



Review Article

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ABHYANGA AS A RECOVERY MODALITY IN PHYSICALLY ACTIVE INDIVIDUALS: A NARRATIVE REVIEW

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ABSTRACT

The rapid growth of gym culture and recreational fitness has led to an increasing emphasis on effective recovery strategies that can enhance performance, reduce fatigue, and minimize the risk of exercise-related injuries. While contemporary sports medicine offers several recovery modalities, there is growing interest in traditional systems of medicine that provide holistic and sustainable approaches to health. Abhyanga, a classical Ayurvedic oil massage described as an integral part of Dinacharya, has long been advocated for promoting strength, maintaining musculoskeletal health, alleviating fatigue, and preserving overall well-being. This review explores the potential relevance of Abhyanga in the context of exercise recovery by integrating classical Ayurvedic concepts with current scientific evidence. This review examined literature from Ayurvedic texts and contemporary research on massage therapy, exercise physiology, musculoskeletal recovery, skin physiology, and sports medicine to assess the mechanisms and therapeutic benefits of Abhyanga. The available evidence suggests that regular Abhyanga may support recovery through improved circulation, enhanced lymphatic drainage, reduced muscle soreness and stiffness, better flexibility and neuromuscular function, and improved psychological relaxation. The therapeutic properties of sesame oil, particularly its antioxidant, anti-inflammatory, and tissue-nourishing effects, may further contribute to recovery and musculoskeletal health. Although the existing evidence is encouraging, well-designed clinical studies are needed to establish standardized protocols and provide stronger scientific support for the incorporation of Abhyanga into modern exercise recovery and sports rehabilitation programs. Integrating this time-tested Ayurvedic practice with contemporary fitness routines may offer a safe, holistic, and practical approach to improving recovery and overall physical performance.

Keywords: Abhyanga, Ayurveda, Gym, Exercise Recovery, Sports Medicine, Massage Therapy, Fitness, Sesame Oil.

INTRODUCTION

Abhyanga is a fundamental part of Dinacharya (Daily routine), and it is well established in classical Ayurvedic literature such as the Charak Samhita, Sushrut Samhita, and Ashtanga Hridaya. It is an ancient Ayurvedic practice that includes smearing warm, typically medicated oils and performing a structured body massage. It is advised not only for relaxation but also to maintain the equilibrium of the Doshas (Vata, Pitta, Kapha), nourish the Saptadhatu (body tissues), and promote general well-being. The massage is done with lukewarm oils, generally in the direction of hair growth (Anulom Gati), to maximize absorption and effectiveness. Specialized types, including Shirobhyanga (head massage) and Padabhyanga (foot massage), address certain benefit areas like hair and foot well-being.

Abhyanga is not merely a massage; it is a medical treatment particularly effective in balancing irritated Vata dosha, which tends to present itself as dryness, cracking, and premature aging of the skin—problems that are prevalent among physically active people. The advantages are myriad: Abhyanga has been found to reduce fatigue, ease mental stress, improve lymph circulation,

purify the body, improve sleep, calm anxiety, treat depression, smooth skin texture, build muscle, lubricate joints, and support well-being and longevity.

The gym and fitness industry has expanded rapidly worldwide because of rising awareness of the benefits of physical activity and the pursuit of a healthier lifestyle. As more individuals participate in regular physical activity and structured exercise programs, there is a growing need for services that focus on injury prevention, healing, and strength and endurance development. Fitness groups are seeking safe natural remedies to supplement exercise routines due to increased stress, environmental exposure, and sedentary habits. As part of the wider shift toward evidence-based, integrated approaches to health, Abhyanga is being adopted in wellness and fitness settings for its potential to improve recovery, reduce muscle soreness, increase circulation, prevent injuries, and support mental well-being. With increasing global participation in physical activity and structured exercise, demand for rehab and injury-prevention strategies has grown. In this context, classical Ayurvedic practices like Abhyanga have been identified and used as effective means of enhancing longevity, sports performance, and overall well-being, making them well-suited to today's fitness-conscious world.

