AmeriHealth Caritas Ohio

Aquatic therapy

Clinical Policy ID: CCP.1127

Recent review date: 7/2025

Next review date: 11/2026

Policy contains: Aquatic therapy; hydrotherapy; musculoskeletal conditions; physical therapy.

AmeriHealth Caritas Ohio has developed clinical policies to assist with making coverage determinations. AmeriHealth Caritas Ohio's clinical policies are based on guidelines from established industry sources, such as the Centers for Medicare & Medicaid Services (CMS), state regulatory agencies, the American Medical Association (AMA), medical specialty professional societies, and peer-reviewed professional literature. These clinical policies along with other sources, such as plan benefits and state and federal laws and regulatory requirements, including any state- or plan-specific definition of "medically necessary," and the specific facts of the particular situation are considered, on a case by case basis, by AmeriHealth Caritas Ohio when making coverage determinations. In the event of conflict between this clinical policy and plan benefits and/or state or federal laws and/or regulatory requirements, the plan benefits and/or state and federal laws and/or regulatory requirements shall control. AmeriHealth Caritas Ohio's clinical policies are for informational purposes only and not intended as medical advice or to direct treatment. Physicians and other health care providers are solely responsible for the treatment decisions for their patients. AmeriHealth Caritas Ohio's clinical policies are reflective of evidence-based medicine at the time of review. As medical science evolves, AmeriHealth Caritas Ohio will update its clinical policies as necessary. AmeriHealth Caritas Ohio's clinical policies are not guarantees of payment.

Coverage policy

Aquatic therapy is clinically proven and, therefore, may be medically necessary when **all** of the following criteria are met (Cavallo, 2017; Jette, 2020; Osborne, 2022):

- Treatment addresses loss or restriction of joint motion, strength, mobility, balance, or function due to pain, injury, or illness.
- Treatment addresses loss of activities of daily living, mobility, range of motion, strength, balance, coordination, posture, or effect on function.
- Treatment is for conditions such as (not an exhaustive list) pain, joint stiffness, or muscle spasms from rheumatoid arthritis; a removed cast or recent surgery requiring limb mobilization; paraparesis or hemiparesis; recent amputation; paralytic condition; limb mobilization after head trauma; inability to tolerate exercise for rehabilitation under gravity-based weight bearing; and fibromyalgia.
- Pain rating, location of pain, and effect of pain on function are documented (if used for pain).
- Aquatic therapy is selected because land-based therapy is ineffective or not tolerated due to clinical status, pain, or functional limitation.
- The skilled nature of the qualified professional's/auxiliary personnel's intervention during the therapeutic exercise is documented.

Home-based aquatic therapy is clinically proven and, therefore, may be medically necessary if continued aquatic exercise is needed, as documented in the member's medical record.

Limitations

All other uses of aquatic therapy are considered experimental/investigational and not clinically proven, including:

- To promote overall fitness, flexibility, improved endurance, aerobic conditioning, or for weight reduction.
- To be performed safely at home or in the community without trained personnel in attendance.
- To be performed simultaneously with other forms of hydrotherapy.
- To use mineral baths for rejuvenation.

Alternative covered services

Land-based physical therapy or occupational therapy.

Background

Terms such aqua(tic) therapy, hydrotherapy, thalassotherapy (sea water therapy), balneotherapy (mineral water therapy), and spa therapy describe therapy in a water-based environment with a lengthy history of use in health care and wellness.

Aquatic therapy refers to physical therapy that takes place in a pool or other aquatic environment under the supervision of a trained healthcare professional. The therapy may encompass any therapeutic exercise, therapeutic activity, neuromuscular re-education, or gait activity. Treatment can improve joint motion, strength, mobility, and balance/function due to pain, injury, or illness by using the buoyancy and resistance properties of water (American Physical Therapy Association, 2024).

Aquatic therapy is generally administered by physical therapists or occupational therapists. The American Physical Therapy Association's Academy of Aquatic Physical Therapy offers training in aquatic therapy, and specifies that this treatment can be beneficial for patients with pain, osteoarthritis, multiple sclerosis, and other conditions. The therapist does not need to be in the water except when needed to ensure patient safety (American Physical Therapy Association, 2024). Continued aquatic exercise in a home program can be conducted through community resources.

Findings

Clinical guidelines and professional recommendations

Professional medical societies and clinical guideline panels have evaluated the evidence for aquatic therapy across multiple conditions, providing recommendations that range from strong endorsements to conditional support based on the quality and quantity of available evidence. These guidelines consistently position aquatic therapy as a legitimate therapeutic option, though the strength of recommendations varies by condition and available evidence.

