

Dance and health

From Wikipedia, the free encyclopedia

Dance is an enjoyable health promoting physical activity which many people worldwide incorporate into their lifestyles today. This physical activity appeals to some who may not be active and therefore may be another alternative of exercise.^[1] Dance for health has become an important factor in the prevention, treatment and management in several health circumstances. It is not only significant for your physical health but it also contributes to your mental health and subsidizes social communication^[2] Dance is an art which is learned from many cultures. Types of dance can entail body movements, expression and collaboration.^[1] **Dance and health** has been subject of a number of research studies that show dance to be a healthy exercise. However, there are a number of health risks that require attention^[2]

Contents

- 1 Benefits of dance
 - 1.1 Physical health and fitness
 - 1.2 Mental health
- 2 Risks of dance
 - 2.1 Injuries
 - 2.1.1 Avoiding injury
 - 2.1.2 Treatment of injuries
 - 2.2 Stress
- 3 Scientific study of dance
- 4 Related occupations
- 5 References
- 6 Further reading
- 7 External links



Learn to dance cartoon

Benefits of dance

Physical health and fitness

Dancing can be a way to stay fit for people of all ages, shapes and sizes. It has a wide range of physical, and mental benefits including: improved condition of your heart and lungs, increased muscular strength, endurance and motor fitness, increased aerobic fitness, improved muscle tone and strength, weight management, stronger bones and reduced risk of osteoporosis, better coordination, agility and flexibility, improved balance and spatial awareness, increased physical confidence, improved mental functioning, improved general and psychological well being, greater self-confidence and self-esteem, and better social skills.^[3] Most forms of dance may be considered an aerobic exercise and as such reduce the risk of cardiovascular disease, help weight control, stress reduction, and bring about other benefits commonly associated with physical fitness. In addition, studies have demonstrated a considerable correlation between dancing and psychological well-being. A large amount of governmental, health, and educational information is available extolling the benefits of dance for health.^[4]



Ellsworth Zumba demo.

Benefits of Cultural dance Physical activity has many physical and mental health outcomes. However, physical inactivity continues to be common. Dance, specifically cultural dance, is a type of physical activity that may appeal to some who are not otherwise active and may be a form of activity that is more acceptable than others in certain cultures.^[5]

Dance pads have proven useful in tackling obesity in young people and are welcomed in many schools for that reason.^[6]

A report by Professor Tim Watson and Dr Andrew Garrett of the University of Hertfordshire compared members of the Royal Ballet with a squad of British national and international swimmers. The dancers scored higher than the swimmers in seven out of ten areas of fitness.^[7] An Italian study in 2006 has shown that dance is a very good exercise for heart patients compared to other aerobic exercises like cycling. This may be partly because the patients enjoyed it much more.^{[8][9]}

A study at the Washington University in St. Louis School of Medicine in 2007 showed Argentine tango was better at improving the mobility of Parkinson's disease sufferers than an exercise class^[10] (a later study showed similar benefits from Tai chi).^[11] Because of the level of interest a permanent tango class was set up after the study ended. A study by Dr Paul Dougall at Strathclyde University in 2010 concentrating on older women found that Scottish country dancers were more agile, have stronger legs and can walk more briskly than people of the same age who took part in exercises such as swimming, walking, golf and keep-fit classes.^[12]

Another gain of dancing is for those who have high cholesterol, plus drugs and adequate food, dancing can draw. As an aerobic exercise abridged levels of total blood cholesterol, especially in LDL cholesterol, acknowledged as bad and helps boost levels of HDL or good cholesterol.^[13] Dancing in general increases, muscle strength and flexibility, which in turn, improves overall range of motion. Dance also increases core strength which can improve balance, coordination, and posture (which reduces back pain).^[14]

Mental health

Dance has been repeatedly shown to positively impact a person's mental health. For example, lead study author Anna Duberg, of Sweden's Center for Health Care Sciences, found that, "despite problems such as stress and other potential challenges in being an adolescent girl, dance can result in high adherence and a positive experience for the participants." Dancing had the potential to contribute to new healthy habits. Swedish researchers, writing in the *JAMA Pediatrics*,^[15] studied 112 teenage girls who were struggling with problems including neck and back pain, stress, anxiety, and depression. Half of the girls attended weekly dance classes, while the other half didn't. The girls who took the dance classes improved their mental health and reported a boost in mood—positive effects that lasted up to eight months after the classes ended.

