Canadian Geriatrics Society

UNINTENTIONAL WEIGHT LOSS IN OLDER ADULTS: A PRACTICAL APPROACH TO DIAGNOSIS AND MANAGEMENT

Abstract

Unintentional weight loss is common among older adults, is associated with adverse outcomes and may be the result of multiple factors. A comprehensive history and physical examination has the highest yield for determining the cause(s) of weight loss. Investigations should be targeted to concerns identified on the examination. Management strategies need to be customized to the individual and include addressing modifiable contributing factors.

Jayna M. Holroyd-Leduc MD, FRCPC
Head and Associate Professor, Section of Geriatric Medicine, Departments of Medicine and Community Health Sciences, University of Calgary

Corresponding Author:
Dr. Jayna M. Holroyd-Leduc, Jayna.Holroyd-Leduc@albertahealthservices.ca

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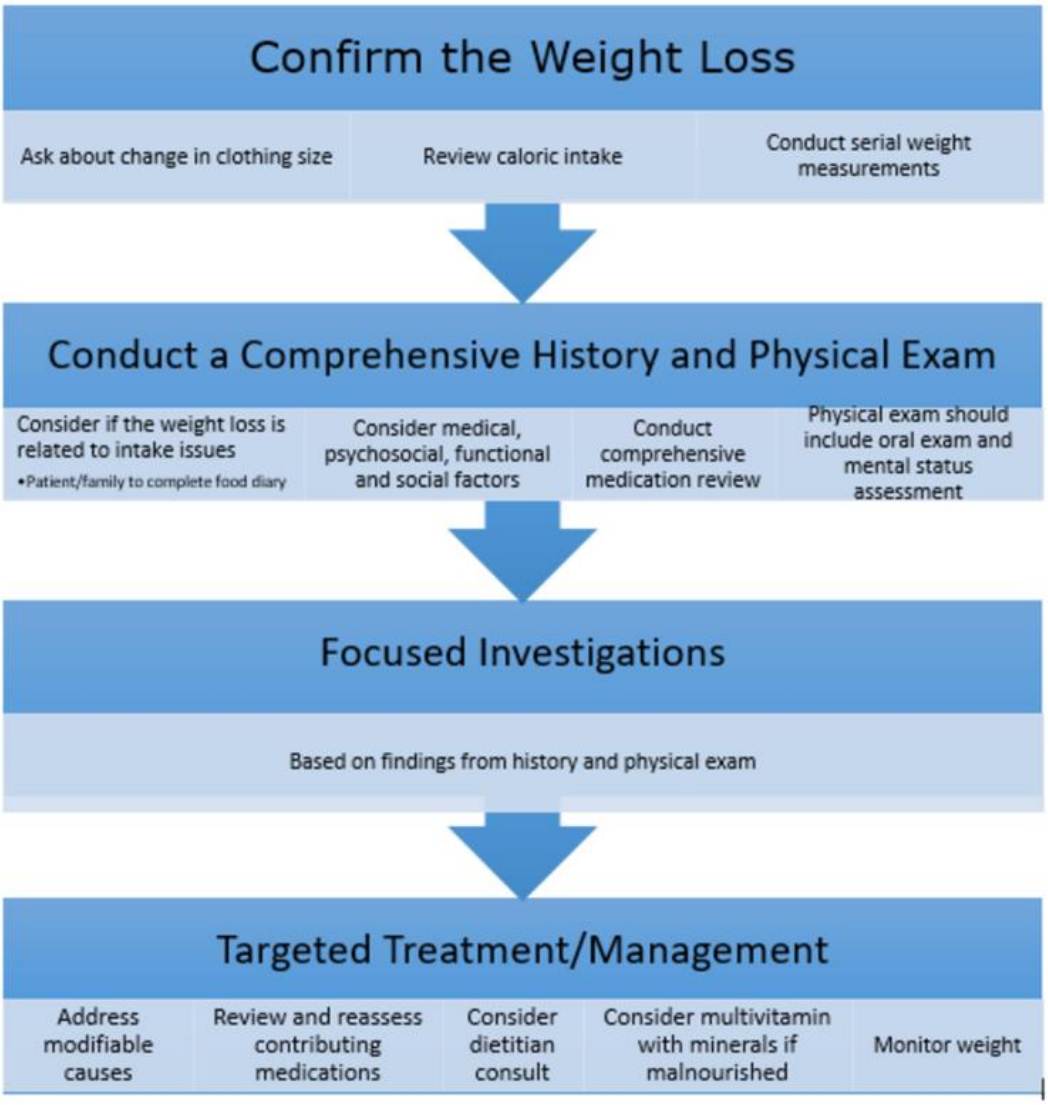
Unintentional or involuntary weight loss is a common issue among older adults and contributes to frailty[1,2]. Unintentional weight loss is also associated with higher mortality, as well as functional decline, long term care admission and poor quality of life[3-5]. A common definition is a 5% unintentional loss of body weight within one month or 10% over a six-month period[6]. From a practical perspective, asking the person if they have had a change in their clothing size or if their clothing is noticeably looser can be a clue to weight loss when it is difficult to confirm their actual change in weight. Additionally, office screening can include asking about whether they have been eating less than usual, obtaining collateral history and/or performing serial weight measurements (Figure 1).

