

REFERENCES

- Abernethy, P., Wilson, G., & Logan, P. 1995. Strength and power assessment: issues, controversies, and challenges. *Sports Medicine*, 19(6) 410-17.
- Altug, Z., Altug, T., & Altug, A. 1987. A test selection guide for assessing and evaluating athletes. *National Strength and Conditioning Association Journal*, 9(3): 62-66.
- Baechle, T.R. 1994. *Essentials of strength and conditioning*. Champaign, IL: Human Kinetics.
- Balkó Š., Wasik J., Chytrý V., Dunajová K., & Škopek, M. 2017. Influence of different background music volumes and mobile phone communication on the reaction time of sports active students. *Journal of Physical Education and Sport*, 17(3): 1125-1129.
- Balkó, Š., Borysiuk, Z., & Šimonek, J. 2016. The Influence of Different Performance Level of Fencers on Simple and Choice Reaction Time. *Brazilian Journal of Kinanthropometry and Human Performance*, 18(4): 391-400.
- Balko, Š. 2016. *The surface electromyography in fencing. The analysis of the acyclic movement in three different performance level groups of fencers*. Opole: Opole University of Technology.
- Balko, Š., Borysiuk, Z., Balko, I., & Spulak, D. 2016. The influence of different performance level of fencers on muscular coordination and reaction time during the fencing lunge. *Archives of Budo*, 12(1): 49-59.
- Barber-Westin, S.D., Noyes, F.R., & Galloway, M. 2006. Jump-land characteristic and muscle strength development in young athletes. *American Journal of Sports Medicine*, 34(3): 375-84.
- Barrow, H., & McGee, R. 1971. *A practical approach to measurement in physical education*. Philadelphia, PA: Lea & Febiger.
- Barry, D.M.S. 2007. *Executive function- definition and description*. Encyclopedia of mental disorders. Retrieved on 04.01.2007 from <http://www.minddisorders.com/Del-Fi/Executive-function.html>.
- Besier, T.F., Lloyd, D.G., Ackland, T.R., & Cochrane, J.L. 2001. Anticipatory effects of knee joint loading during running and cutting manoeuvres. *Medicine and Science in Sports and Exercise*, 33: 1176-1181.

- Bloomfield, J., Polman, R., O'Donoghue, P., & McNaughton, L. 2007. Effective speed and agility conditioning methodology for random intermittent dynamic type sports. *Journal of Strength and Conditioning Research*, 21(4): 1093-100.
- Bloomfield, J., Ackland, T.R., & Elliot, B.C. 1994. *Applied anatomy and biomechanics in sport*. Melbourne, VIC: Blackwell Scientific.
- Bompa, T. 2000. *Total training for young champions*. Champaign, IL: Human Kinetics.
- Bös, K., & Mechling, H. 1983. *Dimensionen sportmotorischer Leistungen*. Schorndorf, Verlag Hofmann.
- Bressel, E., Yonker, J.C., Kras, J., & Heath, E.M. 2007. Comparison of static and dynamic balance in female collegiate soccer, basketball and gymnastics athletes. *Journal of Athletic Training*, 42(1):42-6.
- Brughelli, M., Cronin, J., Levin, G., & Chaouachi, A. 2008. Understanding Change in Direction Ability in Sport: A Review of Resistance Training Studies. *Sports Medicine*, 38(12): 1045-1063.
- Buttifant, D., Graham, K., & Cross, K. 1999. *Agility and speed in soccer players are two different performance parameters*. Paper presented at the Science and Soccer IV Conference, Sydney, NSW.
- Cavala, M., & Katic, R. 2010. Morphological, motor and situation-motor characteristics of elite female handball players according to playing performance and position. *Collegium Antropologicum*, 34: 1355-1361.
- Chaalali, A., Rouissi, M., Chtara, M., Owen, A.L., Bragazzi, N.L., Moalla, W., Chaouachi, A., Amri, M., & Chamari, K. 2016. Reactive agility training in young elite soccer players: promising results compared to planned agility drills. *Biology of Sport*, 33(4): 345-351.
- Chaouachi, A., Chtara, M., Hammami, R., Chtara, H., Turki, O., & Castagna, C. 2014. Multidirectional sprints and small-sided games training effect on agility and change of direction abilities in youth soccer. *J Strength Cond Res.*, 28(11): 3121-3127.
- Choutka, M., & Dovalil, J. 1991. *Sportovní trénink*. Praha: Olympia. Craig, B.W. 2004. What is the scientific basis of speed and agility? *Strength and Conditioning Journal*, 26(3): 13-14.
- Cronin, J., McNair, P.J., & Marshall, R.N. 2003. Lunge performance and its determinants. *Journal of Sports Sciences*, 21: 49-57.
- Češková, E., Kučerová, H., Kašpárek, T., & Přikryl, R. 2006. Farmakoterapie kognitivní dysfunkce. *Česká a slovenská psychiatrie*, 102(1): 13-17.
- Dovalil, J., Choutka, M., & Svoboda, B. 2002. *Výkon a trénink ve sportu*. Praha: Olympia.