Additionally, a recent study done in Perth Western Australia by Debbie Duignan (WA Alzheimers Association) explored the use of Wu Tao Dance as a therapy for people with dementia. It was shown that Wu Tao dance helped to reduce symptoms of agitation in people with dementia.^[16] The complex mental coordination involved with dancing activates both sensory and motor circuits. Therefore, when one dances, one's brain is both stimulated by the sound of the music and by the dance movements themselves. PET imaging has shown brain regions that become activated during dance learning and performance, including the motor cortex, somatosensory cortex, basal ganglia, and cerebellum.^[17] The benefits of dancing on the brain includes memory improvement and strengthened neural connections. Consequently, not only can dance help to reduce symptoms experienced by those with dementia, but it can also reduce the risk of developing dementia in the first place, as shown in a 2003 study in the *New England Journal of Medicine* by researchers at the Albert Einstein College of Medicine.

In addition to improving symptoms of dementia and preventing dementia, frequent dancing can even lead to increased cognitive acuity for individuals of all ages. However, not all kinds of dancing have this power. Those dance styles that allow for the most split-second decisions are the most beneficial; those dance styles with the

same, memorized patterns are the least beneficial.^[18] For the same reason, those who take the Follow role have a higher opportunity for improving their cognitive acuity since they must make constant split-second decisions as they follow their partner's lead. The key for improving cognitive acuity is to create new neural connections to increase the complexity of our neuronal synapses. Another important consideration is that the frequency of dancing matters. The more frequent an individual dances, the greater the cognitive improvement.

Furthermore, many cultures agree that there is a mind and body connection, and many cultures use dance to heal this often damaged connection. During the African diaspora, individuals used dance therapy to treat the trauma that resided from their situations.^[19] Dance therapy is suggested for patients today as treatment for emotional and therapeutic support, as dance allows individuals to connect with their inner-self.^[20]

Risks of dance

There are various health risks of professional dance, as it can be very demanding. As well as sports injuries, repetitive strain injury, and chronic workplace stress. Dancers risk injury within the course of their career, many retiring from active performance in their mid to late 30s. Since dance is a performance art with emphasis on aesthetics, dancers are also at a higher risk of body image problems and eating disorders such as anorexia nervosa or bulimia.^[21] Dancing, especially ballet, are very strenuous on the body. Research shows that dancers in elite pre-professional companies have 1.38 injuries per 1000 hours of dancing, with dancers averaging about 30.3 hours per week. The most common injury was to the lower extremities, with ankle being the most common. The injuries on average took about 7 days to heal with foot injuries taking the longest at 14 days and thigh injuries being the lowest at 2 days.^[22]

Injuries

Many dance movements, and particularly ballet techniques, such as the turnout of the hips and rising on the toes (en pointe), test the limits of the range of movement of the human body. Dance movements can place stress on the body when not performed correctly; even if perfect form is used, over-repetition can cause repetitive strain injury. The most common injury for ballet dancers is snapping hip syndrome ^[24]

“ ...compared to the 61 common sports, only professional [American] football is more physically demanding than ballet.^[23] ”

Examined in the *Journal of Dance Medicine and Science*, dancers often put off consultation from doctors or physical therapists in the effort to stay employed by a dance company or to stay in rehearsals. When in fact those dancers that "work through" their pain more often than not end up worsening their symptoms and prolonging their recovery. Eighty percent of professional dancers will be injured in some way during their careers; 50 percent of dancers from large ballet companies and 40 percent from small companies will miss performances due to injury.^[25] The practice of "plieing" (bending one's knees deeply) after landing each jump may seem innocuous, but failing to do so may result in shin splints or knee injuries.