Common Causes of Unintentional Weight Loss

The etiology of unintentional weight loss among older adults can be complex and is not always the direct result of a medical illness. In fact, psychological factors (e.g., depressed mood, bereavement)[7,8] and social factors (e.g., low income, social isolation)[9,10] can play a role. Normal age-related changes can also predispose a person to weight loss, including declining smell and taste, slowed gastric emptying, reduced efficiency of chewing and changes to neuroendocrine hormones and peptides[11]. The "Meals on Wheels" mnemonic can be used when considering categories of potentially modifiable causes of unintentional weight loss (see Box 2 at www.cmaj.ca/content/172/6/773)[11-13]. A more comprehensive list would be the newly developed *"STOP WEIGHT LOSS©" mnemonic* depicted below.

Figure 1: Approach to managing unintentional weight loss



BOX 1: "STOP WEIGHT LOSS©" mnemonic for Common Potentially Modifiable Causes of Unintentional Weight Loss (© Dr. Frank Molnar. For permission to use please contact Dr. Frank Molnar at fmolnar@toh.ca)

S Side effect of medications (see Box 3)
T Treatment effect (e.g., chemotherapy, radiotherapy, dialysis, etc.)
O Other medical diagnoses (e.g., malignancy, end-stage CHF/COPD, renal failure)
P Pain (inadequate control)

W Wandering, repetitive behaviours of dementia or psychiatric disease
E emotional/psychological problems (e.g., anxiety, depression, delusions)
I Impaired cognition (dementia, delirium) or function (inability to feed self)
G GI disease (e.g., malabsorption, reflux, nausea/vomiting, constipation)
H Hyperthyroidism, hypothyroidism, hyperparathyroidism, hypoadrenalism
T Taste and texture of food (restrictive diets – low Na, low cholesterol, pureed)

L Loss of appetite/early satiety
O Oral health factors (mucosa, dentition) and poorly fitting dentures
S Swallowing disorders
S Social factors (e.g., social isolation, poverty, poor access to food)

When evaluating the cause of the weight loss, a good starting point is to determine whether or not the person has adequate caloric intake. Intake-related issues (Box 2) often contribute to unintentional weight loss in older adults and may be easily addressed[14].

BOX 2: Intake-related issues that can cause weight loss

Physical
Eating or chewing problems
Swallowing difficulties
Poor oral health
Reduced appetite or early satiety
Constipation
Functional impairment or reduced mobility
Daily pain

Psychosocial
Poor access to food
Low income
Social isolation
Depression
Cognitive impairment

A number of commonly prescribed medications can also contribute to weight loss[14], given side effects such as dry mouth, dysphagia, nausea, vomiting, constipation, altered mental status or change in taste or smell (Box 3). Dementia is one of the most common medical causes for unintentional weight loss in the frail older adult, particularly among those living in assisted living facilities[7]. Dementia can cause cognitive (e.g.,

forgetting meals, inability to prepare meals), behavioural (e.g., paranoia, depression, apathy, agitation) and physical (e.g., impaired swallowing, poor oral care) changes that can contribute to weight loss. Medications employed in dementia (e.g., cholinesterase inhibitors and memantine) can also contribute to weight loss (Box 3). Upwards of 40% of persons with dementia will experience clinically significant weight loss[15]. Acute illness or a flare-up of chronic conditions can also be contributing factors[7,9]. Malignancy should be considered, particularly among those with adequate dietary intake[11].

BOX 3: Commonly prescribed medications that can contribute to weight loss (in alphabetical order)

ACE inhibitors
Alcohol
Allopurinol
Antibiotics
Anticholinergics
Anticonvulsants
Antihistamines
Aspirin

Benzodiazepines
Bisphosphonates

Calcium channel blockers
Cholinesterase inhibitors

Decongestants
Digoxin
Diuretics
Dopamine agonists

Iron

Levodopa
Levothyroxine
Lithium

Memantine
Metformin

Nitroglycerin
NSAIDs

Opioids

Potassium

SSRIs
Statins

Tricyclics

Assessing Weight Loss

A comprehensive history and physical examination is required when assessing a person with unintentional weight loss, as it has the greatest potential for determining the cause(s) of weight loss[16]. This should include an appropriate review of potential medical, psychological, social and intake-related issues, as well as a comprehensive medication review and mental status assessment. In order to determine the adequacy of oral intake, there may be a role for asking the patient or their family to complete a food diary over several days or consulting a dietitian when available.

There is limited value to doing computed tomographic screening[16]. Testing should instead be directed toward areas of concern identified on the history and physical examination. Investigations of highest yield appear to be thyroid function testing and gastrointestinal investigations (e.g., endoscopy, barium studies, upper gastrointestinal series) [16]. However, these investigations should still be guided by areas of concern identified by history or physical examination. Routine laboratory investigations, including CBC, albumin, calcium, hemoglobin A1C and creatinine, could also be considered. The extent of investigation should depend on the individual's overall frailty status and their goals of care. However, in up to 25% of individuals the cause of the weight loss will not be identified[11]. In many of these cases the prognosis appears to be better.

