B. Ardagna J. Relationship Between Strength Qualities And Sprinting Performance. *Journal Of Sport Medicine And Physical Fitness*, 1995; 35(1), 13-19.
145. Perez-Gomez J. Rodriguez Gv. Ara I. Olmedillas H. Chavarren J. Gonzales-Henriquez J. Role Of Muscle Mass On Sprint Performance: Gender Differences. *European Journal Of Applied Physiology*, 2008; 102(6), 685-694.
146. Kraska JM, Ramsey MW, Haff GG, Fethke N, Sands WA, Stone ME. Relationship Between Strength Characteristics And Unweighted And Weighted Vertical Jump Height. *International Journal Of Sports Physiology And Performance*, 2009; 4(4), 461-473.
147. McLennan, Cp., Lovell, Di., Gass, Gc. [The Role Of Rate Of Force Development On Vertical Jump Performance]. *Journal Of Strength And Conditioning Research*, 2011; 25(2), 379-385.
148. Loturco I, Nakamura Fy, Tricoli V, Kobal R, Abad Cc, Kitamura K, Ugrinowitsch C, Gil S, Pereira La, And Gonzales-Badillo Jj. Determining The Optimum Power Load In Jump Squats Using The Mean Propulsive Velocity. *Plos One* 2015b: 10: E0140102.
149. Loturco I, Ugrinowitsch C, Roschel H, Mellinger AL, Gomes F, Tricoli V, Gonzales-Badillo JJ. Distinct Temporal Organizations Of The Strength- And Power-Training Loads Produce Similar Performance Improvements 2013.
150. Turner AP, Unholz CN, Potts N, Coleman SG. Peak Power, Force, And Velocity During Jump Squats In Professional Rugby Players. *Journal Of Strength And Conditioning Research*, 2012,26, 1594-600.
151. Kotzamanidis, C., Chatzopoulos, D., Michailidis, C., Papaiaikovou, G., & Patikas, D. The Effect Of A Combined High-Intensity Strength And Speed Training Program On The Running And Jumping Ability Of Soccer Players. *Journal Of Strength And Conditioning Research*, 2005;19, 369-375.

- 152.Cronin J, Mcnair PJ, Marshall RN. Velocity Specificity, Combination Training And Sport Specific Tasks. *Journal Of Science And Medicine In Sport*, 2001; 4, 168–178.
- 153.Maio-Alves J.M. Rebelo A.N. Abrantes C. & Sampaio J. Short-Term Effects Of Complex And Contrast Training In Soccer Players' Vertical Jump, Sprint, And Agility Abilities. *Journal Of Strength And Conditioning Research*. 2010;24, 936–941.
- 154.Allen MK. Hakkinnen, P. Komi. Changes In Neuromuscular Performance And Muscle Activation Level And Muscle Fiber Characteristics Of Elite Power Athletes Self-Administrating Androgenic And Anabolic Steroids. *Acta Physiol. Scand.* 1984; 122: 535–544.
- 155.Bobbert MF, A.Van Soest. Effect Of Muscle Strengthening On Vertical Jump Height: A Simulation Study. *Med. Sci. Sports Exerc.* 1994. 26:1012–1020.
- 156.Hakkinnen, K. Neuromuscular Adaptation During Strength Training, Aging, Detraining and Immobilization. *Crit. Rev. Phys. Rehabil. Med.*1984; 6:161–198.
- 157.Hofman, JR, WJ, Kraemer AC, Fry M. Deshenes, DJ. Kemp. The Effect Of Selection For Frequency Of Training In A Winter Conditioning Program For Football. *J. Appl. Sport Sci. Res.*1990; 3:76–82.
- 158.Ronnestad B.R. Kvamme N.H. Sunde A. Raastad T. Short-Term Effects Of Strength And Plyometric Training On Sprint And Jump Performance In Professional Soccer Players. *Journal Of Strength And Conditioning Research*, 2008;22(3): 773-780.
- 159.Newton R. U and Dugan E. Application Of Strength Diagnosis. Strength And Conditioning Association Journal, 2002: 24(5), 50-59.
- 160.Clutch D, Wilton M, McGown C, Bryce GR. The Effect Of Depth Jumps And Weight Training On Leg Strength And Vertical Jump. *Res Q* 1983;54: 5–10.
- 161.Harris Gr, Stone MH, O'bryant HS, Proulx CM, Johnson RL. Short-Term Performance Effects Of High Power, High Force, Or Combined Weight-Training Methods. *J Strength Cond Res* 2000; 14: 14–20
- 162.Toji, H, Suei, K, And Kaneko, M. Effects Of Combined Training Loads On Relations Among Force, Velocity, And Power Development. *Can J Appl Physiol* 1997;22: 328–336.
- 163.Fatouros, I., Jamurtas, A., Leontsini, D., Taxildaris, K., Aggelousis, G., Kostopoulos, N. And Buckenmeyer, P. Evaluation Of Plyometric Exercise Training, Weight Training, And Their Combination On