The American Physical Therapy Association's clinical practice guidelines specifically recommend progressive aquatic resistance training for total knee arthroplasty based on demonstrated improvements in sustained lower limb mobility outcomes (Jette, 2020). The Association also recommends considering aquatic balance training over land-based therapy to improve fear of falling and quality of life in Parkinson's disease (Osborne, 2022). For juvenile idiopathic arthritis, the Ottawa Panel recommends aquatic therapy based on randomized controlled trial evidence demonstrating clinically important reductions in joint swelling and tenderness (Cavallo, 2017).

For rheumatoid arthritis, the 2022 American College of Rheumatology Guideline for Exercise, Rehabilitation, Diet, and Additional Integrative Interventions makes a conditional recommendation for aquatic exercise as an

adjunctive therapy. This recommendation is based on low-certainty evidence from their systematic review, which showed improved physical function but no significant difference in pain levels (England, 2023).

The National Institute for Health and Care Excellence provides detailed guidance for axial spondyloarthritis, a chronic inflammatory rheumatic disease affecting the sacroiliac joints and spine. Despite limited high-quality evidence, the guideline recommends considering hydrotherapy as an adjunctive treatment based on expert consensus regarding its muscle-relaxing effects and potential to enhance range of motion. The Guideline Development Group concluded that hydrotherapy can improve mobility and function, key therapeutic goals in this population, and that the low cost of utilizing existing facilities justifies its use even with modest benefits. They identified important research gaps, calling for studies on long-term outcomes, management of disease flares, and comparative effectiveness of different aquatic settings (National Institute for Health and Care Excellence, 2017).

Post-surgical and post-injury rehabilitation

For individuals recovering from major surgery, particularly lower-extremity procedures like total knee arthroplasty, the evidence establishes aquatic therapy as a highly effective primary rehabilitation modality. Its therapeutic benefits stem from the buoyancy of water, which reduces joint loading and allows for earlier mobilization with less pain. A 2024 meta-analysis of six trials comparing aquatic therapy (n = 183) to land-based physical therapy (n = 168) found that aquatic programs led to significant functional improvement as measured by the Western Ontario and McMaster Universities Arthritis Index (P = .037) at eight-week follow-up, though pain reduction did not reach statistical significance (P = .260) (Lei, 2024). This is reinforced by a large 2025 network meta-analysis of 32 trials (n = 2,292) that compared nine different rehabilitation methods and ranked hydrotherapy among the top interventions, assigning it a surface under the cumulative ranking curve value of 74.62, indicating a high probability of being one of the most effective treatments (Jin, 2025).

Chronic musculoskeletal conditions

In the management of chronic conditions like osteoarthritis and ankylosing spondylitis, the evidence consistently shows aquatic exercise as a beneficial intervention that is generally equivalent to land-based programs. A 2025 review of 12 trials including 865 older participants found that while aquatic exercise improved balance and stiffness compared to no exercise, it did not offer superior benefits over other modalities like land-based programs (Ayán-Pérez et al., 2025). This conclusion of general equivalence is supported by multiple earlier reviews, including an analysis of eight trials (n = 579) that found no significant long-term difference between aquatic and land-based exercise for pain or physical function in knee osteoarthritis (Dong, 2018). However, this same study revealed that aquatic therapy produced statistically significant improvements in activities of daily living (P = .005) and recreational activities (P = .01) compared to no intervention. For ankylosing spondylitis, a meta-analysis of five trials (n = 1,393) demonstrated that aquatic therapy reduced both pain scores (P = .03) and disease activity scores (P = .02) compared to controls (Zhao, 2020).

Neurological rehabilitation

Aquatic therapy demonstrates particular value in neurological rehabilitation for stroke, multiple sclerosis, and Parkinson's disease, with balance improvement being a consistent finding across conditions. A comprehensive 2022 meta-analysis of 17 trials (n = 629) found that participants with stroke receiving aquatic therapy showed greater improvements than land-based programs in balance (SMD = 0.72, 95% CI: 0.50 to 0.94), walking speed (SMD = -0.45, 95% CI: -0.71 to -0.19), and mobility (SMD = -0.43, 95% CI: -0.7 to -0.17) (Ghayour Najafabadi, 2022).

For Parkinson's disease, aquatic therapy produced sustained balance improvements even at six-month follow-up (P = .005), though effects on other motor functions were less consistent (Liu, 2023). In multiple sclerosis,

systematic reviews confirm improvements in fatigue, walking ability, and quality of life (Amedoro, 2020; Corvillo, 2017).

Fall prevention in older adults

Balance and fall prevention represent critical outcomes for maintaining independence in older adults. Multiple systematic reviews demonstrate that aquatic therapy is at least as effective as land-based rehabilitation for improving balance in adults over 50 years, regardless of fall history or comorbidities. A 2023 systematic review and meta-analysis focusing on community-dwelling adults over 60 with vestibular dysfunction found aquatic therapy increased functional reach by 6.36 centimeters compared to land-based therapy ($P < .00001$), with additional benefits for gait, quality of life, and fear of falling (Melo, 2023). These findings suggest aquatic therapy may serve as an effective fall prevention strategy, though higher quality studies are needed.