PHYSIOLOGICAL AND BIOMECHANICAL EFFECTS OF ABHYANGA

Impact of Abhyanga on Skin and Muscular System

Abhyanga is a subtype of Bahya Snehana (External oleation therapy), which is indeed a part of Panchakarma therapy. It has a significant impact on the skin and musculoskeletal system, which are crucial for physically active individuals. Oil is considered the best for the massage because skin (Sparshanendriya) is dominated by Vata Dosha.¹ Commonly Abhyanga is done with Sneha Dravyas. Sneha Dravyas have properties opposite to Vata dosha, that is, Snigdha, Guru, Sheeta, Mrudu Guna. Abhyanga improves skin texture, prevents wrinkles and skin diseases like acne, and strengthens muscles.² The Vata Dosha itself governs the sense of touch, and oil has the special property of pacifying this Vata Dosha. This Abhyanga technique stimulates blood circulation in the skin and underlying muscles. Improved circulation enhances oxygen delivery, which is crucial for muscle metabolism and repair. Enhanced microcirculation enables nutrient delivery and the removal of metabolic byproducts, facilitating quicker recovery from exercise-induced muscle fatigue.

Beyond circulation, Abhyanga positively influences the skin's sebaceous and sweat gland function, keeping the skin hydrated and resilient despite heavy physical exertion and climatic stress. Abhyanga directly affects keratinocytes (promotes protection), melanocytes (improves complexion), mast cells, and fibroblasts (support elasticity), leading to a cytostabilizing effect across different cells and their functions.³ Skin that is well-oiled is far more resistant to dust, dryness and external irritants. Daily oil massage application can reduce stiffness of the muscles by softening the muscle fibers and enhancing tissue pliability, which is required to prevent the injuries common among active people. Together, these physiological actions enhance tissue resilience, endurance, and muscle performance.

Effect on Lymphatic and Metabolic Waste Removal

A crucial aspect of fluid balance and immunological defense is the superficial network of lymph that lies just underneath the skin. Lymphatic fluid carries waste products, toxins, and metabolic debris from tissues to lymph nodes for filtration and eventual elimination. Abhyanga involves physical massage strokes that stimulate this superficial lymphatic system by promoting lymphatic fluid movement and removing metabolic waste products that accumulate after strenuous physical exercise. Lymphatic drainage helps in reduction of fluid retention thus reducing swelling. Effective elimination of this type of waste is typically linked with reduced muscle soreness and inflammation, enabling improved recovery cycles in the physically active population.

Through the stimulation of lymphatic drainage, Abhyanga averts inflammatory cascades, and immune system stress due to training microtraumas. This cleansing effect is required to maintain tissue integrity and ensure the musculoskeletal system is conditioned for subsequent training without unnecessary fatigue or discomfort.

Oil Absorption and Biochemical Responses

A unique feature of Abhyanga is the transdermal passage of oil molecules, which enter the dermis and subsequently reach the capillaries and blood via hair follicles and sweat pores. Absorption enables nutritive and biochemical interactions between oil fractions and body tissues, which may affect cellular processes and generate antioxidant and anti-inflammatory activities. Sesame oil, Coconut oil, and olive oil, for example, contain bioactive molecules such as vitamin E, fatty acids, and polyphenols that modulate oxidative stress and skin barrier function.

They also support muscle metabolism through local nutrient delivery and enhanced membrane stability in muscle tissue. Synergistic biochemical effects support tissue repair, reduce oxidative damage, and maintain the integrity of young skin and muscle tissue in exercising subjects. According to Dalhana, the commentator of Sushruta Samhita, Abhyanga Kala on different Dhātu (body tissues) of the body is mentioned below in Table 1.⁴

Table 1: Effect of Abhyanga Kala on different Dhātu of the body

Name of Dhātu (Body Tissue)	Penetrating time of Oil
Roma Kupa	300 Matra (95 sec)
Twak	400 Matra (133 sec)
Rakta	500 Matra (160 sec)
Mamsa	600 Matra (190 sec)
Meda	700 Matra (228 sec)
Asthi	800 Matra (240 sec)
Majja	900 Matra (280 sec)

