

Content available at: <https://www.ipinnovative.com/open-access-journals>

IP Indian Journal of Anatomy and Surgery of Head, Neck and Brain

Journal homepage: <https://www.ijashnb.org/>**Short Communication****Rehabilitation strategies for post-surgical head and neck cancer patients: A physiotherapist's perspective****Mohammed Sheeba Kauser^{1*}, Subhasis Karmakar²**¹*SV Group of Institutions, Nellore, Andhra Pradesh, India*²*Physiotherapist, United Arab Emirates***ARTICLE INFO***Article history:*

Received 15-12-2024

Accepted 07-01-2025

Available online 20-01-2025

Keywords:

Reduced range of motion (ROM)

Speech and language therapists (SLTs)

Manual lymphatic drainage (MLD)

ABSTRACT

Head and neck cancer (HNC) and its associated treatments, including surgery, radiation, and chemotherapy, can result in significant physical and functional impairments. Post-surgical rehabilitation plays a crucial role in restoring functional independence, managing symptoms, and improving overall quality of life for these patients. Physiotherapists are integral to the multidisciplinary approach required for HNC rehabilitation, focusing on improving mobility, managing pain, optimizing respiratory and swallowing function, and addressing psychosocial well-being. This article explores key rehabilitation strategies from a physiotherapist's perspective for post-surgical HNC patients.

This is an Open Access (OA) journal, and articles are distributed under the terms of the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License](https://creativecommons.org/licenses/by-nc-sa/4.0/), which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprint@ipinnovative.com**1. Restoring Range of Motion and Strength**

Post-surgical HNC patients often experience restricted movement due to surgical resection, tissue scarring, or lymph node dissection. Reduced range of motion (ROM) in the neck and shoulders is common, limiting everyday activities like eating, speaking, and even maintaining posture. Physiotherapists employ a range of manual therapy techniques, including joint mobilizations and soft tissue massage, to reduce stiffness and improve mobility. Active and passive stretching exercises are also incorporated into rehabilitation programs to restore ROM and prevent joint contractures.¹

Additionally, strengthening exercises are essential to address muscle weakness, particularly in the shoulder girdle and neck muscles. These exercises not only help restore functional strength but also assist in posture correction, which can be negatively impacted after surgery. Strengthening programs are designed based on the severity

of surgery and the patient's recovery stage.

2. Respiratory Rehabilitation

Surgical interventions in the head and neck region can affect respiratory function, especially if the airway is compromised or if there is significant scarring in the throat or chest.² Physiotherapists focus on respiratory rehabilitation through techniques such as diaphragmatic breathing, pursed-lip breathing, and techniques for lung expansion to improve ventilation. These exercises are essential to help patients manage breathlessness, increase lung capacity, and ensure optimal respiratory function post-surgery.

In addition to these techniques, airway clearance strategies can be taught to help patients with secretion management and prevent respiratory infections, which are a common concern in post-surgical HNC patients.

* Corresponding author.

E-mail address: sheebaishaq.doc@gmail.com (M. Sheeba Kauser).

3. Swallowing and Speech Rehabilitation

Dysphagia (difficulty swallowing) is one of the most common challenges for HNC patients after surgery, often resulting from resection of oral, pharyngeal, or laryngeal tissues. Physiotherapists collaborate closely with speech and language therapists (SLTs) to design rehabilitation programs aimed at restoring swallowing function. Techniques such as compensatory swallowing strategies, strengthening exercises for the swallowing muscles, and postural adjustments during eating are employed to improve food intake and reduce aspiration risk.³

Speech rehabilitation is equally important, as patients may experience difficulty speaking due to surgery that affects the vocal cords, soft palate, or other speech-related structures.⁴ A physiotherapist might assist in exercises designed to restore strength and coordination of the muscles involved in speech, helping the patient regain clear communication and improve social interactions.

4. Lymphedema Management

Lymphedema is a frequent complication following neck dissection, which involves the removal of lymph nodes to prevent cancer spread. This condition leads to the accumulation of lymphatic fluid, causing swelling in the head, neck, and shoulders. Physiotherapists are trained in manual lymphatic drainage (MLD) techniques, which are designed to stimulate the lymphatic system and reduce swelling. In addition, they educate patients on self-care strategies, including compression garments, massage, and exercise programs to further control lymphedema and prevent complications.

5. Psychosocial Support and Pain Management

Chronic pain, fatigue, and psychological distress are common among post-surgical HNC patients. Physiotherapists use various modalities, including transcutaneous electrical nerve stimulation (TENS), heat or cold therapy, and therapeutic ultrasound, to manage pain and discomfort. Additionally, physical activity is encouraged as part of a holistic approach to reduce fatigue, enhance mood, and improve overall mental well-being.^{5,6}

Pain management is often coupled with education about the importance of engaging in daily activities, which can help reduce feelings of isolation and depression.⁷ A physiotherapist's role in encouraging regular movement, social engagement, and relaxation techniques is essential for improving the patient's emotional and psychological recovery.

