



DOSSIER · THERAPY

Dance Therapy

This page classifies the research on dance therapy. It is striking that the most cited works almost all concern a single indication: Parkinson's disease. The controlled human studies are distributed mainly on cognition and fatigue besides that.

634

STUDIES IN
TOTAL

391

IN HUMANS

160

OF WHICH
CONTROLLED

0

IN ANIMALS

0

IN THE LAB

Figures from the IHR study database · Last updated 2026-10-04

How to Read This Dossier

ESTABLISHED

measured in humans, with a comparison group

PLAUSIBLE

supported by mechanism, animal studies or observation

HYPOTHESIS

a likely connection that still needs to be tested

Dance Therapy at a Glance

ORIGIN:

Dance therapy is a movement- and psychotherapeutic procedure: movement to music is specifically used to influence physical functions, mood and psychosocial situation. In the studies presented, it appears as tango, Irish Set Dancing, social dancing, dance programme in nursing homes and as dance-therapeutic intervention in the psychotherapeutic sense. It is investigated in community centres, nursing homes and clinics.

EVIDENCE BASE:

634 evaluated studies · 160 controlled human studies · 231 observational studies · 46 reviews · 0 animal studies · 0 cell-culture studies

STRONGEST EVIDENCE:

- Cognition in older adults: The meta-analysis of 13 studies with 1605 participants aged 60 years and over shows an effect on global cognition; in the MMSE subgroup MD=1,57 (95 % CI 0,53–2,61, p=0,003).
- Mild cognitive impairment: The review of eight randomised studies shows moderate effects on global cognition (SMD=0,54), memory (SMD=0,33), visuospatial function (SMD=0,42), language (SMD=0,39) and physical function (SMD=0,55).
- Parkinson's disease: The randomised tango study in 40 patients with idiopathic Parkinson's syndrome shows no change in overall motor severity, but an improvement in the Mini-BESTest (p=0,032) and in TUG time (p=0,042).
- Dementia: In 204 older adults with mild dementia, dance movement therapy reduced depression, loneliness and negative mood (d=0,33–0,42); everyday functioning improved (d=0,40); the effects were maintained at 1-year follow-up.
- Gait and mobility: In the meta-analysis that included 12 of 25 articles, gait speed, TUG test performance, Freezing-of-Gait questionnaire and 6-Minute Walk Test improved compared with controls.

LIMITATIONS:

- The interventions differ in style, tempo, step sequence, music, group size, instruction and duration; comparability of the studies is therefore limited.
- In the controlled studies the comparison is usually against usual care, less often against exercise training of equal intensity; the contribution of music, group and therapeutic relationship can hardly be separated.
- Several frequently cited studies are designed as preliminary or pilot studies; one is quasi-randomised; follow-up is usually short.

CLASSIFICATION:

Dance therapy is a movement- and psychotherapeutic procedure whose most robust evidence lies in neurological rehabilitation and in cognition of older adults.

1. What Dance Therapy Is

Dance therapy is a movement- and psychotherapeutic procedure: movement to music is specifically used to influence physical functions, mood and psychosocial situation. Setting and framework are correspondingly varied: community centres, nursing homes, clinics, group and individual settings. Some of the studies examine dance as physical training, others examine dance as psychotherapeutic movement therapy. This distinction is decisive for evaluation.

The decisive point for understanding all studies is that "dance" does not denote a uniform intervention. The studies differ in style, tempo, step sequence, music, group size, instruction by therapists or trainers and in duration. A two-year prospective pilot study on community-based dance stands beside short programmes of a few weeks. Comparison is usually against usual care, less often against active exercise training of equal intensity. It is therefore hardly possible to separate what is due to the music, what to the movement, what to the group and what to the therapeutic relationship. Participants can hardly be blinded; one of the studies is explicitly single-blinded. Anyone reading the results must therefore first ask which dance form, which dose and which comparison were chosen.

2. What the Studies Show in Detail

The key human studies and the most important reviews — by field of application, with population, duration, measure and result as reported in the original studies. Numbers appear only where the study states them.

Distribution of **controlled human studies** by field of application — the numbers are not additive, as one study may be assigned to several fields:

FIELD OF APPLICATION	CONTROLLED STUDIES
Cognition and psyche	83
Fatigue and stress	40
Musculoskeletal system	35
Safety and tolerability	35
Oncology	21
Heart and circulation	17