COSMETIC AND DERMATOLOGICAL BENEFITS

Skin Health and Anti-Aging Properties of Abhyanga

The daily mechanical stimulation and oil used during Abhyanga offer effective defence against dryness, wrinkling, and sagging induced by recurrent environmental stress and sweat loss in physically active individuals engaged in regular exercise. The oil's emollient and occlusive properties retain moisture and elasticity in the skin, and the massage enhances peripheral blood flow in the dermis, promoting regeneration and retarding visible signs of ageing.

Such cosmetic benefits are particularly valuable in sun- and wind-swept sportspersons and physically active individuals subjected to indoor climate conditioning, which compromises skin integrity. Further, the practice also adheres to Ayurvedic principles of Vata Dosha regulation, which increases with age and physical stress and leads to desiccation and tissue degeneration. Abhyanga is thus known not only for its curative but also its rejuvenating properties, which contribute to sports well-being and appearance.

Enhancement of Complexion and Skin Texture

Ayurvedic oils used in Abhyanga, like Kumkumadi Taila and Eladi Taila, are highly sought after for their potential to enhance complexion and skin texture by nourishing sebaceous gland activity and evening out the complexion. The oils soften the skin and give a natural sheen, which can contribute to improved psychological well-being through increased self-esteem among individuals who engage in regular physical activity and emphasized physical appearance as part of their fitness regimen.

Healthy sebaceous activity is important to prevent skin drying and irritation, which are usually secondary effects of sweating during exercise and frequent washing. Abhyanga helps reduce hyperpigmentation and improve skin colour. Regular oil massage is a preventive remedy that helps maintain skin barrier integrity and provides athletes with cosmetic and structural advantages for skin health.

Hair and Foot Care Benefits

Specific Ayurvedic massages such as Shiroabhyanga (Head oil massage), and Padabhyanga (foot massage) have specific benefits that are useful for physically active individuals. Shiroabhyanga stimulates circulation to the scalp, conditions the scalp follicles, and enhances luscious, healthy hair, which can be strained and over-washed. It also induces calmness of mind and supports good sleep in active people.

Padabhyanga enhances foot health by preventing fatigue, enhancing circulation, and keeping the skin soft, which is useful for people who do prolonged standing, running, or gym exercise. One of the most important exercises for gym-goers is leg workouts, which can cause severe pain and make it impossible for some people to walk. Padabhyanga helps to ease this symptom. Adhering to these practices ensures visible benefits, including reduced tension in the feet, scalp, and skin, which supports overall well-being and athletic performance.

ABHYANGA AS A RECOVERY MODALITY FOR PHYSICALLY ACTIVE INDIVIDUALS

Muscle Relaxation and Reduction of Post-Exercise Soreness

Muscle soreness and tension following exercise are major detractors from regular workout adherence and peak sporting performance. Abhyanga helps dissipate muscle tension through the application of oil and systematic, repetitive manipulation of muscle tissue. This serves to decrease muscle fiber tension and elevates pain associated with microtrauma or delayed onset of muscle soreness (DOMS). Guo *J et al.* suggest that following intense exercise, massage therapy is useful for reducing DOMS and enhancing muscle function.⁵

Administration of various other anti-inflammatory oils, such as Mahanarayana Taila⁶ and Dhanwantaram Taila⁷, has shown the benefits of massage in enhancing muscle recovery, regulating inflammatory responses, and reducing subjective measures of tenderness. According to Acharya Charaka, the body of one who does oil massage regularly is less affected, even when subjected to accidental injuries or strenuous work.⁸ Individuals engaged in regular physical training and workout sessions, so oil massage helps withstand such strenuous work. It is very beautifully expressed while stating the importance of oil massage in Charak Samhita, as a pitcher by smearing with oil, dry skin by applying oil, and the axle of a cart with lubrication becomes strong and jerk-resistant, so by oil massage the body becomes firm, smooth-skinned, free from disturbances of Vata and tolerant of exertion and exercise.⁹ Relaxing stimulation of Abhyanga is cumulative to mechanical relaxation of the fibers and vascular responses and could reduce the severity and duration of soreness after exercise.