Chronic pain and fatigue syndromes

For chronic low back pain, fibromyalgia, and cancer-related fatigue, aquatic therapy consistently demonstrates symptom improvement. A 2023 analysis of 14 trials (n = 484) examining chronic low back pain found highly significant reductions in pain ($P < .00001$) and disability ($P < .00001$), along with improvements in both physical and mental quality of life components (Heidari, 2023). For fibromyalgia, a meta-analysis of 14 trials (n = 762) showed superior benefits on clinical symptoms, physical function, and quality of life compared to other exercises or no exercise (Ma, 2024). In individuals who survived breast cancer, systematic reviews confirm significant fatigue reduction and quality of life improvements, with therapy typically administered for one hour three times weekly over eight weeks (Muñoz-Gómez, 2022; Wang, 2022).

Special populations

Limited but promising evidence supports aquatic therapy for spinal cord injury and children with neurodevelopmental disorders. For spinal cord injury, three trials (n = 71) suggest aquatic exercise facilitates movement, cardiovascular conditioning, and relaxation across varying injury severities (Palladino, 2023). In children with neurodevelopmental disorders, including autism spectrum disorder, low-quality evidence from 16 trials indicates improvements in water comfort, balance, and psychomotor skills, suggesting value as an adjunct to occupational therapy (Shariat, 2024).

In 2025, we added new high-level evidence, including multiple recent systematic reviews and meta-analyses (e.g., Jin, 2025; Ayán-Pérez et al., 2025), and incorporated new clinical practice guidelines, such as those from the American College of Rheumatology for rheumatoid arthritis (England, 2022) and the National Institute for Health and Care Excellence (2017), and reorganized the findings section by functional categories to improve clarity. Based on evidence demonstrating that aquatic therapy is equivalent to land-based therapy rather than a secondary alternative, we removed the coverage requirements that members must be unable to tolerate land-based exercises and that aquatic therapy must be used to facilitate progression to land-based therapy.

References

On June 7, 2025, we searched PubMed and the databases of the Cochrane Library, the U.K. National Health Services Centre for Reviews and Dissemination, the Agency for Healthcare Research and Quality, and the Centers for Medicare & Medicaid Services. Search terms were “hydrotherapy,” “balneology,” as well as free text terms “hydrotherapy rehabilitation,” “aquatic physical therapy,” “aquatic rehabilitation,” “ai chi,” and “aqua* treatment.” We included the best available evidence according to established evidence hierarchies (typically systematic reviews, meta-analyses, and full economic analyses, where available) and professional guidelines based on such evidence and clinical expertise.

Amedoro A, Berardi A, Conte A, et al. The effect of aquatic physical therapy on patients with multiple sclerosis: A systematic review and meta-analysis. *Mult Scler Relat Disord*. 2020;41:102022. Doi: 10.1016/j.msard.2020.102022.

American Physical Therapy Association, Academy of Aquatic Physical Therapy. Fact sheets and resources. https://aquaticpt.org/fact_sheets. Published 2024.

Ayán-Pérez C, González-Devesa D, Montero-García B, Varela S. Effects of aquatic exercise in older people with osteoarthritis: systematic review of randomized controlled trials. *Geriatrics (Basel)*. 2025;10(1):12. Doi: 10.3390/geriatrics10010012.

Cavallo S, Brosseau L, Toupin-April K, et al. Ottawa Panel Evidence-Based Clinical Practice Guidelines for structured physical activity in the management of juvenile idiopathic arthritis. *Arch Phys Med Rehabil*. 2017;98(5):1018-1041. Doi: 10.1016/j.apmr.2016.09.135.

Corvillo I, Varela E, Armijo F, Alvarez-Badillo A, Armijo O, Maraver F. Efficacy of aquatic therapy for multiple sclerosis: A systematic review. *Eur J Phys Rehabil Med.* 2017;53(6):944-952. Doi: 10.23736/S1973-9087.17.04570-1.

Dong R, Wu Y, Xu S, et al. Is aquatic exercise more effective than land-based exercise for knee osteoarthritis? *Medicine.* 2018;97(52):e13823. Doi: 10.1097/MD.0000000000013823.

England BR, Smith BJ, Baker NA, et al. 2022 American College of Rheumatology guideline for exercise, rehabilitation, diet, and additional integrative interventions for rheumatoid arthritis. *Arthritis Care Res*. 2023;75(8):1603-1615. Doi: 10.1002/acr.25117.