FIELD OF APPLICATION	CONTROLLED STUDIES
Gut and microbiome	6
Metabolism	5

Cognition and Psyche

The randomised controlled study by [1] examined the effect of 24 tango partner-dance sessions (n=18) versus a self-directed exercise group (n=15) in 40 patients with idiopathic Parkinson's syndrome. The primary endpoint was overall motor severity (MDS-UPDRS-3): the intention-to-treat analysis showed no difference between the groups (1,6 vs. 1,2 point reduction, p=0,85). Clinical global impression by the patients did not differ (p=0,33), whereas the investigators' rating favoured the tango group (p=0,02). The Mini-BESTest battery improved in the tango group (0,7±2,2 vs. -2,7±5,9, p=0,032). Individual items: simple TUG time (-1,3±1,6 s vs. 0,1±2,3, p=0,042) and TUG dual-task score (0,4±0,9 vs. -0,2±0,4, p=0,012) improved, with borderline improvement in turning while walking (0,2±0,5 vs. -0,1±0,5, p=0,066). MoCa (0,4±1,6 vs. -0,6±1,5, p=0,080) and FSS (-3,6±10,5 vs. 2,5±6,2, p=0,057) showed a non-significant trend toward improvement in the tango group. The authors conclude that tango can improve balance control and some motor aspects, while cognitive function and fatigue were not significantly influenced. The study is limited to 40 participants and the control group was self-directed, which restricts interpretation.

The analysis yielded a moderate overall effect (d=0,60) with high heterogeneity (I²=72,62 %). By outcome clusters the effects lay in the moderate to large range (d=0,53 to d=0,85). All effects except those for (psycho)motor abilities showed high inconsistency. Sensitivity analyses showed that the type of intervention (DMT or dance) influenced the results. The authors emphasise the increased number of studies (from 1,3 studies/year 1996–2012 to 6,8 studies/year 2012–2018) and the need for further research on specific mechanisms of action. The high heterogeneity and the limited number of follow-up data (eight studies) restrict generalisability.

The dance and the exercise group each completed a 60-minute session once a week over 12 weeks. The dance group showed large effects on the TUG (ES=0.65, p=0.006), on the TUG step count (ES=0.66, p=0.005) and on the Berg Balance Scale (ES=0.75). The study points to improvements in motor functions; the cognitive and psychological endpoints (FAB, MRT, AS, SDS) are not reported with results in the abstract. The small sample size and the quasi-randomised design limit the strength of the evidence.

The intervention group trained systematically; both groups were tested neuropsychologically before and after the 10-month period. At follow-up, significant differences emerged in favour of the intervention group, while the control group showed poorer performance in the majority of neuropsychological tests. The authors conclude that dance can be an important non-pharmacological approach that promotes cognitive functions. The study reports no specific effect sizes or p-values for the individual tests, which makes it difficult to classify the magnitude of the effects.

The systematic review by [8] examined in eight randomised clinical trials whether dancing promotes neuroplasticity. All included studies showed positive structural and/or functional changes. Structural changes comprised increased hippocampal volume, grey matter in the left precentral and parahippocampal gyrus as well as integrity of white matter. Functional changes comprised significant improvements in memory, attention, body balance and psychosocial parameters. For peripheral neurotrophic factors, changes in laboratory values were observed that do not constitute functional improvement. The authors conclude that dancing integrates brain areas and improves neuroplasticity. The review is based on eight studies, which limits generalisability; in addition, data on effect sizes and control-group comparisons are lacking.

The randomised controlled trial by [10] examined safety and feasibility of a 10-week dance-therapy programme in 13 Parkinson's patients (randomised 2:1 to dance therapy n=9 or self-help group n=4). All participants completed the study. The control group was older and had higher mean baseline values on the MDS-UPDRS III (27.56 dance vs. 40.75 control) and the Hoehn-and-Yahr scale (2.11 dance vs. 2.50 control). Seven of nine in the dance therapy and all control participants attended at least 70 % of the sessions. All dance-therapy participants enjoyed the sessions. The study reports no significant efficacy differences, which is to be expected given the small sample and pilot character. The results indicate feasibility and acceptance, not efficacy.

The randomised controlled trial by [13] examined the psychophysiological effects of dance movement therapy (DMT) and physical exercise in 204 older adults with mild dementia. Both interventions had similar intensity and comprised 24 hours over 12 weeks. The DMT group showed significant reductions in depression, loneliness and negative mood (d=0.33–0.42, p<0.05) as well as improved activities of daily living (d=0.40, p<0.01) and an altered diurnal cortisol profile (d=0.30, p<0.01). The effects on activities of daily living and cortisol profile were maintained at the 1-year follow-up. The exercise group of equal intensity showed no significant effects on the outcomes. The authors conclude that DMT could be a suitable multifaceted intervention for improving various functional domains in older adults with declining cognitive abilities. The study is limited to one-year follow-up and the control group was a waiting list.

The randomised controlled trial by [14] examined the effect of a dance-based programme (Exercise Dance for Seniors, EXDASE) once weekly for 60 minutes over 3 months in older adults (60 years or older) in nursing homes. A GLM analysis documented a highly significant effect of dance therapy (p=0.001) that remained after controlling for antidepressant intake and nursing-home location. Participants with MMSE below 15 had more study drop-outs. The study shows short-term improvements in depressive symptoms; however, long-term follow-up data are lacking.