Enhancement of Circulation and Nutrient Delivery

Abhyanga involves rhythmic pressing, squeezing, and stroking of muscles and body parts, which help move stagnant blood through congested areas. Abhyanga activates the parasympathetic nervous system, which releases nitric oxide that causes blood vessels to expand, improving blood flow and oxygen delivery.¹⁰ This improved circulation helps deliver oxygen and vital nutrients to injured tissues, supporting muscle healing. Improved circulation also speeds the flushing of waste products and inflammatory mediators generated by metabolism, which can build up during vigorous physical activity. All these physiological benefits help physically active individuals recover faster and optimize their recovery window, allowing them to indulge in more intense and strenuous workouts.

Psychological and Cognitive Benefits Promoting Overall Wellbeing

Beyond physical rehabilitation, Abhyanga also offers psychological benefits that support motivation and mental function during training. The soothing quality of oil massage is linked with reducing circulating cortisol- the primary stress hormone-thus reducing immunosuppression and anxiety due to physical overtraining.¹¹ Abhyanga calms the mind and relaxes the body.

Improved psychological well-being enhances compliance with exercise schemes and improves mood and overall well-being among fitness club members. These neuroendocrine effects underscore the importance of integrating mind-body therapies such as Abhyanga into comprehensive fitness schemes.

BENEFITS OF ABHYANGA IN ENHANCING STRENGTH AND STAMINA

Influence on Muscular Function and Endurance

Abhyanga can be defined as a form of passive exercise that maintains muscle tone and vascular health without physical stress. Its capacity to reduce joint stiffness and improve flexibility is directly related to improving performance in strength and endurance training in the gym environment. Abhyanga nourishes the Dhatus (body tissues) and helps strengthen them.

By improving circulation and reducing muscular fatigue, Abhyanga indirectly increases endurance, enabling athletes to train longer and with greater intensity. These effects are especially advantageous in reversing Vata Dosha aggravation, which is well documented to lead to muscle weakness and fatigue in Ayurvedic physiology.

Promoting Neuromuscular Coordination and Balance

The skin, which is predominantly Vata Dosha, has tactile sensory organs that play a crucial role in proprioception and balance. Abhyanga can activate tactile receptors and stimulate neuromuscular coordination by strengthening neural feedback mechanisms. This improved sensorimotor integration contributes to better balance, coordination, and joint stability, which are important for sports conditioning and injury prevention.

Regular tactile stimulation through Abhyanga may enhance body awareness and sensorimotor integration by increasing afferent sensory input to the nervous system. Improved proprioceptive feedback facilitates more efficient neuromuscular responses, helping individuals maintain balance, joint alignment, and movement accuracy during physical activities. Enhanced sensorimotor control is particularly important in athletes and gym trainees, where precise movement patterns reduce the risk of ligament sprains, muscle strains, and overuse injuries.

So, Abhyanga and balance-focused body training such as martial arts or functional fitness training can optimize motor control and athletic performance.

Potential for Increasing Recovery Speed and Training Frequency

Recovery is a critical element of athletic training because insufficient recovery may lead to chronic fatigue, decreased performance, overtraining, and increased vulnerability to sports injuries. Mechanical stimulation during oil massage improves peripheral blood circulation and lymph drainage, helping remove metabolic waste products released during physical activity and improving the transport of oxygen and nutrients to muscles and other tissues. Abhyanga may positively affect the parasympathetic nervous system, lowering physiological reactions to physical stress and improving recovery quality. Athletes who use Abhyanga therapy can train much more quickly after each session.¹²

According to Ayurvedic principles, Abhyanga therapy helps reduce aggravated Vata Dosha levels elevated by excessive physical activity. Because this therapy promotes tissue (Dhatus) nutrition and stability and reduces fatigue (Shrama), it creates optimal conditions for the body to cope with exercise-related

stress. Therefore, applying Abhyanga therapy in training sessions can improve recovery and readiness for further exercise.