- Draper, J.A., & Lancaster, M.G. 1985. The 505 test: A test for agility in the horizontal plane. *Australian Journal of Science and Medicine in Sport*, 17: 15-18.
- Dyer, F.N. 1973. The Stroop phenomenon and its use in the study of perceptual, cognitive, and response processes. *Memory & Cognition*, 1(2):106-120.
- Eisenmann, J.C., & Malina, R.M. 2003. Age- and sex-associated variation in neuromuscular capacities of adolescent distance runners. *J Sports Sci.*, 21(7): 551-557.
- Enoka, R. 2002. *Neuromechanics of human movement* (3rd edition). Champaign, IL: Human Kinetics.
- Farrow, D., Young, W., & Bruce, L. 2005. The Development of a Test of Reactive Agility for Netball: A New Methodology. *Journal of Science & Medicine in Sport*, 8(1): 52-60.
- Fiorilli, G., Iuliano, E., Mitrotasios, M., Pistone, E.M., Aguiño, G., Calcagno, G., & DiCagno, A. 2017. Are change of Direction Speed and Reactive Agility Useful for Determining the Optimal Field Position for Young Soccer Players? *Journal of Sports Science and Medicine*, 16(2): 247-253.
- Gabbett, T.J., & Benton, D. 2009. Reactive agility of rugby league players. *J Sci Med Sport*, 12: 212-4.
- Gabbett, T.J., Kelly, J.N., & Sheppard, J.M. 2008a. Speed, change of direction speed, and reactive agility of rugby league players. *J Strength Cond Res.*, 22(1): 174-181.
- Gabbett, T.J., Sheppard, J.M., Pritchard-Peschek, K.R., Leveritt, M.D., & Aldred, M.J. 2008b. Influence of closed skill and open skill warm-ups on the performance of speed, change of direction speed, vertical jump, and reactive agility in team sports athletes. *Journal of Strength and Conditioning Research*, 22(5): 1413-1415.
- Gabbett, T.J. 2002. Training injuries in rugby league: An evaluation of skill-based conditioning games. *Journal of Strength and Conditioning Research*, 16: 236-241.
- Gambetta, V. 1996. How to develop sport-specific speed. *Sports Coach*, 19: 22-24.
- Gamble, P. 2011. Technical Aspects of Acceleration and Straight-Line Speed Development. In: *Training for Sports Speed and Agility – An Evidence-Based Approach*, Abington, UK: Routledge.
- Gamble, P. 2013. *Strength and Conditioning for Team Sports: Sport-Specific Physical Preparation for High Performance*. 2nd ed., London & New York, Routledge, Taylor&Francis.