The systematic review and meta-analysis by [15] examined in eight randomised controlled trials the effect of dance interventions on cognition, neuroplasticity, physical function, depression and quality of life in older adults with mild cognitive impairment. Dance interventions showed a significant moderate effect on global cognition (SMD=0.54, Z=3.55, p<0.001), significantly improved memory (SMD=0.33, Z=3.97, p<0.001), visuospatial function (SMD=0.42, Z=2.41, p=0.02) and language (SMD=0.39, Z=2.69, p=0.007). In addition, a significant moderate effect on physical function (SMD=0.55, Z=3.43, p<0.001) was observed. The authors point to the limited number of eight RCTs and to the fact that heterogeneity of the interventions restricts comparability.

The meta-analysis and systematic review by [17] comprised 13 studies with a total of 1605 participants aged 60 years and older. The meta-analysis for global cognition yielded a large effect size. In the MMSE subgroup a significant effect of dancing on cognition was shown (MD=1.57, 95 % CI 0.53–2.61, p=0.003; I²=62 %). In the SCEF subgroup the effect was statistically significant and without heterogeneity (MD=33.25, 95 % CI 30.94–35.56, p<0.00001; I²=0 %). For executive function no significant group differences were found after exclusion of one study with low quality rating. The authors emphasise the heterogeneity of the studies and the need for further research on specific cognitive domains.

The meta-analysis by [25] summarises six randomised controlled trials (total N=168) on music-based movement therapy (MbM) in Parkinson's patients. Significant homogeneous effect sizes were found for the Berg Balance Scale, the Timed Up and Go test and stride length (SES: 4.1; 2.2; 0.11; $p < 0.01$; I^2 : 0 %, 0 %, 7 %). A sensitivity analysis by type of MbM therapy showed a significant improvement in gait speed for gait-related MbM therapy, but not for dance-related MbM therapy. No significant effects were found for the UPDRS motor score, freezing of gait and quality of life. The authors conclude that MbM therapy is promising for improving gait and gait-related activities, yet emphasise the small samples and the need for larger studies with long-term follow-up.

The review by [27] analysed 45 studies (five reviews and 40 experimental studies) on the effect of music and dance on gait and symptoms in Parkinson's. The results show that rhythmic stimulation and dance offer motor, cognitive and quality-of-life advantages for participants with Parkinson's. Auditory stimuli and dance improved gait as well as cognitive abilities such as motor control, adaptation and spatial memory. The authors conclude that dance and music therapy are non-invasive, simple treatment options that promote gait and cognition. The review is narrative and reports no quantitative effect sizes or systematic quality assessment.

The conceptual paper by [29] proposes a framework for the fusion of cognitive and physical rehabilitation through dance. The authors argue that dancing can address both physical and cognitive impairments because it combines physical and cognitive stimulation while involving perception, emotion and memory in an enriched environment. Further practical advantages such as promotion of adherence through enjoyment of movement are discussed. The paper is conceptual and provides no own empirical data; it serves as a theoretical basis for future research.

The observational study by [30] examined the effect of dance therapy (DT, n=9) versus traditional rehabilitation (TR, n=7) in 16 Parkinson's patients with a history of falls. The DT group received 20 one-hour sessions twice weekly over 10 weeks; the TR group received 20 group sessions of 60 minutes. In the DT group, but not in the TR group, motor and cognitive outcomes improved significantly after treatment and were maintained at the 8-week follow-up. Significant changes were found for the 6-minute walk test ($p=0.028$), the TUG ($p=0.007$), the TMT-A ($p=0.014$) and the TMT-B ($p=0.036$). The authors conclude that DT is an unconventional physiotherapy for Parkinson's patients that effectively influences motor (endurance and fall risk) and non-motor functions (executive functions).

The systematic review and meta-analysis by [32] evaluated 25 articles, of which 12 were suitable for the meta-analysis. Based on pre-post change values, gait speed, TUG test performance, Freezing-of-Gait Questionnaire and 6-minute walk test times improved significantly after a dance intervention compared with controls. Global cognition, measured with the Montreal Cognitive Assessment, and cognitive dual-tasking, measured with the Dual-Task-TUG, also showed greater improvements in the dance groups. There was limited evidence to determine the most effective intensity, frequency, duration or music. The authors emphasise the heterogeneity of the studies and the need for standardised outcome measures.

The review by [33] examined the effect of dance movement therapy on behavioural, social, cognitive and emotional symptoms in people with dementia. The authors state that efficacy remains unclear and emphasise the complexity of the condition as well as the need to treat the person as a whole. The search was conducted up to March 2016. The review is a Cochrane review that classifies the evidence as insufficient for a final assessment. Data on included studies and effect sizes are lacking in the abstract.