6. Tailored Rehabilitation Programs

The rehabilitation needs of each HNC patient are unique, depending on factors such as the type and extent of

surgery, pre-existing conditions, and individual goals.⁸ Physiotherapists work closely with oncologists, speech therapists, dietitians, and other healthcare professionals to develop individualized treatment plans.⁹ These plans are regularly assessed and adjusted to ensure optimal recovery outcomes. Early intervention is key to preventing long-term complications such as permanent functional impairment, pain, and emotional distress.

7. Conclusion

Post-surgical rehabilitation for head and neck cancer patients is a multifaceted process that involves a combination of physical, respiratory, swallowing, and emotional support.¹⁰ Physiotherapists play a critical role in guiding patients through the rehabilitation journey, ensuring that they regain functional independence, manage symptoms effectively, and improve their quality of life.¹¹ With early and tailored intervention, physiotherapy can significantly enhance recovery, helping HNC survivors navigate the challenges of post-surgical life.¹² Through a collaborative, patient-centered approach, rehabilitation can offer hope for improved outcomes and a return to daily activities.¹³

8. Conflict of Interest

None.

9. Source of Interest


None.

References

1. Head and Neck Cancer; National Cancer Institute; ; 2013. Available from: <https://www.cancer.gov/cancertopics/types/head-and-neck>.
2. Ferlay J, Shin HR, Bray F, Forman D, Mathers C, Parkin DM, et al. Estimates of worldwide burden of cancer in 2008: GLOBOCAN. *Int J Cancer*. 2008;127(12):2893–917.
3. Bray FF, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, Jemal A. Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin*. 2018;68(6):313–424.
4. Pulte D, Brenner H. Changes in survival in head and neck cancers in the late 20th and early 21st century: a period analysis. *Oncologist*. 2010;15:994–1001.
5. Epidemiology, and End Results Program (SEER) Stat Fact Sheets: Oral Cavity and Pharynx Cancer; 2016. Available from: <http://seer.cancer.gov/statfacts/html/oralcav.html>.
6. Siegel RL, Miller K, Jemal A. Jemal Ahmedin. *Cancer Statistics*. *A cancer J Clin*. 2018;68(1):7–30.
7. Harvey AT, Yetukuri M, Hansen AR, Simpson MC, Boakye A, Varvares E, et al. Rising incidence of late-stage head and neck cancer in the United States. *Cancer*. 2020;126(5):1090–101.
8. Taylor DB, Osazuwa-Peters OL, Okafor SI, Boakye EA, Kuziez D, Perera C, et al. Differential Outcomes Among Survivors of Head and Neck Cancer Belonging to Racial and Ethnic Minority Groups. *JAMA Otolaryngol Head Neck Surg*. 2022;148(2):119–46.
9. Liao C, Francoeur C. HPV associated cancers in the US over the last 15 years: Has screening or vaccination made any difference. *J Clin Oncol*. 2021;39:107.

10. Hashibe M, Brennan P, Benhamou S, Castellsague X, Chen C, Curado MP. Alcohol drinking in never users of tobacco, cigarette smoking in never drinkers, and the risk of head and neck cancer: pooled analysis in the International Head and Neck Cancer Epidemiology Consortium. *J National Cancer Inst.* 2007;99(10):777–89.
11. Hashibe M, Brennan P, Chuang SC, Boccia S, Castellsague X, Chen C, et al. Interaction between tobacco and alcohol use and the risk of head and neck cancer: pooled analysis in the International Head and Neck Cancer Epidemiology Consortium. *Cancer Epidemiol Biomar Preven.* 2009;18(2):541–50.
12. Shaw R, Beasley N. Aetiology and risk factors for head and neck cancer: United Kingdom National Multidisciplinary Guidelines. *J Laryngol Otol.* 2016;130(S2):9–12.
13. Tobias JS. Current issues in cancer: Cancer of the head and neck. *BMJ.* 1994;308(6934):961–7.

Author's biography

Mohammed Sheeba Kauser, Physiotherapist UAE
 <https://orcid.org/0000-0001-5301-3559>

Subhasis Karmakar, Physiotherapist

Cite this article: Sheeba Kauser M, Karmakar S. Rehabilitation strategies for post-surgical head and neck cancer patients: A physiotherapist's perspective. *IP Indian J Anat Surg Head, Neck Brain* 2024;10(4):101-103.