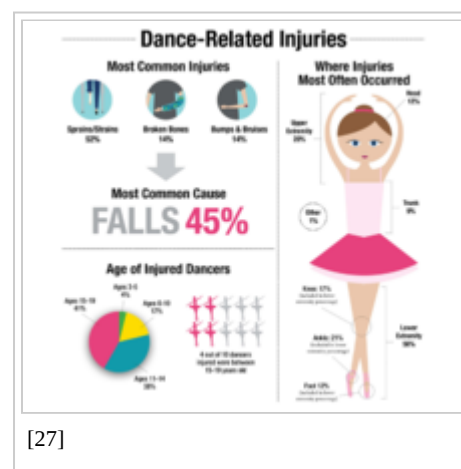
Overwork and poor occupational health and safety conditions, a (non-sprung) hard floor, a cold studio or theater, or dancing without sufficient warm up also increase risk of injury. To minimize injury, dance training emphasizes strength building and forming appropriate habits. Choreographers and dance instructors will often put certain demands on their students and dancers without taking into consideration that each dancer is faced with different anatomical limitations. Dancers will strive to achieve the ideal aesthetic in their respective dance technique by over compensating for their limitations and thus presenting themselves with a higher risk for injury. Also damage may result from having a student perform movements for which they are not prepared, care must be taken that the student is not "pushed" inappropriately.^[26]

A dancer put en pointe at an age where his or her bones have not completely ossified may develop permanent damage; even past the point of ossification, ankle injuries can result if a dancer goes en pointe without sufficient strength. Rachele Quested and Anna Brodrick, the lower extremities are the vulnerable to injury. The

most common injury is to the ankle, then leg, foot, knee, hip and finally the thigh. Dancers are trained from a very young age to avoid injury by using plie, turn out, and other means to protect their bodies.^[22]

Avoiding injury

Keeping dancers free of injury is a crucial aspect and will help a lifetime of healthy physical activity and can prevent injuries in the future. By being taught a few simple techniques by parents, teachers, and medical professionals can avert injuries from occurring. Following are a few advice's on preventing injuries.^[28] Wearing properly fitting clothing and shoes, drink plenty of fluids to stay hydrated, don't dance through pain, rest and then start back up again and listen to your teachers for correct technique.^[28] For social dance the use of a sprung floor is highly recommended.^[29] Because a dance injury can ruin a career professional dancers are increasingly refusing to dance on anything else. In ballet good plieing (bending the knees) on landing helps protect against knee injuries and shin splints. Many types of dance, especially folk dances, have hops in the steps where the impact of landing can be reduced by slightly bending the knee. Warming up and cooling down exercises are recommended before and after exercises to avoid strain, muscle pains, and possible injury.^[30] Conditioning is a good way to prevent dance injuries.^[31]



[27]

Treatment of injuries

RICE (Rest, Ice, Compression, Elevation) is generally regarded as a good first aid therapy for most dance injuries before the ambulance comes, or even for what may be thought of as minor injuries.^[32] Pain and inflammation can be reduced using a non-steroidal anti-inflammatory drug (NSAID) in a gel applied to the affected area (not on broken skin), note however that masking a pain to continue dancing is dangerous as it can easily make an injury very much worse.^[29]



[27]

Stress

Professional dancers may experience chronic workplace stress with an uncertain work situation. The average income for a ballet dancer is low,^[33] and competition for jobs is very high. In addition to the stress that may be caused by this, dancers also may experience the psychological distress from technical and physical "perfectionism". As with other activities (such as horse jockeying) where weight is a factor, dancers are at a higher risk for developing eating disorders such as anorexia and bulimia.^[34] Many young dancers, believing that the ideal dancer must be thin, may begin controlling their diets, sometimes obsessively.^[35] Such dancers may be unaware of or may choose to ignore the fact that an emaciated dancer will not have the strength required for ballet. It is also highly relevant that inadequate nutrition in adolescent females has been linked to development of scoliosis, due to decreased oestrogen production and subsequent reduced bone density. A dancer with poor nutrition is at a higher risk for injuries and long-term health problems. A malnourished dancer's performance will be altered and weakened as his or her body starts to break down muscle and bone in order to fuel itself. This puts the dancer at risk for injury and slows the healing of chronic injuries.^[36] In a survey of 300 professional dancers, 40% were tobacco smokers in contrast with the Center for Disease Control average of 24% of American women and 29% of American men aged 18–34.^[37]