The systematic review by [34] examined in 15 studies the effect of dance movement therapy (DMT) in psychiatric disorders such as depression, schizophrenia, autism and somatoform disorder. The authors highlight strengths and weaknesses of the treatment approach and investigate the potential efficacy of body movements as a tool for symptom reduction. They conclude that DMT has clear potential as a treatment for a range of conditions and symptoms and that further research is warranted. The review is narrative and reports no quantitative effect sizes; heterogeneity of the studies and the limited number of controlled studies among those reviewed restrict the strength of the evidence.

Further Research

The systematic review and meta-analysis by [3] comprised five randomised controlled trials on the efficacy of dance in Parkinson's patients compared with no intervention and other exercise interventions. Dance significantly improved the UPDRS motor score (-10.73 , CI -15.05 to -6.16 ; $p=0.004$), the Berg Balance Scale (0.72 , CI 0.31 to 1.44 ; $p=0.0006$) and gait speed (0.14 m/s, CI 0.02 to 0.26 ; $p=0.02$) compared with no intervention. Compared with other exercise interventions, significant improvements were shown in the Berg Balance Scale (3.98 , CI 1.52 to 6.44 ; $p=0.002$) and quality of life (PDQ-39) (-4.00 , CI -7.13 to -0.87 ; $p=0.01$). The authors conclude that dance shows short-term clinically meaningful benefits in Parkinson's, yet emphasise the need for well-designed RCTs to determine long-term effects, optimal dose and type of dance as well as comparison with other exercise therapies. The small number of included studies (five) limits generalisability.

The systematic review and meta-analysis by [7] comprised 16 randomised controlled trials with 636 participants with mild to moderate Parkinson's disease, of which nine were included in the meta-analysis. The review shows that dance can improve motor impairments, particularly balance and motor symptom severity, while more research is needed to determine effects on non-motor symptoms and quality of life. The authors emphasise the need for RCTs with mixed methods and larger samples to fully characterise the effects and identify the most important programme elements. Heterogeneity of the interventions and the limited number of studies with uniform endpoints restrict comparability.

The randomised controlled trial by [16] examined the effect of a 10-week group-based dance exergaming programme versus a waiting-list control group in 40 obese adolescents. Compared with controls, participants in dance exergaming reported significantly increased self-reported competence for regular exercise and significantly improved relationships with parents from baseline to end of treatment. Maternal ratings of externalising and internalising symptoms also decreased from baseline to end of treatment. There were no pre-post differences in BMI within or between groups. The authors conclude that the results support the positive effect of dance exergaming on psychological function and perceived exercise competence in obese adolescents.

The review by [26] evaluated 13 articles on dance interventions in Parkinson's patients. The evidence suggests that two one-hour dance classes per week over 10 to 13 weeks can have beneficial effects on endurance, motor functions and quality of life. The authors emphasise variability in study quality and methodological limitations in some studies. The review provides information on frequency, intensity, duration and type of dance used in these programmes and serves the development of future studies. Quantitative effect sizes and a systematic quality assessment are lacking.

Oncology

The randomised controlled pilot study by [5] examined the effect of a 12-week dance and movement programme (The Lebed Method, Focus on Healing Through Movement and Dance) versus a waiting-list control group with crossover in weeks 13 to 25 in 35 breast-cancer survivors who had been treated within the last five years. During the crossover phase the FACT-B score rose in the waiting-list group and remained stable in the treatment group. Body image improved similarly in both groups. The authors conclude that the dance and movement programme can improve quality of life and shoulder function in breast-cancer survivors.

The randomised, controlled, single-blind study by [12] examined the effect of dance movement therapy (DMT) versus a control group in 139 Chinese breast-cancer patients undergoing adjuvant radiotherapy. The intervention comprised six 1.5-hour DMT sessions held twice weekly during radiotherapy. DMT showed significant effects on buffering the deterioration of perceived stress, pain intensity and pain interference (Cohen $d=0.34-0.36$, $p<0.05$). No significant intervention effects were found for anxiety, depression, fatigue, sleep disturbances and quality of life (Cohen $d=0.01-0.20$, $p>0.05$). The authors conclude that the short-term DMT programme can counteract the expected deterioration in stress and pain in breast-cancer patients during radiotherapy. The study is limited to three weeks and follow-up is absent.

The Cochrane review by [18] examined the effect of dance/movement therapy plus standard care versus standard care alone or standard care plus other interventions on psychological and physical outcomes in cancer patients. The search covered several databases up to July 2014. The authors report that cancer patients use dance/movement therapy to accept their body and reconnect with it, rebuild new self-confidence, improve self-expression, address feelings of isolation, depression, anger and anxiety and strengthen personal resources. The review updates an earlier version, but the abstract reports no quantitative results or included studies. The evidence base is described as insufficient for a final assessment.

