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- Hospice Palliative Care Program  
Symptom Guidelines

# Nutrition & Cachexia

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## □ Rationale

This guideline is adapted for inter-professional primary care providers working in various settings in Fraser Health, British Columbia and the Fraser Valley Cancer Center and any other clinical practice setting in which a user may see the guidelines as applicable.

Up to 80% of patients living with and dying from advanced life threatening illness experience the symptoms of cachexia and/or anorexia.<sup>(1-6)</sup>

**Cachexia and anorexia** are common multifactorial and distressing complications of terminal illness, especially cancer and HIV/AIDS. The clinical signs are anorexia and weight loss. They may prevent further interventions such as surgery and chemotherapy, and causes families to feel helpless as they perceive their loved ones “starving to death”.

## □ Scope

This guideline provides recommendations for the assessment and symptom management of adult patients (age 19 years and older) living with advanced life threatening illness and experiencing the symptom of cachexia and/or anorexia. This guideline does not address disease specific approaches in the management of cachexia and/or anorexia.

## □ Definition of Terms

**Anorexia** loss of appetite and resulting reduced caloric intake. **Cachexia** - involuntary weight loss of more than 10% of pre-morbid weight, associated with loss of muscle and visceral protein and lipolysis (the breakdown of fat stored in fat cells). Cachexia may not correlate with anorexia. The anorexia-cachexia syndrome is usually defined in terms of primary or secondary causes. Primary cause is related to changes (metabolic and neuroendocrine) directly associated with underlying disease and an ongoing inflammatory state. Secondary causes are aggravating factors (fatigue, pain, dyspnea, infection, etc) that contribute to weight loss.<sup>(1-3, 6-13)</sup>

## □ Standard of Care

1. Assessment
2. Diagnosis
3. Education
4. Treatment: Nonpharmacological
5. Treatment: Pharmacological

**Recommendation 1 Assessment of Cachexia and Anorexia**

Ongoing comprehensive assessment is the foundation of effective cachexia and anorexia management, including interview, physical assessment, medication review, medical and surgical review and psychosocial and physical environment review and appropriate diagnostics<sup>(1-3, 7, 9, 12, 14-17)</sup>(see Table 1).

*Table 1: Nutrition / Cachexia Assessment using Acronym O, P, Q, R, S, T, U and V*

<b>O</b> <b>Onset</b>	When did you notice your weight loss or lack of appetite? How long does it last? How often does it occur? Is it there all the time?
<b>P</b> <b>Provoking / Palliating</b>	What brings it on? What makes it better? What makes it worse?
<b>Q</b> <b>Quality</b>	What does it feel like? Can you describe it? How much weight have you lost?
<b>R</b> <b>Region / Radiation</b>	How much do you eat and drink?
<b>S</b> <b>Severity</b>	What is the intensity of this symptom (On a scale of 0 to 10 with 0 being none and 10 being worst possible)? Right Now? At Best? At Worst? On Average? How bothered are you by this symptom? Are there any other symptom(s) that accompany this symptom?
<b>T</b> <b>Treatment</b>	What medications and treatments are you currently using? How effective are these? Do you have any side effects from the medications and treatments? What medications and treatments have you used in the past?
<b>U</b> <b>Understanding / Impact on You</b>	What do you believe is causing this symptom? How is this symptom affecting you and/or your family?
<b>V</b> <b>Values</b>	What is your goal for this symptom? What is your comfort goal or acceptable level for this symptom (On a scale of 0 to 10 with 0 being none and 10 being worst possible)? Are there any other views or feelings about this symptom that are important to you or your family?

\* Physical Assessment (as appropriate for symptom)

**Recommendation 2** Diagnosis

Management should include treating reversible causes where possible and desirable according to the goals of care. The most significant intervention in the management of cachexia and anorexia is identifying underlying cause(s) and treating as appropriate (*see Table 2*). While underlying cause(s) may be evident, treatment may not be indicated, depending on the stage of the disease.

Intervention aimed at reducing cachexia and anorexia must take into account the cause (often multifactorial) of the symptoms.<sup>(1-4, 7, 8, 11, 13-21)</sup>

*Table 2: Causes of Cachexia*

Causes of Cachexia	Patients Affected	Interventions
<b>Cancer by-products</b>	Cytokines; tumour necrosis factor, interleukin 1, leptin	Megestrol acetate, NSAIDS, adenosine triphosphate, corticosteroids
<b>Depression or delirium</b>	May cause or be caused by anorexia/cachexia	Haloperidol, anti-depressants, counseling, support
<b>Dysphagia</b>	Head, neck or esophageal tumours	Enteral feeding (gastrostomy preferred), stent, swallowing assessment, laser/radiation, pain control with topical anesthetics or systemic analgesics
<b>Gastrointestinal disturbances</b>	Obstruction or constipation	Bowel regime, domperidone, metoclopramide or peripheral opioid antagonists and interventions for obstruction
<b>Malabsorption syndrome</b>	Fats and carbohydrates not metabolized/absorbed	Corticosteroids, megestrol acetate, omega 3 fatty acids
<b>Treatment toxicities: mucositis, nausea/vomiting</b>	Radiation, chemotherapy, medications	Treat according to toxicity
<b>Uncontrolled symptoms: pain, dyspnea, constipation, and nausea/vomiting</b>	Patients with advanced disease processes	Control symptoms to increase appetite and quality of life
<b>Xerostomia, altered oral condition or taste</b>	Infection, poor hygiene, dehydration, medication, taste bud alteration	Saliva substitutes, good oral hygiene and nutrition, zinc supplements