CHEMICAL AND NUTRITIONAL ASPECTS OF OILS USED IN ABHYANGA

Properties and Benefits of Common Oils

In addition to the mechanical actions of the massage process, the effectiveness of Abhyanga is determined by the biochemical characteristics of the used oils. Of all oils used for Abhyanga in Ayurveda, Tila Taila (sesame oil) is regarded as the best option because of its Vatashamaka, Brimhana, and Balya properties. Rich in unsaturated fatty acids, vitamin E, sesamin, sesamol, and other antioxidant compounds, sesame oil provides excellent protection against free radicals formed during intensive physical exercise.¹³

This type of oil has strong emollient and penetrating properties, helping maintain skin hydration and protect it from adverse external influences. Moreover, frequent exercise often leads to skin dryness; therefore, sesame oil can protect the skin barrier from transepidermal water loss and maintain the skin's elasticity. The antioxidants present in sesame oil may also play an important role in reducing the risk of premature skin aging.

Coconut oil has good moisturising qualities and improves skin due to high concentrations of medium-chain fatty acids, especially lauric acid¹⁴. Similarly, olive oil contains polyphenols, squalene, and vitamin E with antioxidant and photoprotective properties that can protect the skin from ultraviolet radiation damage and photoaging.¹⁵ All these contribute to maintaining the optimal functionality of skin while aiding skin regeneration post physical activities.

In Ayurvedic terms, these oils help pacify disturbed Vata dosha, which often increases with physical exercise. Properties such as Snigdha, Mridu, and Rasayana nourish the skin and musculoskeletal system. Hence, using medicated or natural oils in Abhyanga is expected to offer cosmetic and physiological rehabilitation benefits for recovery and physical fitness in athletes or gym-goers.

Interaction of Oils with Skin Biochemistry and Absorption Dynamics

The healing effects of Abhyanga depend not only on the physicochemical process of massage but also on the interactions between the applied oils and physiological skin functions. The skin can be considered a semi-permeable membrane capable of penetration of lipophilic compounds through stratum corneum, pilosebaceous units, hair follicles, sweat glands, and hair shafts. Abhyanga involves repeated hand strokes, which increase contact between the oil and the skin, increasing hydration and epidermal permeability.

Lipids such as sesame oil and other oils contain bioactive ingredients like essential fatty acids, tocopherols (vitamin E), phytosterols, polyphenols, and lignans. These help maintain the skin barrier, reduce water loss, and prevent tissue damage caused by free radicals. By penetrating the lipid matrix of the stratum corneum, these oils make the skin more elastic, softer, and more resilient.¹⁶

Both transfollicular and transappendageal modes of absorption can allow for deeper penetration of some components of the oils applied to the skin, leading to local antioxidant and anti-inflammatory activity.¹⁷ In addition, the effect of increased blood circulation caused by the application of pressure during the massage can result in the spread of absorbed components to

nearby tissues. While systemic absorption is rather poor, local effects may help deliver nutrients and improve microcirculation.

This could benefit physically active people, including sportsmen, since these effects could help maintain skin integrity and reduce exercise-induced oxidative stress and inflammation, improving tissue flexibility and creating optimal conditions for repair processes. In traditional medicine, the oil's Snigdha and Sukshma qualities support deeper tissue nourishment and restore balance by calming aggravated Vata Dosha.

Selection Criteria for Oils

The choice of oil for application during Abhyanga significantly affects the effectiveness of the process. Ayurvedic principles emphasize personalised treatment and recommend oils chosen based on the following parameters: Prakriti, Dosha dominance, changes associated with Ritu, environment, age, and the individual's level of physical activity.