Safety and Tolerability

The randomised controlled pilot study by [9] investigated the effect of a two-year community-based dance class (Argentine tango) versus a control group without prescribed exercises in ten people with Parkinson's disease. The tango group ($n=5$, 4 men; mean age 69.6 ± 6.6 years) participated twice weekly for one hour over two years; the control group ($n=5$, 4 men; mean age 66 ± 11.0 years) received no exercise prescription. Blinded assessments took place at baseline and after 12 and 24 months. There were no differences between the groups at baseline. A significant group-by-time interaction ($F[2,8]=17.59$; $p<0.0001$) was found for the MDS-UPDRS III, with the tango group showing lower scores after 12 and 24 months. The authors conclude that participation in a community-based dance class over two years can improve disease severity and functional mobility in Parkinson's patients. The very small sample (ten participants) and the lack of connection of the participants limit the generalisability.

The randomised controlled study by [11] investigated the feasibility and effect of Irish set dancing versus usual care in 90 people with idiopathic Parkinson's disease. The dance group attended a 1.5-hour dance class once weekly over 10 weeks and completed a 20-minute home dance programme three times per week. The usual-care group continued their usual care and daily activities. The primary endpoint was feasibility, determined by recruitment rates, randomisation, attrition, adherence, safety, willingness to be randomised, resource availability and costs. Secondary endpoints were motor function (UPDRS-Motor), quality of life (PDQ-39), functional endurance (6-Minute Walk Test) and balance (Mini-BESTest). 90 participants were randomised (45 per group). There were no adverse effects or resource constraints. Adherence to the dance programme was 93.5 %, but attrition exceeded 40 % in both groups. After the intervention the dance group showed greater non-significant improvements. The authors conclude that the design is feasible, but the high attrition limits interpretation of the secondary outcomes.

The systematic review by [31] identified ten studies (seven qualitative and three quantitative) on dance interventions for older people with dementia in nursing homes. The studies used different approaches such as therapeutic dance, dance movement therapy, dance therapy, social dance and psychomotor dance-based exercises. There was evidence that problematic behaviours decreased and social interaction as well as enjoyment increased among residents and care staff. A few adverse effects were also reported. The authors conclude that the evidence for the effectiveness of dancing in nursing homes is limited. The heterogeneity of the studies and the small number of quantitative studies restrict generalisability.

Musculoskeletal System

The systematic review by [28] examined in seven articles the therapeutic effects of dancing as a physical exercise modality on balance, flexibility, gait, muscle strength and physical performance in older adults over 60 years without disabling disease. The selected studies showed positive effects on factors associated with fall risk (balance, gait and dynamic mobility, strength). The authors emphasise that the most suitable treatment approaches and their benefits remain unknown. The review is based on seven studies and reports no quantitative effect sizes or p -values, which makes it difficult to assess the magnitude of the effects.

The systematic review by [36] examined the research literature on dance and movement with music (rhythmic auditory stimulation, RAS) in the neurorehabilitation of children and adults with cerebral palsy. The studies showed preliminary evidence for the benefits of dance and RAS on body functions, particularly balance, gait, walking and cardiorespiratory fitness. Research gaps are visible across all domains of the International Classification of Functioning, Disability and Health (ICF), especially in the areas of participation and environment. The authors conclude that the potential of dance and RAS for positive effects on body functions, emotional expression, social participation and attitude change should be considered in future research. The review is qualitative and reports no effect sizes.

Heart and Circulation

The review by [35] compared dance interventions in Parkinson's patients and older adults. The authors note that the literature on dance in Parkinson's is growing, yet many knowledge gaps remain compared with older adults. While a wide variety of dance styles have been studied in older adults, only a limited subset has been evaluated in Parkinson's. Measurements vary widely between studies, and a lack of standardised outcome measures hinders cross-comparisons. Compared with the dance literature in older adults, there is a striking absence of evidence in Parkinson's in outcome domains such as cardiovascular health, muscle strength, body composition, flexibility and proprioception. The authors conclude that the dance literature overall supports substantial and far-reaching benefits in both populations, but additional effort should be invested in well-designed comparative studies with standardised outcome measures to identify optimal treatment programmes. The review is narrative and reports no quantitative effect sizes.

Overall Picture

Across all areas, dance interventions can achieve positive effects in a range of populations and endpoints. The most robust evidence concerns motor functions in Parkinson's patients: meta-analyses by [3] and [7] find significant improvements in balance, motor symptom severity and gait speed. Cognitive function in older adults with mild cognitive impairment is also improved by dance, as shown by the meta-analyses of [15] and [17] with medium to large effect sizes. In dementia and psychiatric disorders the reviews by [33] and [34] indicate potential, yet the evidence is not yet sufficient for definitive assessments. In oncology [5] and [12] show improvements in quality of life and mitigation of stress and pain, while other endpoints such as anxiety and depression were not significantly affected. Safety and tolerability are described as good in [9] and [11], with high adherence but also high attrition in some studies.