- Vertical Jumping Performance And Leg Strength. *J Strength Cond Res* 2000;14: 470-476.
164. Toumi H, Best T, Martin A, Poumarat G. Muscle Plasticity After Weight And Combined (Weight + Jump) Training. *Med Sci Sports Exerc* 2004;36: 1580-1588.
165. Kraemer W J, Fleck S J, Deschenes M. A Review: Factors In Exercise Prescription Of Resistance Training. *Strength And Conditioning Journal*, 1988; 10(5), 36-42.
166. Fry, A. C. The Role Of Resistance Exercise Intensity On Muscle Fibre Adaptations. *Sports Medicine*, 2004; 34(10), 663-679.
167. Gonzales-Badillo JJ, Sanchez-Medina L. Movement Velocity As A Measure Of Loading Intensity In Resistance Training. *International Journal Of Sports Medicine*, 2010;31(5), 347-352.
168. Sanchez-Medina L, Gonzales-Badillo JJ. Velocity Loss As An Indicator Of Neuromuscular Fatigue During Resistance Training. *Medicine And Science In Sports And Exercise*, 2011;43(9), 1725-1734.
169. Dal-Pupo, J., Detanico, D. And Dos-Santos, Sg. Kinetic Parameters As Determinants Of Vertical Jump Performance]. *Brazilian Journal Of Kinanthropometry And Human Performance*, 2012; 14(1), 41-51.
170. Kollias I, Hatzitaki V, Papaiakovou G and Giatsis G. Using Principal Componenets Analysis To Identify Individual Differences In Vertical Jump Performance. *Research Quarterly For Exercise And Sports*, 2001;72(1), 63-67.
171. Can I. Investigating The Relationship Between Sprint And Jump Performances With Velocity And Power Parameters During Propulsive Phase Of The Loaded-Squat Jump Exercise. *Universal Journal Of Educational Research* 2017;6(4): 789-797.
172. Campos GE, Luecke TJ, Wendeln HK, Toma K, Hagerman FC, Murray TF. Muscular Adaptations In Response To Three Different Resistance-Training Regimens: Specificity Of Repetition Maximum Training Zones. *Eur. J. Appl. Physiol.* 2002; 88: 50-60. Doi:10.1007/S00421-002-0681-6. Pmid:12436270.
173. Malisoux L, Francaux M, Nielens H, Renard P, Lebacq J, Theisen, D. 2006a. Calcium Sensitivity Of Human Single Muscle Fibers Following Plyometric Training. *Med. Sci. Sports Exerc.* 2006a;38: 1901-1908.
174. Malisoux L, Francaux M, Nielens H and Theisen D. Stretch-Shorening Cycle Exercises: An Effective Training Paradigm To Enhance Power Output Of Human Single Muscle Fibers. *J. Appl. Physiol.* 2006b;100: 771-779.

- 175.Saunders P.U. Telford R.D. Pyne D.B. Peltola E.M. Cunningham R.B. Gore C.J. Short-Term Plyometric Training Improves Running Economy In Highly Trained Middle And Long Distance Runners. *J. Strength Cond. Res.* 2006;20: 947-954.
- 176.Mohamad N.I. Cronin J.B. Nosaka K.K. Difference In Kinematics And Kinetics Between High- And Low-Velocity Resistance Loading Equated By Volume: Implications For Hypertrophy Training 2012;26(1):269-275.
- 177.Pearson S. N. Cronin J. B. Hume P. A. and Slyfield, D. Kinematics And Kinetics Of The Bench Press And Bench Pull Exercises In A Strength-Trained Sporting Population. *Sports Biomechanics*, 2009; 8(3), 245-25
- 178.Cronin, JB, Mcnair PJ, and Marshall, R. N. Developing Explosive Power: A Comparison Of Technique and Training. *Journal Of Science And Medicine In Sport*, 2001;4(1), 59-70.
- 179.Rahmani A. Viale F. Dalleau G and Lacour J. R. Force / Velocity And Power / Velocity Relationship In Squat Exercise. *European Journal Of Applied Physiology*, 2001;84(3), 227-232.
- 180.Cormie P, McCaulley GO, Triplett NT, McBride JM. Optimal Loadig For Maximal Power Output During Lower Body Resistance Exercises. *Medicine And Science In Sports And Exercise*, 2007;39(2), 340-349.
- 181.Newton R. U. Murphy A. J. Humphries B. J. Wilson G. J. Kraemer W. J. And Hakkinen K. Influence Of Load And Stretch Shortening Cycle On The Kinematics, Kinetics And Muscle Activation That Occurs During Explosive Upperbody Movements. *European Journal Of Applied Physiology*, 1997; 75(4), 333-342.
- 182.Turkay, H., Mumcu, H. E., Çeviker, A., Güngöz, E., Özlü, K. (2019). Beden Eğitiminde Temel Psikolojik İhtiyaçlar Ölçeğinin Türkçe-ye Uyarlanması. *Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi*, 39(2), 1135-1155.
- 183.Yılmaz, E., Yamaner, F. (2019). Alp Disiplini Kayakçılarının Diz Eklem Kıkıldak Kalınlığı ve Q Açısının İncelenmesi, Akademisyen Kitabevi, Ankara