Approach to Managing Weight Loss

Although the impact of treating weight loss on life expectancy is unclear[14], there may be improvements in associated morbidity and in quality of life. Treatment should include addressing potentially modifiable factors,

including addressing intake-related issues and contributing medications. Medications known to contribute to weight loss should be reassessed, with consideration of the ongoing need for the medication, the potential of substituting a different medication or managing the condition with non-pharmacological strategies. The role for nutritional supplements is unclear, and supplements are associated with increased costs and are often poorly consumed[17]. If nutritional supplements are initiated, they should be given between meals in order to decrease the risk of supplements acting as meal replacements. Increasing physical activity may be a more effective intervention than nutritional interventions[18]. The evidence for pharmacological therapies is minimal[14]. There may be a role for initiating a multivitamin with minerals to address vitamin deficiencies associated with malnutrition. There are also evidence-informed online Canadian resources available to both health care providers and older adults, related to addressing weight loss and malnutrition (Box 4). Response to any interventions should be monitored by following the individual's dietary intake and weight.

BOX 4: Online nutrition resources relevant to Canadians

For health care providers: www.nutritioncareincanada.ca

For older Canadians: www.dietitians.ca/Your-Health/Nutrition-A-Z/Seniors.aspx

Conclusion

Unintentional weight loss in older adults can be the result of a number of different factors, many of which may be modifiable. It is important to conduct a comprehensive history and physical examination, paying particular attention to intake-related issues and medications that may be contributing to the weight loss. Management should target modifiable contributing factors. The role for nutritional supplements and pharmacological interventions is less clear.

REFERENCES:

1. Ruscin JM, Page RL, 2nd, Yeager BF, Wallace JI. Tumor necrosis factor-alpha and involuntary weight loss in elderly, community-dwelling adults. Pharmacotherapy. 2005;25(3):313-9.

2. Yannakoulia M, Ntanasi E, Anastasiou CA, Scarmeas N. Frailty and nutrition: From epidemiological and clinical evidence to potential mechanisms. Metabolism. 2017;68:64-76.

3. Harrington M, Gibson S, Cottrell RC. A review and meta-analysis of the effect of weight loss on all-cause mortality risk. Nutr Res Rev. 2009;22(1):93-108.

4. Wallace JI, Schwartz RS, LaCroix AZ, Uhlmann RF, Pearlman RA. Involuntary weight loss in older outpatients: incidence and clinical significance. J Am Geriatr Soc. 1995;43(4):329-37.

5. Fine JT, Colditz GA, Coakley EH, Moseley G, Manson JE, Willett WC, et al. A prospective study of weight change and health-related quality of life in women. JAMA. 1999;282(22):2136-42.

6. Gilmore SA, Robinson G, Posthauer ME, Raymond J. Clinical indicators associated with unintentional weight loss and pressure ulcers in elderly residents of nursing facilities. J Am Diet Assoc. 1995;95(9):984-92.

7. Wright BA. Weight loss and weight gain in a nursing home: a prospective study. Geriatr Nurs. 1993;14(3):156-9

8. Callen BL, Wells TJ. Screening for nutritional risk in community-dwelling old-old. Public Health Nurs. 2005;22(2):138-46.

9. Sorbye LW, Schroll M, Finne Soveri H, Jonsson PV, Topinkova E, Ljunggren G, et al. Unintended weight loss in the elderly living at home: the aged in Home Care Project (AdHOC). J Nutr Health Aging. 2008;12(1):10-6.

10. Bartlett BJ. Characterization of anorexia in nursing home patients. Educ Gerontol. 1990;16:591-600.

11. Alibhai SM, Greenwood C, Payette H. An approach to the management of unintentional weight loss in elderly people. CMAJ. 2005;172(6):773-80.

12. Huffman GB. Evaluating and treating unintentional weight loss in the elderly. Am Fam Physician. 2002;65(4):640-50.

13. Morley JE, Silver AJ. Nutritional issues in nursing home care. Ann Intern Med. 1995;123(11):850-9.

14. Stajkovic S, Aitken EM, Holroyd-Leduc J. Unintentional weight loss in older adults. CMAJ. 2011;183(4):443-9.

15. Franx BAA, Arnoldussen IAC, Kiliaan AJ, Gustafson DR. Weight Loss in Patients with Dementia: Considering the Potential Impact of Pharmacotherapy. Drugs Aging. 2017;34(6):425-36.

16. Thompson MP, Morris LK. Unexplained weight loss in the ambulatory elderly. J Am Geriatr Soc. 1991;39(5):497-500.

17. Ovesen L. The effect of a supplement which is nutrient dense compared to standard concentration on the total nutritional intake of anorectic patients. Clin Nutr. 1992;11(3):154-7.

18. Rydwik E, Lammes E, Frandin K, Akner G. Effects of a physical and nutritional intervention program for frail elderly people over age 75. A randomized controlled pilot treatment trial. Aging Clin Exp Res. 2008;20(2):159-70.