Scientific study of dance

Dance science is the scientific study of dance and dancers, as well as the practical application of scientific principles to dance. Its aims are the enhancement of performance, the reduction of injury, and the improvement of well-being and health. Dance requires a high degree of interpersonal and motor skills, and yet seems built into humans. It has therefore increasingly become the subject of neurological studies. The July 2008 edition of *Scientific American* contains a summary of recent studies and further questions.^[38]

Related occupations

Dance therapy or dance movement therapy is a form of expressive therapy, the psychotherapeutic use of movement (and dance) for treating emotional, cognitive, social, behavioral and physical conditions. Many professionals specialize in dancer's health such as in providing complementary or remedial training or improving mental discipline.^[39]

References

1. Ravelin, Teija; Kylmä, Jari; Korhonen, Teija (2006). "Dance in mental health nursing: a hybrid concept analysis" *Issues in Mental Health Nursing* **27** (3): 307–317. doi:10.1080/01612840500502940(<https://doi.org/10.1080%2F01612840500502940>).
2. Ward, Sheila A. (2008-04-01)."Health and the Power of Dance"(<http://dx.doi.org/10.1080/07303084.2008.10598161>) *Journal of Physical Education, Recreation & Dance*. **79** (4): 33–36. ISSN 0730-3084 (<https://www.worldcat.org/issn/0730-3084>). doi:10.1080/07303084.2008.10598161(<https://doi.org/10.1080%2F07303084.2008.10598161>)
3. [1] (<https://www.betterhealth.vic.gov.au/health/healthyliving/dance-health-benefits>)
4. Dance and health: The benefits for people of all ages(http://www.wartscouncil.org.uk/publication_archive/dance-and-health-the-benefits-for-people-of-all-ages/) Archived (https://web.archive.org/web/20160121061245/http://www.wartscouncil.org.uk/publication_archive/dance-and-health-the-benefits-for-people-of-all-ages/)21 January 2016 at the Wayback Machine. Jointly from the British National Health Service and the Department for Culture, Media and Sport
5. Olvera, Anna E. (2008). "Cultural Dance and Health" *American Journal of Health Education* **39** (6): 353–359. doi:10.1080/19325037.2008.10599062(<https://doi.org/10.1080%2F19325037.2008.10599062>)
6. Games on Deck (http://seriousgamesource.com/features/feature_051906.php) Games For Health 2006: Dance Dance... Revolution in Fitness!
7. Ballet Dancers Are Fitter Than International Swimmers, Study Finds (<http://www.sciencedaily.com/releases/2008/10/081022073916.htm>)
8. America Heart Association(<http://www.heart.org/presenter.jhtml?identifier=3043386>) Archived (<https://web.archive.org/web/20090716153210/http://www.heart.org/presenter.jhtml?identifier=3043386>)16 July 2009 at the Wayback Machine. Heart failure patients can waltz their way to healthier hearts
9. Heart Care -February 2007(https://web.archive.org/web/20081011152348/http://www.healthsystem.virginia.edu/UVAHealth/news_heartcare/0702hc.cfm)Waltzing Your Way to a Stronger Heart
10. Hackney, Madeleine E.; Kantorovich, Svetlana; Earhart, Gammon M. (2007). "A Study on the Effects of Argentine Tango as a Form of Partnered Dance for those with Parkinson Disease and the Healthy Elderly". *American Journal of Dance Therapy*. **29** (2): 109–127. doi:10.1007/s10465-007-9039-2(<https://doi.org/10.1007%2Fs10465-007-9039-2>)
11. Hackney, Madeleine E.; Earhart, Gammon M. (2008). "Tai Chi improves balance and mobility in people with Parkinson disease". *Gait & Posture*. **28** (3): 456–460. doi:10.1016/j.gaitpost.2008.02.005(<https://doi.org/10.1016%2Fj.gaitpost.2008.02.005>).
12. "Dancers reel their way to fitness"(https://web.archive.org/web/20100907212528/http://www.strath.ac.uk/press/newsreleases/headline_314698_en.html) University of Strathclyde Glasgow6 August 2010. Archived from the original (http://www.strath.ac.uk/press/newsreleases/headline_314698_en.html) on 7 September 2010.
13. "Ten biggest benefits of dancing"(<http://whatisusa.info/10-benefits-of-dance-for-health/>). What is USA News. 28 March 2014. Retrieved 2013-11-19.
14. Ward, Sheila A. (2008). "Health and the Power of Dance". *Journal of Physical Education, Recreation & Dance*. **79** (4): 33–36. doi:10.1080/07303084.2008.10598161(<https://doi.org/10.1080%2F07303084.2008.10598161>)
15. Duberg A; Hagberg L; Sunvisson H; Möller M (2013)."Influencing Self-rated Health Among Adolescent Girls With Dance Intervention" (<http://archpedi.jamanetwork.com/article.aspx?articleid=1390784>) *JAMA Pediatrics* **167** (1): 27–31. doi:10.1001/jamapediatrics.2013.421(<https://doi.org/10.1001%2Fjamapediatrics.2013.421>)
16. "Exploring dance as a therapy for symptoms and social interaction in a dementia care unit" (<http://www.nursingtimes.net/nursing-practice-clinical-research/specialists/older-people/exploring-dance-as-a-therapy-for-symptoms-and-social-interaction-in-a-dementia-care-unit/5004646.article>) nursingtimes.net. 30 July 2009.
17. <http://neuro.hms.harvard.edu/harvard-mahoney-neuroscience-institute/brain-newsletter/and-brain-series/dancing-and-brain>