The evidence is nevertheless limited in several respects. Many studies have small samples, such as the pilot studies by [1], [10] and [30] with 40, 13 and 16 participants respectively. Heterogeneity of the interventions (dance styles, duration, frequency) is high, which complicates cross-comparisons, as [2], [32] and [35] emphasise. Standardised outcome measures are often lacking, and follow-up periods are usually short. For some areas such as heart and circulation or the musculoskeletal system only narrative reviews without quantitative effect sizes are available ([28], [35], [36]). The question of which dose, dance type and programme elements are most effective has not yet been clarified and requires further research with larger samples and longer follow-up periods.

Methodology of the evidence base

The included works comprise randomised controlled trials, quasi-randomised pilot studies, observational studies, systematic reviews and meta-analyses. Intervention duration ranges from three weeks ([12]) to two years ([9]), with typical programmes of 10 to 13 weeks and one to two sessions per week of 60 to 90 minutes. Endpoints are diverse: motor functions (UPDRS, TUG, Berg Balance Scale), cognitive functions (MMSE, MoCA, FAB), psychological symptoms (GDS, BDI, Apathy Scale), quality of life (PDQ-39, FACT-B) and physiological parameters (cortisol). Standardised outcome measures are frequently absent, limiting comparability. Many studies have small samples and high attrition. Heterogeneity of the interventions and the limited number of follow-up data are systematic limitations. Future research should use larger samples, standardised endpoints and longer follow-up periods to determine the optimal dose and dance type.

Parkinson carries the field — not dance therapy

The most frequently cited works on dance therapy almost all concern Parkinson's disease. This is no coincidence: motor and non-motor symptoms are well measurable there, those affected are often motivated, and dancing combines rhythm, balance and group in a way that matches the symptoms. From this constellation a research field has emerged that is defined by a single indication.

For assessment this means: a large part of the evidence supports statements about Parkinson's, not about dance therapy in general. Anyone who draws conclusions from these studies for dementia, cancer or mental disorders is transferring findings to other populations. In addition, many works blur the boundary between dance as movement training and dance as psychotherapy. Both approaches are conducted under the same term, although they claim different mechanisms of action.

3. How Reliable the Research Is

Research on dance therapy is broad and predominantly conducted in humans. In addition to controlled studies there are numerous observational works and basic research investigations; reviews addressing the mechanism question are also included. The controlled human studies are distributed across ten application areas. Cognition and fatigue lead, followed by the musculoskeletal system and safety. Oncology and cardiovascular topics come next; gastrointestinal, metabolic, inflammatory and antioxidant questions are represented by only single studies. The most frequently cited controlled studies almost invariably concern Parkinson's disease, alongside breast cancer and dementia. The field is therefore carried by neurological rehabilitation, not by dance therapy as a whole.

For several questions meta-analyses and systematic reviews exist that summarise dance in Parkinson's, in dementia and for health-related psychological endpoints. This elevates individual statements beyond the level of a single study. At the same time pilot character and small samples shape the field: several highly cited works are explicitly designed as preliminary or pilot studies, one is quasi-randomised. Comparison groups are inconsistent, interventions heterogeneous, follow-up mostly short. Where dance is examined as physical training, the effect is difficult to separate from general movement. The methodological strength of the field lies in the number of controlled studies; its weakness in the lack of standardisation of the intervention.

4. What Is Frequently Claimed — and What the Data Support

STATEMENT	EVIDENCE BASE
Dance therapy improves cognition	Cognition is the largest application area of the controlled studies. Several studies and reviews investigate dance in mild cognitive impairment and dementia; the

STATEMENT	EVIDENCE BASE
Dance therapy helps in Parkinson's	The largest number and most frequently cited controlled studies, as well as several meta-analyses, are available on this topic. Investigated are motor and non-motor
Dance therapy works in cancer beyond movement	For breast cancer, controlled studies on quality of life exist, including during radiotherapy. Psychological endpoints are investigated; they do not provide a statement
Dance therapy acts via neuroplastic mechanisms	Review articles on neuroplasticity describe possible pathways. These are mechanistic considerations and laboratory findings, not an effect tested in humans.

5. The Most Robust Studies

Ordered by strength of evidence, not by prominence. The complete evaluation includes significantly more studies; the most robust ones are listed here.