In Ayurveda, Tila Taila (sesame oil) is recognized as the best choice for Abhyanga due to the following properties of this substance: Vatashamaka, Balya, and Brimhana. This oil has characteristics such as warmth, penetrating ability, and nourishing effects; therefore, it is especially helpful for people who are subjected to intensive physical activity, dryness, muscle pain, and increased Vata.

Finally, Narikela Taila (coconut oil) is known to have cooling effects as well as the property of providing moisture and Vatashamaka; therefore, it can be considered as the best option in hot weather, heat intolerance, excessive sweating, and irritated skin.

Another consideration could be the type of oil used for Abhyanga based on the season. In winter, choose heavier oils like sesame oil, as they help with dryness and support Vata balance. On the other hand, cooling oils like coconut oil may work better in hotter weather, offering relief from high temperatures and providing good skin protection. You can also choose medicated oils based on individual musculoskeletal needs, fatigue, stiffness, and recovery.

Athletes and people who do strength training can customize their choice of Abhyanga oils in relation to their body constitution, skin type, level of training, and environmental factors to ensure increased comfort while applying the treatment and maximize its effectiveness.

INTEGRATION OF ABHYANGA INTO MODERN GYM AND FITNESS INDUSTRY

Market Demand for Holistic and Complementary Therapies

The growing importance of preventive healthcare, wellness promotion, and natural healing worldwide has increased demand for holistic and complementary treatments. This has driven exponential growth in the wellness industry and increased acceptance of alternative healthcare systems. Recent studies show that the total value of the health and wellness market across the globe was estimated at around USD 4.79 trillion in 2025 and would reach USD 7.76 trillion by 2035, driven by consumers' preference for health and wellness solutions.¹⁸

In the current scenario, Ayurvedic remedies have become increasingly popular because of their holistic philosophy, emphasis on preventive healthcare, and natural treatments. For instance, the market size of Ayurveda spas was around USD 4.86 billion in 2024 and is projected to reach USD 12.8 billion by 2035,

showing strong demand for Ayurvedic remedies, including massages and relaxation therapies.

Moreover, complementary therapies have grown significantly in the fitness sector for recovery and performance enhancement. Modern-day gym users and athletes increasingly recognise the importance of recovery practices for injury prevention, reduced muscle pain and soreness, and improved performance.

In addition, consumers today generally prefer natural and sustainable healthcare solutions that emphasise personalised care delivery. The philosophy of Ayurvedic medicine is similar to current healthcare trends, owing to customised treatment through Prakriti (assessment of constitution) and lifestyle changes, coupled with the use of naturally occurring medications. In addition, consumer concern is rising about the side effects of an overly chemical-based approach to healing. The introduction of Abhyanga as a recovery technique can benefit both recovery and fitness outcomes in addition to enhancing the attractiveness of fitness centres through a culturally based approach to wellness.

Challenges and Consideration for Industry Adoption

While opportunities are numerous, prospects such as therapist training, protocol standardisation, hygiene practices, and regulatory compliance need to be met. Certification and quality control may ensure client safety and professional credentials.

Insurance and liability concerns and maintaining standards of safety are central to integrating Abhyanga in a sustainable way into gyms and wellness centers, hence calling for systematic operational protocols and clinical guidance.

In spite of the increased popularity of alternative medicine services, the integration of Abhyanga in gyms and wellness centers has some significant barriers that need to be addressed before further implementation. First, the question of adequate education and certification for therapists should be raised as a prerequisite for safe and effective treatment administration. Certification of Abhyanga providers is necessary to establish a high standard of service quality and client safety.¹⁹

Second, issues related to treatment protocols and hygiene standards must be addressed by implementing clear, precise guidelines on the use of specific massage techniques, the time required for procedures, the choice of oils, and hygiene measures to ensure safety. This issue becomes even more crucial if we consider the fact that fitness centers and wellness clinics are characterized by high turnover rates of clients per day.²⁰

Finally, regulatory and legal matters, including insurance policies and liability prevention, need to be considered. Organizations should provide compliance with all necessary requirements and obtain appropriate certificates. Moreover, scientific studies will promote further recognition of Abhyanga as a promising therapy for recovery and wellness by proving its effectiveness.²¹

PRACTICAL GUIDELINES FOR IMPLEMENTING ABHYANGA IN FITNESS ROUTINES

Recommended Frequency and Timing Relative to Workouts

Abhyanga timing and frequency must be tailored to the exercise schedule and the intensity of the training regimen. For athletes, Abhyanga after workouts tends to bring the most benefit because it relaxes tired muscles, relieves stiffness after exercise, improves circulation, and enhances recovery. After working out, the body is receptive to massage therapy and a warm bath, which further facilitate muscle relaxation and rejuvenation.