- Getchell, B. 1979. *Physical Fitness: A Way of Life*. 2nd ed. New York: John Wiley and Sons, Inc.
- Gillet, E., Leroy, D., Thouvarecq, R., Mégrot, F., & Stein, J.F. 2010. Movement-Production strategy in tennis: A case study. *Journal of Strength and Conditioning Research*, 24(7): 1942-7.
- Goral, K. 2015. Examination of agility performances of soccer players according to their playing positions. *Sports J*, 6:1–9.
- Hamar, D. 1997. *Test agility*. Bratislava: Oddelenie telovýchovného lekárstva Ústavu vied o športe pri FTVŠ UK.
- Hamar, D., & Zemková, E. 2001. *Posudzovanie disjunktívnych reakčno-rýchlostných schopností*. (Assessing disjunctive reaction abilities). 1st ed. Bratislava: FTVŠ UK.
- Harman, E., & Garhammer, J. 2008. Administration, scoring, and interpretation of selected tests In *Essentials of Strength Training and Conditioning*. 3rd ed., Edited by T.R.Beachle, and R.W.Earle, pp.250-292. Champaign, IL: Human Kinetics.
- Hendl, J. 2006. *Přehled statistických metod zpracovávání dat (Analýza a metaanalýza)*. Praha: Portál.
- Henry, G., Dawson, B., Lay, B., & Young, W. 2011. The validity of a reactive agility test for Australian soccer. *International Journal of Sports Physiology and Performance*, 6: 534-545.
- Henry, G., Dawson, B., Lay, B., & Young, W. 2012. Effects of a feint on reactive agility performance. *Journal of Sports Sciences*, 30: 787-795.
- Henry, G., Dawson, B., Lay, B., & Young, W. 2013. Decision-making accuracy in reactive agility: Quantifying the cost of poor decisions. *Journal of Strength and Conditioning Research*, 27: 3190-3196.
- Hirtz, P. 1985. *Koordinative Fähigkeiten im Schulsport: vielseitig – variationsreich – ungewohnt*. Berlin: Volk und Wissen.
- Horička, P., Hianik, J., & Šimonek, J. 2014. The relationship between speed factors and agility in sports games. *Journal of Human Sport and Exercise*, 9(1): 49-58.
- Horička, P., Šimonek, J., & Brod'áni, J. 2018. Diagnostics of reactive and running agility in young soccer players. *Physical Activity Review*, 6: 29-36.
- Hůlka, K., Tomajko, D., & Šajna, J. 2008. Komparace výsledků agility testu mezi hráči invazivních sportovních her a normální populací ve věku 10-15 let. In J. Dovalil and M. Chalupecká (Eds.), *Současný sportovní trénink*. Praha: Olympia – Sportprint, 2008; 133-136.
- Hůlka, K., & Tomajko, D. 2007. Využití žebříku v tréninku sportovních her a v tělesné výchově. *Tělesná výchova a sport*, 73(6): 34–37.

- Iacono, A.D., Eliakim, A., & Meckel, Y. 2014. Improving fitness of elite handball players: small-sided games vs. high-intensity intermittent training. *Journal of Strength and Conditioning Research*, 29: 835-843.
- Impellizzeri, F.M., Rampinini, E., & Marcora, S.M. 2005. Physiological assessment of aerobic training in Soccer. *Journal of Sports Sciences*, 23(6): 583-92.
- Inglis, P., & Bird, S.P. 2016. Reactive agility tests: Review and practical applications. *J. Aust. Strength Cond*, 24(5): 62-69.
- Ivanka, M., Rubická, J., Lenková, R., & Caban, E. 2009. *Agilita a jej rozvoj vo futbale*. Aktuálne metodické trendy. Zošit 2009/1. Bratislava: Únia futbalových trénerov Slovenska.
- Jeffriess, M.D., Schultz, A.B., McGann, T.S., Callaghan, S.J., & Lockie, R.G. 2015. Effects of Preventative Ankle Taping on Planned Change-of-Direction and Reactive Agility Performance and Ankle Muscle Activity in Basketballers. *Journal of Sports Science and Medicine*, 14(4): 964-876.
- Jeffreys, I. 2006. *Motor Learning — Applications for Agility, Part 1*. National Strength and Conditioning Association, 28(5): 72-76.
- Kail, R. 1991. Developmental change in speed of processing during childhood and adolescence. *Psychological Bulletin*, 109(3): 490-501.
- Kirchem, A. 1992. *Diagnostik motorischer Fähigkeiten und Auswirkungen einer Förderung der Bewegungskoordination im ausserunterrichtlichen Schulsport*. Erlensee: SFT – Verlag.
- Kopúň, P., & Benkovský, L. 2014. Soccer eye Q – metóda rozvoja kognitívnych schopností. *Tel. Vých. Šport*, 24(3). Methodical annex.
- Kraemer, W.J., & Fleck, S.J. 2005. *Strength training for young athletes*. (2nd edition). Champaign, IL: Human Kinetics.
- Little, T., & Williams, A.G. 2005. Specificity of Acceleration, Maximum Speed and Agility in Professional Soccer Players. *Journal of Strength and Conditioning Research*, 19(1): 76-78.
- Lockie, R.G., Jeffriess, M.D., McGann, T.S., Callaghan, S.J., & Schultz, A.B. 2014. *Int. J Sports Physiol Perform*, 9(5): 766-71.
- Loureiro Jr L.F.B., & De Freitas P.B. 2016. Development of an Agility Test for Badminton Players and Assessment of Its Validity and Test-Retest Reliability. *Int J Sports Physiol Perform*, 11(3): 305-10.
- Mathews, D.K. 1973. *Measurements in physical education*. Philadelphia, PA: W. B. Saunders.
- McMorris, T., & Graydon, J. 1997. The effect of exercise on cognitive performance in soccer-specific tests. *J Sports Sci*, 15(5): 459-468.
- Meir, R., Newton, R., Curtis, E., Fardell, M., & Butler, B. 2001. Physical fitness qualities of professional rugby league soccer players:

- Determination of positional differences. *Journal of Strength and Conditioning Research*, 15: 450-458.
- Měkota, K. 2000. Definice a struktura motorických schopností. *Česká kinantropologie*, 4(1):59-69.
- Milanović, Z., Sporiš, G., Trajković, N., & Fiorentini, F. 2011. Differences in agility performance between futsal and soccer players. *Sports Science*, 4(2): 55-59.
- Miller, M.G., Herniman, J.J., Ricard, M.D., Cheatham, C.C., & Michael, T.J. 2006. The effects of a 6-week plyometric training program on agility. *J Sports Sci Med*, 5: 459-465.
- Moreno, E. 1995. Developing quickness – part 2. *Strength and Conditioning*, 17(2):38-39.
- Morland, B., Bottoms, L., Sinclair, J., & Bourne, N. 2013. Can change of direction speed and reactive agility differentiate female hockey players? *International Journal of Performance Analysis in Sport*, 13: 510-521.
- Nabatnikova, M.J. 1982. *Osnovy upravlenija podgotovkoj junych sportsmenov*. Moskva: FiS.
- Naughton, G., Farpour-Lambert, N.J., Carlson, J., Bradley, M., & van Praagh, E. 2000. Physiological issues surrounding the performance of adolescent athletes. *Sports Medicine*, 30(5): 309-25.
- Parsons, L.S., & Jones, M.T. 1998. Development of speed, agility, and quickness for tennis athletes. *Strength and Conditioning*, 20: 14-19.
- Paul, D.J., Gabbett, T.J., & Nassis, G.P. 2016. Agility in team sports: testing, training, and factors affecting performance. *Sports Med*, (3): 421-42.
- Philippaerts, R.M., Vaeyens, R., Janssens, M. et al. 2006. The relationship between peak height velocity and physical performance in youth soccer players. *Journal of Sports Sciences*, 24(3): 221-30.
- Plisk, S. 2008. Speed, agility, and speed-endurance development. In: *Essentials of Strength Training and Conditioning*, 3rd ed., Edited by T.R. Beachle, and R.W. Earle, 458-485. Champaign, IL: Human Kinetics.
- Quatman, C.E., Ford, K.R., Myer, G.D., & Hewett, T.E. 2006. Maturation leads to gender differences in landing force and vertical jump performance. *American Journal of Sports Medicine*, 34(5): 806-13.
- Reilly, T., & Thomas, V. 1976. A motion analysis of work rate in different positional roles. *J Hum Mov Stud*, 2:87-9.
- Reilly, T., Williams, A.M., Nevill, A., & Franks, A. 2000. A multidisciplinary approach to talent identification in soccer. *Journal of Sports Sciences*, 18: 695-702.