Controlled Studies in Humans

- ¹ Tango for treatment of motor and non-motor manifestations in Parkinson's disease: a randomized control study (2015)
- ² Effects of Dance Movement Therapy and Dance on Health-Related Psychological Outcomes. A Meta-Analysis Update (2019)
- ³ Dance as an intervention for people with Parkinson's disease: a systematic review and meta-analysis (2014)
- ⁴ Effects of dance on motor functions, cognitive functions, and mental symptoms of Parkinson's disease: a quasi-randomized pilot trial (2015)
- ⁵ Dance and movement program improves quality-of-life measures in breast cancer survivors (2005)
- ⁶ International Ballroom Dancing Against Neurodegeneration: A Randomized Controlled Trial in Greek Community-Dwelling Elders With Mild Cognitive ... (2017)
- ⁷ The efficacy of dance for improving motor impairments, non-motor symptoms, and quality of life in Parkinson's disease: A systematic review and ... (2020)
- ⁸ Dance for neuroplasticity: A descriptive systematic review (2019)
- ⁹ Are the effects of community-based dance on Parkinson disease severity, balance, and functional mobility reduced with time? A 2-year prospective ... (2014)
- ¹⁰ "Dance Therapy" as a psychotherapeutic movement intervention in Parkinson's disease (2018)
- ¹¹ Dancing for Parkinson Disease: A Randomized Trial of Irish Set Dancing Compared With Usual Care (2017)
- ¹² Effects of a Short-Term Dance Movement Therapy Program on Symptoms and Stress in Patients With Breast Cancer Undergoing Radiotherapy: A Randomized ... (2016)
- ¹³ Psychophysiological Effects of Dance Movement Therapy and Physical Exercise on Older Adults With Mild Dementia: A Randomized Controlled Trial (2020)
- ¹⁴ The effect of dance on depressive symptoms in nursing home residents (2014)
- ¹⁵ The effect of dance interventions on cognition, neuroplasticity, physical function, depression, and quality of life for older adults with mild ... (2021)
- Psychological effects of dance-based group exergaming in obese adolescents (2012)
- ¹⁶ Effects of dance intervention on global cognition, executive function and memory of older adults: a meta-analysis and systematic review (2020)
- ¹⁷ Dance/movement therapy for improving psychological and physical outcomes in cancer patients (2015)
- The effect of creative psychological interventions on psychological outcomes for adult cancer patients: a systematic review of randomised controlled ... (2015)
- ¹⁸ Fixing the mirrors: a feasibility study of the effects of dance movement therapy on young adults with autism spectrum disorder (2015)
- Argentine tango dance compared to mindfulness meditation and a waiting-list control: a randomised trial for treating depression (2012)
- ¹⁹ Dance movement therapy for depression (2015)
- ²⁰ Effects of Aerobic Dance on Cognition in Older Adults with Mild Cognitive Impairment: A Systematic Review and Meta-Analysis (2020)
- ²¹ A randomized controlled feasibility trial exploring partnered ballroom dancing for people with Parkinson's disease (2017)

6. Summary

Proven are effects on cognition: The meta-analyses on older adults and on mild cognitive impairment show medium effects on global cognition, memory, visuospatial function and language across several randomised studies. For gait and mobility in Parkinson's, meta-analyses prove improvements in gait speed, TUG and 6-Minute Walk Test. Controlled findings also exist for depressive experience in dementia and in nursing homes. The most cited works almost invariably concern Parkinson's disease, alongside breast cancer and dementia; the field is carried by neurological rehabilitation, not by dance therapy as a whole.

Plausible is that the effect does not depend on a single dance form, but on movement to music, on the group and on the therapeutic relationship.

Hypothesis: Because the comparisons mostly run against usual care and rarely against exercise training of the same intensity, part of the observed effects could be due to general movement, rhythm or group experience. **Hypothesis:** That the effects on everyday functions and cortisol course in the dementia study remained at the 1-year follow-up could indicate that the effect persists beyond the intervention phase.

A study would have to standardise the dance form, the dose and the comparison. It would need to be clarified how much of the effect is attributable to the music, how much to the movement, how much to the group and how much to the therapeutic relationship; the present works can hardly separate that.

Furthermore, the question remains open as to which specific mechanisms of action and which cognitive domains are addressed in which way — precisely that is named by the authors of the reviews as the next step. It is also open whether the effects occur in comparable magnitude in populations other than those studied.

7. What Remains Open

- **Differentiation:** Can the effect of dance therapy be separated from the general exercise effect when compared against active training of the same intensity?
- **Dose:** Which frequency, duration and group size are appropriate for which application area? The studies vary greatly here.
- **Blinding:** How can controlled dance studies be designed so that expectation effects among participants and investigators remain low?

Frequently Asked Questions

Is dance therapy the same as dance training?

No. Two approaches stand side by side in the works: dance as physical training and dance as psychotherapeutic movement therapy. The studies do not always distinguish this cleanly, and precisely from this arises part of the uncertainty in the evaluation. For practice, this means checking the chosen form and the comparison arm precisely.

For which application areas is the study situation most robust?

It is densest for Parkinson's disease, supported by several controlled studies and meta-analyses. Cognition, fatigue and the musculoskeletal system follow. For intestine, metabolism, inflammation and antioxidative endpoints there are only individual works; here research is at the beginning.

How reliable are the results overall?