Moderate workout regimens (3-5 workouts per week) will require performing Abhyanga 2-3 times per week. More intense training schedules, such as strength training, endurance exercises, or participation in competitive sports, may require Abhyanga more frequently, especially during periods of intensive training and competition.

If there is a rest day or recovery from an injury or illness, the longer form of Abhyanga can be used to support active recovery measures such as stretching and yoga, along with sufficient hydration, sleep, and nutrition. It can also help release accumulated muscular tension and improve joint flexibility.

On the contrary, just prior to an intense workout, Abhyanga in the form of a full-body massage with oil may not be recommended, as it will lead to the skin becoming slippery and heavy, as well as reducing the comfort of working out. However, if the desire is to take Abhyanga before engaging in physical activities, the person could apply some oil to the skin and give it a brief massage, lasting between 10 and 15 minutes, concentrating mainly on joint areas or muscles. This practice might help improve joint flexibility.

Ultimately, it depends on the individual's fitness level, body constitution (Prakriti), exercise intensity, Ritucharya, and personal preference. Consistent, properly timed Abhyanga, along with an exercise routine and a healthy diet plan, will help enhance physical performance and recovery.

Procedure Standardization and Technique Essentials

To get uniform therapeutic benefits, Abhyanga must be done using a standard technique, with slight adjustments based on Prakriti (body constitution), level of physical activity, and the individual's clinical condition. The massage should be done in a warm, tranquil setting using lukewarm medicated oil, because warm oil spreads easily over the skin and allows better penetration.

Before the massage, the individual needs to be in a comfortable state. It is best to start the procedure one to two hours after a meal. Use enough oil to ensure smooth motion without excessive rubbing. Usually, Abhyanga is done with moderate to light pressure, using long, rhythmic strokes in the direction of hair growth (Anuloma Gati) over long bones and muscles, and circular motions around the shoulder, elbow, wrist, hip, knee, and ankle joints. Adjust pressure based on comfort, muscle bulk, and the individual's exercise intensity.

Pay greater attention to muscle groups that bear repeated mechanical stress, such as the neck, shoulders, back muscles (upper and lower), glutes, quadriceps, hamstrings, calf muscles, chest, and forearms. Attention to these muscles may help relieve muscular tension, promote circulation, reduce DOMS, and improve flexibility. Gently stretching the limbs after the massage can also help increase muscle relaxation.

Typically, a complete body Abhyanga takes 30-45 minutes; each region requires 3-5 minutes. After the procedure, wait 15-30 minutes before taking a warm-water bath.

Individualization of the oil used in the massage is crucial depending on the person's constitution, skin type, season, and purpose of the treatment. Generally, Tila Taila (sesame oil) is more popular among people due to its Vatahara, Balya and Brimhana actions which make it an ideal choice for physically active patients. Cooling oils such as coconut oil may be preferable in summer or for Pitta body types, and medicated oils may be chosen according to specific musculoskeletal disorders.

Uniformity in the duration of the procedure, the direction and pressure of the strokes, the temperature of the oil, and follow-up measures after treatment is necessary, especially in clinical and experimental settings.

DISCUSSION

The increasing involvement of people in physical exercise in gyms creates a need for proper recovery techniques that improve performance and help prevent exercise-induced fatigue and injuries. However, while the modern approaches to fitness include training intensity, nutrition, and supplementation, recovery and tissue repair are equally crucial elements in physical training. In such cases, Abhyanga, described in Dinacharya from an Ayurvedic perspective, can provide an integrated way to boost strength, endurance, relaxation, and overall health maintenance.