- Rouissi, M., Chtara, M., Owen, A., Chaalali, A., Chaouachi, A., Gabbett, T., et al. 2016. *Journal of Sports Sciences*, 34(6): 542-8.
- Rousseau, R. 2013. How to improve hand-eye coordination. [online] 2013. [retrieved on September 9, 2013]. Available online at http://www.bodyomics.com/articles/hand_eye_coordination.html.
- Royal, K.A., Farrow, D., Mujika, I., Halson, S.L., Pyne, D., & Abernethy, B. 2006. The effect of fatigue on decision making and shooting skill performance in water polo players. *J Sports Sci.*, 24(8): 807-15.
- Safaric, A.J., & Bird, S.P. 2011. Agility drills for basketball: Review and practical applications. *Journal of Australian Strength and Conditioning*, 19: 24-32.
- Sayers, M. 2000. Running techniques for field sports players. *Sports Coach, Autumn*, 26-27.
- Scanlan, A., Humphries, B., Tucker, P.S., & Dalbo, V. 2014. The influence of physical and cognitive factors on reactive agility performance in men basketball players. *J Sports Sci*, 32: 367-74.
- Scott, S., & Saylor, J. 2010. *Conditioning for combat sports*. Santa Fe: Turtle Press.
- Sekulic, D., Krolo, A., Spasic, M., Uljevic, O., & Peric, M. 2014. The development of a new stop'n'go reactive agility test. *Journal of Strength and Conditioning Research*, 28: 3306-3312.
- Semenick, D. 1990. Tests and measurements. The T-test. *National Strength & Conditioning Association Journal*, 12: 36.
- Serpell, B.G., Ford, M., & Young, W.B. 2010. The development of a new test of agility for rugby league. *Journal of Strength and Conditioning Research*, 24: 3270-3277.
- Serpell, B.G., Young, W.B., & Ford, M. 2011. Are the perceptual and decision-making components of agility trainable? A preliminary investigation. *J Strength Cond Res*, 25(5): 1240-1248.
- Sheppard, J.M., Young, W.B. 2006a. Agility Literature Review: Classifications, Training, and Testing. *Journal of Sports Science*, 24(9): 919-32.
- Sheppard, J.M., Young, W.B., Doyle, T.L., Sheppard, J., & Newton, R.U. 2006b. An evaluation of a new test of reactive agility and its relationship to sprint speed and change of direction speed. *Journal of Science and Medicine in Sport*, 9: 342-349.
- Singh, A., Sathe, A., & Sandhu, J.S. 2017. Effect of a 6-week agility training program on performance indices of Indian taekwondo players. *Saudi J Sports Med*, 17: 139-43.
- Spasic, M., Krolo, A., Zenic, N., Delextrat, A., & Sekulic, D. 2015. Reactive Agility Performance in Handball; Development and Evaluation of a

- Sport-Specific Measurement Protocol. *Journal of Sports Science and Medicine*, 14: 501-506.
- Sporis, G., Jukic, I., Milovanovic, L., & Vucetic, V. 2010. *Journal of Strength and Conditioning Research*, 24(3): 679-688.
- Sternberg, J.R. 2002. *Kognitivní psychologie*. Praha: Portál.
- Stolen, T., Chamari, K., Castagna, C., & Wisloff, U. 2005. Physiology of soccer: An update. *Sports Medicine*, 35(6): 501-536.
- Svoboda, M. 1999. *Psychologická diagnostika dospělých*. Praha: Portál.
- Šimonek, J., & Kazár, D. 2016. Efektivnosť rozvoja agility a rýchlostných schopností mladých futbalistov. In *Šport a rekreácia*. Zborník vedeckých prác. Ed. Jaroslav Broďáni. Nitra: KTVŠ PF UKF Nitra, pp. 134-143.
- Šimonek, J. 2016. The effect of intervention on the changes of coordination factors in the youth sports preparation. *Sport Science*, 9 (Suppl 2): 77-81.
- Šimonek, J., Horička, P., & Hianik, J. 2017. The differences in acceleration, maximal speed and agility between soccer, basketball, volleyball and handball players. *Journal of Human Sport and Exercise*, 12(1): 73-82.
- Šimonek, J. 2014. *Coordination abilities in volleyball*. De Gruyter Open Ltd, Warsaw/Berlin.
- Šimonek, J. 2013a. Speed and coordination improvement by means of agility training at school P.E. lessons. *Sport Science*, 6(1): 95-98.
- Šimonek, J. 2013b. Niekoľko poznámok k chápaniu pojmu agilita. *Tel. Vých. Šport*, 23(1): 18-23.
- Šimonek, J., & Mikovičová, D. 2012. *Rozvoj agility v programoch školskej telesnej výchovy a športu*. 1. vyd. Nitra: PF UKF. 112 p.
- Tonson, A., Ratel, S., Le Fur, Y., Cozzone, P., & Bendahan, D. 2008. Effect of maturation on the relationship between muscle size and force production. *Med Sci Sports Exerc*, 40(5): 918-925.
- Vasil'ovský, I., & Šimonek, J. 2016. Rozvoj reaktívnej agility v tematickom celku úpoly. *Tel. Vých. Šport*, 26(3): 24-26.
- Veale, J.P., Pearce, A.J., & Carlson, J.S. 2010. Reliability and validity of a reactive agility test for Australian soccer. *International Journal of Sports Physiology and Performance*, 5: 239-248.
- Verkhoshansky, Y. V. 1996. Quickness and Velocity in Sports Movements. *New Studies in Athletics*, 11(2-3): 29-37.
- Vieira, F., Veiga, V., Carita, A.I., & Petroski, E.L. 2013. Morphological and physical fitness characteristics of under-16 Portuguese male handball players with different levels of practice. *Journal of Sports Medicine and Physical Fitness*, 53: 169-176.

