

# HEAD AND NECK CANCER FACT SHEET

FOR HEALTHCARE PROFESSIONALS

## TREATMENT OPTIONS FOR HEAD AND NECK CANCER

- **Tumor resection**
- **Neck dissection**<sup>1</sup>
  - Radical Neck Dissection: All tissues in the neck between the mandible and the clavicle are removed. This includes all lymph nodes, the sternocleidomastoid muscle, cervical sensory and spinal accessory nerves, and the internal jugular vein.
  - Modified Radical Neck Dissection: All lymph nodes are removed, but one or more of the non-lymphatic structures is spared.
  - Selective Neck Dissection: One or more lymph node groups is spared.
- **Tracheostomy tube placement**
- **Gastrostomy tube placement**
- **Radiation therapy and chemotherapy:** Often done concurrently over a period of 4-6 weeks.
- **Reconstruction:** Most common methods include:
  - Radial forearm free flap<sup>2</sup>
  - Free fibula flap<sup>3</sup>
  - Pectoralis major musculocutaneous flap<sup>4</sup>

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## POSSIBLE SIDE EFFECTS OF CANCER TREATMENT

### Surgery<sup>5</sup>

- Difficulty talking, breathing, chewing, and swallowing
- Facial and cervical lymphedema<sup>6,7</sup>
- Neck and shoulder pain and dysfunction
- Decreased neck and shoulder range of motion (ROM)
- Scar tissue limitations
- Postural dysfunction
- Spinal accessory nerve (SAN) palsy<sup>8</sup>
- Facial nerve palsy<sup>9,10</sup>
- Donor site pain, decreased flexibility and ROM, and/or edema<sup>2-4</sup>

### Radiation Therapy<sup>11</sup>

- Skin erythema, irritation, pruritus, sores or blisters
- Radiation-induced fibrosis (acute and chronic)
- Dry mouth, loss of taste and appetite
- Numbness and paresthesia
- Increased risk of infection
- General fatigue and deconditioning
- Temporomandibular joint (TMJ) dysfunction or trismus<sup>12,13</sup>
- Brachial plexopathy<sup>14,15</sup>
- Ototoxicity<sup>16</sup>

### Chemotherapy<sup>17</sup>

All chemotherapy drugs may cause nausea, vomiting, appetite loss, changes in taste, weight loss, suppression of the immune system, hair loss, and general fatigue. Common drugs<sup>18</sup> and side effects are:

- Methotrexate: muscle and joint pain
  - Cisplatin: peripheral neuropathy, hearing loss<sup>16,19,20</sup>
  - Fluorouracil: mouth sores, sun sensitivity
  - Bleomycin: pulmonary fibrosis
  - Cetuximab: rash, muscle and joint pain
  - Docetaxel: neutropenia, fluid retention
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## EXAMINATION AND EVALUATION CONSIDERATIONS

- Cervical & TMJ ROM, strength, and mobility
- Thoracic spine mobility
- Shoulder active and passive ROM
- Shoulder and scapulothoracic muscle strength
- Scapula static position and mechanics
- Glenohumeral and scapulothoracic mobility
- Postural impairments
- Scar tissue mobility and skin integrity
- Signs and symptoms of lymphedema and infection
- Cardiovascular endurance
- Functional mobility and fall risk
- Cancer specific questionnaires to assess fatigue<sup>21</sup> and quality of life<sup>22</sup>

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## PHYSICAL THERAPY INTERVENTION CONSIDERATIONS

### Pre-Cancer Surgery

- Address postural deficits, cervical and shoulder ROM, cervical and shoulder strength
- Promote healthy lifestyle habits regarding exercise and fitness
- Provide immediate post-operative self-management instructions

### 2 Weeks to 3 Months after Surgery <sup>23</sup>

- Manage edema and lower edema risks <sup>24,25</sup>
  - Education on signs and symptoms of lymphedema and infection
  - Education on precautions to reduce risk and/or exacerbation of lymphedema
  - Manual lymphatic drainage
  - Compression garments
  - Self-manual lymphatic drainage and exercises to promote lymph circulation
- Address TMJ dysfunction, neck and shoulder pain, weakness, and decreased ROM<sup>26</sup>
  - Education on shoulder unloading and protection techniques
  - Soft tissue, scar tissue, and joint mobilizations
  - If SAN palsy is present: progressive strengthening of compensatory muscles<sup>27,28</sup>
  - Home stretching and strengthening program
- Manage graft site
  - Scar tissue mobility
  - ROM and tissue flexibility
  - Self-management instructions regarding protection of graft site to promote healing
- Address postural re-education for awareness and endurance
- Develop an Individualized aerobic exercise program using recommended guidelines<sup>29</sup>
- Functional, balance, and body mechanics training to prevent falls/injuries and promote return to work and recreational activities
- Refer patients to appropriate additional health professionals and services
  - Speech therapy
  - Nutrition and weight management counseling
  - Coping and stress management: professional psychological support and support groups
  - Community exercise programs
  - Palliative care for pain management, coping, and hydration

### Greater than 3 Months after Surgery

- Promote life-long fitness and education on exercise modifications for safety and injury prevention
  - Monitor frequently for delayed onset or progression of the side effects of cancer treatments
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## Getting in touch with a physical therapist:

The American Physical Therapy Association (APTA) offers a "Find a PT" database at <http://www.apta.org> or follow the link to this database by visiting APTA's Oncology Section public resources page at <http://www.oncologypt.org>.

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## Disclaimer:

*This Head and Neck Cancer Fact Sheet for Health Professionals is a public service from APTA and the Oncology Section of the APTA. It is not intended to be a comprehensive overview of this subject.*

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