According to Ayurveda, overactivity and frequent muscle tension can cause Vata Dosha, which manifests as fatigue, stiffness, dryness, pain, and reduced functionality. The Snigdha, Mridu, and Vatahara qualities of the Abhyanga technique help address these problems by nourishing the body's tissues and maintaining normal physiological function. The traditional explanation that Abhyanga provides the body with stability and the ability to endure physical stress seems very relevant for individuals engaged in regular physical exercises.

From a modern point of view, the advantages that could be obtained from Abhyanga can be explained through its mechanical, physiological, and biochemical effects. Rhythmic muscle manipulation through massage promotes improved local blood circulation and, therefore, better delivery of oxygen and nutrients to working muscles. Improved blood circulation also helps remove metabolites produced in the body as a result of exercise. Increased stimulation of lymphatic flow might also be important in decreasing the levels of swelling, inflammation, and muscle soreness experienced after exercising.

The skin where Abhyanga is applied does more than act as a protective organ. Regular oiling helps maintain skin hydration and flexibility. This is especially important for people who sweat a lot, experience environmental changes, and cleanse after exercise. The bioactive compounds found in the oil, such as fatty acids, antioxidants, and vitamins like vitamin E found in oils like sesame oil, have protective effects.

Another vital feature of Abhyanga practice is its effect on the neuromuscular and psychological aspects of fitness. The constant touch during massage therapy can positively affect body perception, proprioception, and muscle relaxation. These factors support coordination and flexibility and reduce the risk of injury during physical activity. Besides, the activation of the relaxation reaction and decreased levels of physiological effects of stress can help achieve better results in sleep, calmness and motivation that are essential for an efficient training process.

Nowadays, the recovery process plays an increasingly significant role in sport and fitness science, since its absence may lead to effects such as overtraining and injuries. Abhyanga offers a natural recovery method through a combination of mechanical action and the properties of oil. If used properly, Abhyanga can improve muscle relaxation and reduce fatigue.

However, the growing popularity of preventive healthcare and alternative wellness methods allows ancient techniques such as Abhyanga to be included in the routines of modern fitness clubs. However, effective inclusion presupposes adequate standardization of procedure, use of proper oils, qualification of

therapists, hygiene standards, and scientific validation through clinical trials. Individualization of procedure according to Prakriti, exercise load, season, and personal needs is one of the core principles of Ayurveda, which needs to be respected when introducing Abhyanga into the modern fitness environment.

While classical literature and new scientific findings point to the benefits of Abhyanga, more research is needed to demonstrate its effects using objective physiological parameters, larger sample sizes, and consistent clinical trials.

In other words, Abhyanga bridges ancient tradition and modern fitness demands. Its multi-faceted influence on the musculoskeletal system, skin, recovery processes, and psyche makes it a great addition to the fitness routine.

CONCLUSION

Abhyanga is a traditional Ayurvedic therapy described in Dinacharya that has significant potential as a holistic technique to restore and maintain wellness for people who train regularly in gyms or fitness centres. In addition to its health-maintaining and balancing influence on Vata Dosha effects, Abhyanga's multidimensionality is shown by its impact on the musculoskeletal system, skin condition, blood circulation, recovery process, and psychology.

Thus, regular Abhyanga use could help people relax muscles, overcome exercise-related fatigue and stiffness, gain flexibility, increase tissue nutrition, and speed recovery after physical training. These processes, supported by systematic massage and the therapeutic qualities of the oils used, could positively affect microcirculation, lymphatic drainage, skin condition, and patients' overall physical health.

The growing demand for natural recovery and preventive medicine in the fitness industry creates an opportunity to introduce Abhyanga into the practice of gyms and fitness clubs.

Integrating the timeless knowledge of the Abhyanga (massage) technique with modern principles of exercise physiology could create a safe and sustainable method for improving the wellbeing and athletic performance of active people.

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