18. <https://socialdance.stanford.edu/syllabi/smarthehtm>
19. Monteiro, Nicole M.; Wall, Diana J. (2011). "African Dance as Healing Modality Throughout the Diaspora: The Use of Ritual and Movement to Work Through Trauma" (https://www.researchgate.net/profile/Nicole_Monteiro/publication/251237748_African_Dance_as_Healing_Modality_Throughout_the_Diaspora_The_Use_of_Ritual_and_Movement_to_ork_Through_Trauma/links/00b7d51efab8e450a4000000.pdf) (PDF). *The Journal of Pan African Studies* 4 (6): 234–252.
20. <http://www.cancer.org/treatment/treatmentsandsideeffects/complementaryandalternativemedicine/mindbodyandspirit/d/therapy>
21. Wan Nar Wong, Margaret; William Wing Kee To; Kai Ming Chan (2001). "Chapter 16: Dance Medicine". In Nicola Maffulli, K. M. Chan, Robert M. Malina, Tony Parker. *Sports Medicine for Specific Ages and Abilities* (2nd ed.). Elsevier. pp. 161–168. ISBN 978-0-443-06128-8
22. Ekegren, Christina L.; Quedsted, Rachele; Brodrick, Anna (2014). "Injuries in pre-professional ballet dancers: Incident characteristics and consequences" *Journal of Science and Medicine in Sport* 17 (3): 271–275. doi:10.1016/j.jsams.2013.07.013(<https://doi.org/10.1016%2Fj.jsams.2013.07.013>)
23. The Cleveland Clinic Foundation (12 January 2004)."Ballet: Ideal Body Type" (<https://web.archive.org/web/20060826234633/http://www.clevelandclinic.org/health/health-info/docs/1700/1799.asp?index=7779&src=news>) Archived from the original (<http://www.clevelandclinic.org/health/health-info/docs/1700/1799.asp?index=7779&src=news>) on 26 August 2006 Retrieved 2006-10-05.
24. <http://www.dance-teacher.com/2010/08/10-common-dance-injuries/>
25. Machleder, Elaine (2000). "Avoiding Injury: It's A Science"(https://web.archive.org/web/20060319092055/http://www.dancespirit.com/backissues/jul_aug00/avoidinjury.html). *Dance Spirit Magazine*. Archived from the original (http://www.dancespirit.com/backissues/jul_aug00/avoidinjury.html) on 19 March 2006 Retrieved 2006-05-23.
26. "Dance and health" (<http://pole-acrobatics.info/lexicon/dance-and-health.html>) *Pole-acrobatics.info*. Retrieved 12 September 2016.
27. "Types Of Dance" (<http://www.artscentral.sg/types-of-dance/>) *www.artscentral.sg*. Arts Central. Retrieved 2016-05-17.
28. "STOP Sports Injuries" (http://www.stop-sports-injuries.org/STOP/Prevent_Injuries/STOP/Prevent_Injuries/Our_Resources.aspx?hkey=c0514bfe-e99a-43d7-88c9-7dd9f5756d61)
29. Harkness Centre for Dance Injuries (<http://www.med.nyu.edu/hjd/harkness/patients/injuries/>) Common Dance Injuries Archived (<https://web.archive.org/web/20071128055503/http://www.med.nyu.edu/hjd/harkness/patients/injuries/>) 28 November 2007 at the Wayback Machine
30. Adapted Physical Education and Sport By Joseph Winnick 2005 ISBN 0-7360-5216-X Chapter 15 Science behind Accurate Exercise Programs
31. Daniel D. Arnheim (1991). *Dance injuries: their prevention and care*. Princeton Book Co. p. 8. ISBN 978-0-87127-146-4.
