



## Impact of Physiotherapy in Head and Neck Cancer

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DOI: [10.5281/zenodo.13151817](https://doi.org/10.5281/zenodo.13151817)

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Head and neck cancer is broadly recognized as the seventh most frequently occurring type of cancer and consists of a various array of tumors affecting the upper aerodigestive tract. Despite the presence of various histologies, squamous cell carcinoma remains the most prevalent. Predominant risk factors include tobacco use, alcohol abuse, and oncogenic viruses, including human papillomavirus and Epstein-Barr virus. Head and neck cancer, comprising a range of malignancies affecting the oral cavity, pharynx, larynx, and surrounding structures, presents complex challenges in both treatment and rehabilitation.[1]

Physiotherapy plays a crucial role in the management of Oral, Head, and Neck cancer especially during and after Treatment. Here's how physiotherapy can help [2]

1. Restoration of Function and Mobility: Physiotherapy assists in restoring function and mobility to areas affected by surgery, radiation therapy, or chemotherapy. Therapists develop personalized exercise programs to improve strength, flexibility, and range of motion in the jaw, head, and neck.
2. Swallowing and Speech Therapy: Speech-language pathologists, often working closely with physiotherapists, help patients regain the ability to swallow and speak properly after treatment. This may involve exercises to strengthen swallowing muscles and techniques to improve speech clarity.
3. Pain Management: Physiotherapists use various techniques such as manual therapy, therapeutic exercises, and modalities like heat and cold therapy to manage pain and discomfort associated with cancer treatment.
4. Education and Support: Physiotherapists educate patients about self-care techniques, posture correction, and energy conservation strategies to optimize recovery and enhance the quality of life during and after cancer treatment. Overall, physiotherapy plays a vital role in addressing physical impairments, improving function, and promoting overall well-being in individuals undergoing treatment for oral, head, and neck cancer.

### TheraBite Jaw Motion Rehabilitation System: Enhancing Jaw Mobility in Head and Neck Cancer Rehabilitation

TheraBite is a jaw motion rehabilitation system designed to improve jaw function, range of motion, and reduce trismus (limited mouth opening) often experienced by head and neck cancer patients. The device consists of a hand-held controller and custom-fit mouthpieces, allowing patients to perform exercises that gently stretch and mobilize the jaw muscles and temporomandibular joint (TMJ). Here's how TheraBite is typically utilized in the rehabilitation of head and

neck cancer patients:

1. Trismus Management: After surgical procedures or radiation therapy, patients may experience trismus due to scarring, fibrosis, or muscle stiffness. TheraBite helps gradually stretch the muscles and tissues, promoting increased mouth opening over time.
2. Improving Jaw Mobility: TheraBite exercises involve controlled, repetitive movements of the jaw, encouraging improved mobility and flexibility. Patients work with their physiotherapists or speech therapists to establish a customized exercise regimen based on their specific needs and limitations.
3. Pain Management: Jaw exercises with TheraBite can also help alleviate discomfort or pain associated with muscle tightness and restricted movement. The device allows patients to perform exercises at their own pace, adjusting the intensity as tolerated.
4. Functional Restoration: By promoting increased jaw mobility and mouth opening, TheraBite contributes to the restoration of essential functions such as chewing, swallowing, and speech. This is particularly beneficial for patients aiming to regain oral function and quality of life post-treatment.
5. Patient Education and Support: Physiotherapists play a crucial role in guiding patients in the safe and effective use of TheraBite, ensuring proper technique and monitoring progress. They also provide education on self-care strategies and offer support throughout the rehabilitation process.

TheraBite is a valuable adjunctive tool in the comprehensive rehabilitation of head and neck cancer patients, facilitating improved jaw function, reduced trismus, and enhanced quality of life. Its integration into personalized treatment plans underscores the multidisciplinary approach required to address the diverse challenges faced by individuals undergoing treatment for head and neck cancer [3].

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