Ghayour Najafabadi M, Shariat A, Dommerholt J, et al. Aquatic therapy for improving lower limbs function in post-stroke survivors: A systematic review with meta-analysis. *Top Stroke Rehabil*. 2022;29(7):473-489. Doi: 10.1080/10749357.2021.1929011.

Heidari F, Mohammad Rahimi N, Aminzadeh R. Aquatic exercise impact on pain intensity, disability and quality of life in adults with low back pain: A systematic review and meta-analysis. *Biol Res Nurs*. 2023;25(4):527-541. Doi: 10.1177/10998004231162327.

Jette DU, Hunter SJ, Burkett L, et al. Physical therapist management of total knee arthroplasty. *Phys Ther*. 2020;100(9):1603-1631. Doi: 10.1093/ptj/pzaa099.

Jin Z, Tang Y, Huang H, et al. Comparison of therapeutic effects of different rehabilitation methods on patients undergoing total knee arthroplasty: a network meta-analysis of randomized controlled trials. *Orthop Surg*. 2025;17(2):348-360. Doi: 10.1111/os.14332.

Lei C, Chen H, Zheng S, et al. The efficacy and safety of hydrotherapy in patients with knee osteoarthritis: A meta-analysis of randomized controlled trials. *Int J Surg*. 2024;110(3):1711-1722. Doi: 10.1097/js9.0000000000000962.

Liu Z, Huang M, Liao Y, et al. Long-term efficacy of hydrotherapy on balance function in patients with Parkinson's disease: A systematic review and meta-analysis. *Front Aging Neurosci*. 2023;15:1320240. Doi: 10.3389/fnagi.2023.1320240.

Ma J, Zhang T, Li X, Chen X, Zhao Q. Effects of aquatic physical therapy on clinical symptoms, physical function, and quality of life in patients with fibromyalgia: A systematic review and meta-analysis. *Physiother Theory Pract*. 2024;40(2):205-223. Doi: 10.1080/09593985.2022.2119906.

Melo RS, Cardeira CSF, Rezende DSA, Guimarães-do-Carmo VJ, Lemos A, de Moura-Filho AG. Effectiveness of the aquatic physical therapy exercises to improve balance, gait, quality of life and reduce fall-related

outcomes in healthy community-dwelling older adults: A systematic review and meta-analysis. *PLoS One*. 2023;18(9):e0291193. Doi: 10.1371/journal.pone.0291193.

Muñoz-Gómez E, Arnal-Gómez A, López Cascón A, Espí-López GV. Systematic review of aquatic therapeutic exercise efficacy in breast cancer survivors. *Support Care Cancer*. 2022;31(1):44. Doi: 10.1007/s00520-022-07460-1.

National Institute for Health and Care Excellence (NICE). Spondyloarthritis in over 16s: diagnosis and management. NICE guideline [NG65]. Published February 2017. Last updated March 4, 2025.

Osborne JA, Botkin R, Colon-Semenza C, et al. Physical therapist management of Parkinson disease: A clinical practice guideline from the American Physical Therapy Association. *Phys Ther*. 2022;102(4). Doi: 10.1093/ptj/pzab302.

Palladino L, Ruotolo I, Berardi A, Carlizza A, Galeoto G. Efficacy of aquatic therapy in people with spinal cord injury: A systematic review and meta-analysis. *Spinal Cord*. 2023;Doi: 10.1038/s41393-023-00892-4.

Shariat A, Najafabadi MG, Dos Santos IK, et al. The effectiveness of aquatic therapy on motor and social skill as well as executive function in children with neurodevelopmental disorder: A systematic review and meta-analysis. *Arch Phys Med Rehabil*. 2024;105(5):1000-1007. Doi: 10.1016/j.apmr.2023.08.025.

Wang J, Chen X, Wang L, Zhang C, Ma J, Zhao Q. Does aquatic physical therapy affect the rehabilitation of breast cancer in women? A systematic review and meta-analysis of randomized controlled trials. *PLoS One*. 2022;17(8):e0272337. Doi: 10.1371/journal.pone.0272337.

Zhao Q, Dong C, Liu Z, et al. The effectiveness of aquatic physical therapy intervention on disease activity and function of ankylosing spondylitis patients: A meta-analysis. *Psychol Health Med*. 2020;25(7):832-843. Doi: 10.1080/13548506.2019.1659984.

Policy updates

8/2014: initial review date and clinical policy effective date: 1/2016

6/2016: Policy references updated.

6/2017: Policy references updated.

5/2018: Policy references updated.

6/2019: Policy references updated. Policy number changed to CCP.1127.

6/2020: Policy references updated.

7/2021: Policy references updated.

7/2022: Policy references updated.

7/2023: Policy references updated.

7/2024: Policy references updated.

7/2025: Policy references updated