For individual questions there are meta-analyses that go beyond the individual study. However, many frequently cited works are pilot studies with small samples and short follow-up. The interventions are not standardised, the comparison groups are inconsistent. The direction is recognisable, the details are open.

Sources

- 1 **Tango for treatment of motor and non-motor manifestations in Parkinson's disease: a randomized control study**
Rios Romenets S, Anang J, Fereshtehnejad SM, Pelletier A, Postuma R · 2015
- 2 **Effects of Dance Movement Therapy and Dance on Health-Related Psychological Outcomes. A Meta-Analysis Update**
Koch SC, Riege RFF, Tisborn K, Biondo J, Martin L, Beilmann A · 2019
- 3 **Dance as an intervention for people with Parkinson's disease: a systematic review and meta-analysis**
Sharp K, Hewitt J · 2014
- 4 **Effects of dance on motor functions, cognitive functions, and mental symptoms of Parkinson's disease: a quasi-randomized pilot trial**
Hashimoto H, Takabatake S, Miyaguchi H, Nakanishi H, Naitou Y · 2015
- 5 **Dance and movement program improves quality-of-life measures in breast cancer survivors**
Sandel SL, Judge JO, Landry N, Faria L, Ouellette R, Majczak M · 2005
- 6 **International Ballroom Dancing Against Neurodegeneration: A Randomized Controlled Trial in Greek Community-Dwelling Elders With Mild Cognitive impairment**
Lazarou I, Parastatidis T, Tsolaki A, Gkioka M, Karakostas A, Douka S et al. · 2017
- 7 **The efficacy of dance for improving motor impairments, non-motor symptoms, and quality of life in Parkinson's disease: A systematic review and meta-analysis**
Carapellotti AM, Stevenson R, Doumas M · 2020
- 8 **Dance for neuroplasticity: A descriptive systematic review**
Teixeira-Machado L, Arida RM, de Jesus Mari J · 2019
- 9 **Are the effects of community-based dance on Parkinson disease severity, balance, and functional mobility reduced with time? A 2-year prospective pilot study**
Duncan RP, Earhart GM · 2014
- 10 **"Dance Therapy" as a psychotherapeutic movement intervention in Parkinson's disease**
Michels K, Dubaz O, Hornthal E, Bega D · 2018
- 11 **Dancing for Parkinson Disease: A Randomized Trial of Irish Set Dancing Compared With Usual Care**
Shanahan J, Morris ME, Bhriain ON, Volpe D, Lynch T, Clifford AM · 2017
- 12 **Effects of a Short-Term Dance Movement Therapy Program on Symptoms and Stress in Patients With Breast Cancer Undergoing Radiotherapy: A Randomized, Controlled, Single-Blind Trial**
Ho RT, Fong TC, Cheung IK, Yip PS, Luk MY · 2016
- 13 **Psychophysiological Effects of Dance Movement Therapy and Physical Exercise on Older Adults With Mild Dementia: A Randomized Controlled Trial**
Ho RTH, Fong TCT, Chan WC, Kwan JSK, Chiu PKC, Yau JCY et al. · 2020
- 14 **The effect of dance on depressive symptoms in nursing home residents**
Vankova H, Holmerova I, Machacova K, Volicer L, Veleta P, Celko AM · 2014
- 15 **The effect of dance interventions on cognition, neuroplasticity, physical function, depression, and quality of life for older adults with mild cognitive impairment: A systematic review and meta-analysis**
Wu VX, Chi Y, Lee JK, Goh HS, Chen DYM, Haugan G et al. · 2021
- 16 **Effects of dance intervention on global cognition, executive function and memory of older adults: a meta-analysis and systematic review**
Meng X, Li G, Jia Y, Liu Y, Shang B, Liu P et al. · 2020
- 17 **Dance/movement therapy for improving psychological and physical outcomes in cancer patients**
Bradt J, Shim M, Goodill SW · 2015
- 18 **Fixing the mirrors: a feasibility study of the effects of dance movement therapy on young adults with autism spectrum disorder**
Koch SC, Mehl L, Sobanski E, Sieber M, Fuchs T · 2015
- 19 **Dance movement therapy for depression**
Meekums B, Karkou V, Nelson EA · 2015
- 20 **Effects of Aerobic Dance on Cognition in Older Adults with Mild Cognitive Impairment: A Systematic Review and Meta-Analysis**
Zhu Y, Zhong Q, Ji J, Ma J, Wu H, Gao Y et al. · 2020
- 21 **A randomized controlled feasibility trial exploring partnered ballroom dancing for people with Parkinson's disease**
Kunkel D, Fitton C, Roberts L, Pickering RM, Roberts HC, Wiles R et al. · 2017

International Health Research

Research, put in context. Every statement leads to the original paper; the decision in the individual case rests with the treating professional.
ih-research.com/en/knowledge/dance-therapy/ · Last updated 2026-10-04