**Recommendation 3** Education

Early counseling regarding nutritional aspects is vital. Emphasize that oral intake will lessen over time (functional dysphagia) – explain the metabolic abnormalities causing anorexia. Assist families and caregivers to understand and accept the benefits and limits of treatment interventions and to look at alternate ways to nurture the patient (oral care, massage, reading, conversing). This will help to decrease the feelings of helplessness for these individuals. Advise families that pressuring their loved one to eat increases anxiety and stress for them all and can worsen symptoms of nausea and vomiting.<sup>(1-3, 7, 17)</sup>

**Recommendation 4** Treatment: Nonpharmacological

- Oral nutrition is the ideal with emphasis on “what one likes” rather than “what is right or of value” nutritionally. As the illness progresses, educate that intake will decrease and that this is natural. Ice chips, small sips of beverages and good mouth care becomes the norm.<sup>(1, 7, 11, 20, 22)</sup>
- Consider hypodermoclysis to correct symptoms related to dehydration when there are symptoms that could be relieved by parenteral fluids and will improve quality of life.<sup>(1)</sup> See *Fraser Health Hospice Palliative Care Symptom Guideline for Dehydration*.
- Enteral feeding may be appropriate in patients who have difficulty swallowing and who have an appetite and reasonable quality of life; consider a gastrostomy rather than a nasogastric tube for comfort and body image; G-tubes also provide drainage should total bowel obstruction occur. There is a risk of aspiration pneumonia and diarrhea. Patients with secondary etiologies benefit from this type of feeding.<sup>(1, 2, 13, 18, 20)</sup>
- Consultation with dietician and/or counselor and family education is critical.<sup>(1, 2, 17, 20)</sup>
- Total parenteral nutrition is the exception thus should only be considered in exceptional situations – multiple studies have found no benefit on mortality or morbidity rates.<sup>(1-3, 12, 13, 16, 17, 19, 22, 23)</sup>

**Recommendation 5 Treatment: Pharmacological**

Goal of treatment should be to conserve or restore best quality of life; to control symptoms that cause aggravating symptoms or distress; emphasis should not be solely nutrition and should be determined prior to initiation of treatment. A multi-disciplinary approach is needed considering prognosis, patient and family wishes.<sup>(2, 3, 7, 9, 11, 14)</sup>

**Most Commonly Used:**

- **Metoclopramide** should be considered when chronic nausea occurs in association with cachexia because of the high incidence of autonomic failure with resulting gastroparesis. Metoclopramide 10 mg q4 to 8h.<sup>(2, 11, 14)</sup>
- **Megestrol acetate** may be useful in treating anorexia in patients with expected survival time of months or for end stage renal patients for uremic syndrome. Side effects are usually mild (and dose related) but can include edema, venous thromboembolic events, hypertension, alopecia, adrenal suppression, hypercalcemia and cushingoid fat distribution. Megestrol acetate 160 to 800 mg per day, titrate.<sup>(2, 3, 6, 7, 9-11, 13, 14)</sup>
- **Corticosteroids** may increase appetite, strength and promote a sense of well being; effects last about 2 to 4 weeks making it appropriate for those whose life expectancy is weeks. Dexamethasone 4 to 8 mg per day – titrate for increased appetite.<sup>(2, 3, 5, 7, 11, 13, 14)</sup>

**Less Commonly Used:**

- **NSAIDS** like ibuprofen and cox inhibitors have been shown to have some beneficial effect on anorexia/weight loss by mediating the inflammatory response of cytokines.<sup>(10, 14, 19)</sup> Ibuprofen 400 mg t.i.d.<sup>(10)</sup> or indomethacin 50 mg b.i.d.<sup>(19)</sup>
- **Melatonin** has been shown to have some effect on weight loss by mediating circulating tumour necrosis factor.<sup>(4, 14)</sup> Melatonin 20 mg daily at bedtime.<sup>(4)</sup>
- **Omega 3 fatty acids** have been shown to normalize metabolism and stabilize weight.<sup>(3, 7, 14, 19)</sup> Eicosapentaenoic acid (EPA) 2.2 grams daily and docosahexaenoic acid (DHA) 0.96 grams daily.<sup>(24)</sup>
- **Dronabinol** may decrease nausea, stimulate mood, and appetite but is not proven effective in preventing weight loss. 5 mg daily.<sup>(2, 3, 7, 13)</sup>
- **Adenosine Triphosphate** has been shown to have some positive effect on weight gain but needs further study.<sup>(21)</sup>
- **Cyproheptadine** may cause mild appetite increase but does not prevent progressive weight loss in advanced cancer, has sedative side effect.<sup>(2, 7, 13, 14)</sup>

## □ References

Information was compiled using the CINAHL, Medline (1996 to April 2006) and Cochrane DSR, ACP Journal Club, DARE and CCTR databases, limiting to reviews/systematic reviews, clinical trials, case studies and guidelines / protocols using nutrition/cachexia/anorexia terms in conjunction with palliative/hospice/end of life/dying. Palliative care textbooks mentioned in generated articles were hand searched. Articles not written in English were excluded.

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