32. Dance Magazine April, 2005 by Linda Hamilton (https://archive.is/20120708010505/http://findarticles.com/p/articles/r_i_m1083/is_4_79/ai_n13493419) Ouch! Five common dance injuries & how to treat them
33. "Occupational Overview for Dancers and Choreographers" (<http://www.edonline.com/collegecompass/oohb0107.htm>) College Compass.
34. Maloney MJ (November 1983). "Anorexia nervosa and bulimia in dancers. Accurate diagnosis and treatment planning" *Clin Sports Med* 2 (3): 549–55. PMID 6580964 (<https://www.ncbi.nlm.nih.gov/pubmed/6580964>)
35. Bettle N, Bettle O, Neumärker U, Neumärker KJ (1998). "Adolescent ballet school students: their quest for body weight change" (<http://content.karger.com/produktedb/produkte.asp?typ=fulltext&file=psp3153>). *Psychopathology* 31 (3): 153–9. PMID 9636944 (<https://www.ncbi.nlm.nih.gov/pubmed/9636944>) doi:10.1159/000066238 (<https://doi.org/10.1159%2F000066238>)
36. "Dance" (<http://orthopedics.childrenscolorado.org/sports-medicine--injuries/sports-injuries-we-treat/dance>). Children's Hospital of Colorado: Orthopedics Institute Retrieved 13 June 2013.
37. Lalith Munasinghe, Nachum Sicherman (February 2005). "Why Do Dancers Smoke?" (<https://web.archive.org/web/20080307122721/http://www2.gsb.columbia.edu/faculty/NSicherman/Research/getpaperfm/Why.Do.Dancers.Smoke.pdf?Article=Why.Do.Dancers.Smoke.pdf>) (PDF). Archived from the original (<http://www2.gsb.columbia.edu/faculty/NSicherman/Research/getpaperfm/Why.Do.Dancers.Smoke.pdf?Article=Why.Do.Dancers.Smoke.pdf>) (PDF) on 7 March 2008 Retrieved 2006-10-05.
38. [2] (<http://www.sciam.com/article.cfm?id=the-neuroscience-of-dance>) So You Think You Can Dance?: PET Scans Reveal Your Brain's Inner Choreography Stephen Brown and Lawrence M. Parsons *Scientific American* July 2008 vol 299 No. 1 58-63
39. "Archived copy" (<https://web.archive.org/web/20080614044735/http://www.londondance.com/content.asp?CategoryID=510>). Archived from the original (<http://www.londondance.com/content.asp?CategoryID%3D510>) on 14 June 2008 Retrieved 2008-07-09. Londondance.com: Dancers Health

Further reading

- Quin, Edel; Rafferty, Sonia; Tomlinson, Charlotte (2015). *Safe Dance Practice*. Human Kinetics. ISBN 978-1-4925-1347-6.

External links

- Harkness Centre for Dance Injuries
- Overview of Ballet Injuries
- Ouch! Five common dance injuries & how to treat them

Retrieved from "https://en.wikipedia.org/w/index.php?title=Dance_and_health&oldid=786759859"

Categories: [Dance and health](#) | [Health research](#)

- This page was last edited on 21 June 2017, at 13:05.
- Text is available under the Creative Commons Attribution-ShareAlike License; additional terms may apply. By using this site, you agree to the Terms of Use and Privacy Policy. Wikipedia® is a registered trademark of the Wikimedia Foundation, Inc., a non-profit organization.