- Webb, P., & Lander, J. 1983. An economical fitness testing battery for high school and colleague rugby teams. *Sports Coach*, 7(3): 44-46.
- Wheeler, K.W., & Sayers, M.G.L. 2010. Modification of agility running technique in reaction to a defender in rugby union. *J Sports Sci Med*, 9(3): 445-51.
- Williams, A., & Grant, A. 1999. Training perceptual skill in sport. *Int J Sport Psychol*, 30: 194-220.
- Young, W.B., James, R., & Montgomery, I. 2002. Is muscle power related to running speed with changes of direction? *Journal of Sports Medicine and Physical Fitness*, 43: 282-288.
- Young, W.B., Benton, D., Duthie, G., & Pryor, J. 2001a. Resistance training for short sprints and maximum-speed sprints. *Strength and Conditioning Journal*, 23(2): 7-13.
- Young, W.B., McDowell, M.H., & Scarlett, B.J. 2001b. Specificity of sprint and agility training methods. *Journal of Strength and Conditioning Research*, 15(3): 315-320.
- Young, W.B., & Willey, B. 2010. Analysis of a reactive agility field test. *Journal of Science and Medicine in Sport*, 13: 376-378.
- Young, W.B., & Rogers, N. 2014. Effects of small-sided game and change-of-direction training on reactive agility and change-of-direction speed. *J Sports Sci*, 32(4): 307-14.
- Young, W.B., Dawson, B., & Henry, G.J. 2015. Agility and change-of-direction speed are independent skills: Implications for training for agility in invasion sports. *International Journal of Sports Science & Coaching*, 10(1): 159-169.
- Zatsiorsky, V.M. 1995. *Science and Practice of Strength Training*. Champaign: Human Kinetics.
- Zemkova, E., & Hamar, D. 2009. *Toward an Understanding of Agility Performance*. 1st edition, Boskovice: František Šalé - Albert.
- Zemkova, E., & Hamar, D. 2014a. Age-related changes in agility time in children and adolescents. *International Journal of Science and Research*, 3(11): 280-285.
- Zemkova, E., & Hamar, D. 2014b. Agility performance in athletes of different sport specializations. *Acta Univ Palacki Olomouc Gymn*, 44: 133-140.
- Zemkova, E., & Hamar, D. 2015. *Toward an understanding of agility performance*. 2nd edition. Boskovice: František Šalé – Albert. 65 p.
- Zemkova, E. 2016a. Agility Index as a measurement tool based on stimuli number and traveling distances. *J Strength Cond Res*, 31: 2141-2146.

- Zemkova, E. 2016b. Differential contribution of reaction time and movement velocity to the agility performance reflects sport-specific demands. *Human Movement*, 17(2): 94-101.
- Zemkova, E., & Hamar, D. 2018. Sport-Specific Assessment of the Effectiveness of Neuromuscular Training in Young Athletes. *Front Physiology*, 9: 264.
- <http://www.topendsports.com>