



# CACHEXIA

\kuh-kek-se-uh\ n : a multifactorial syndrome characterised by an ongoing loss of skeletal muscle mass (with or without loss of fat mass) that cannot be fully reversed by conventional nutritional support and leads to progressive functional impairment. The pathophysiology is characterised by a negative protein and energy balance due to a combination of reduced food intake and abnormal metabolism.<sup>1</sup>

1 in 5 patients with  
cancer die from  
CACHEXIA<sup>2</sup>

NOT FROM  
CANCER.

16 clinical studies  
prove that ProSure  
MAY REDUCE  
CACHEXIA.



ProSure. Strength to  
Fight and Get Back  
to Life



 **Abbott**  
A Promise for Life



CACHEXIA: A REDUCIBLE RISK

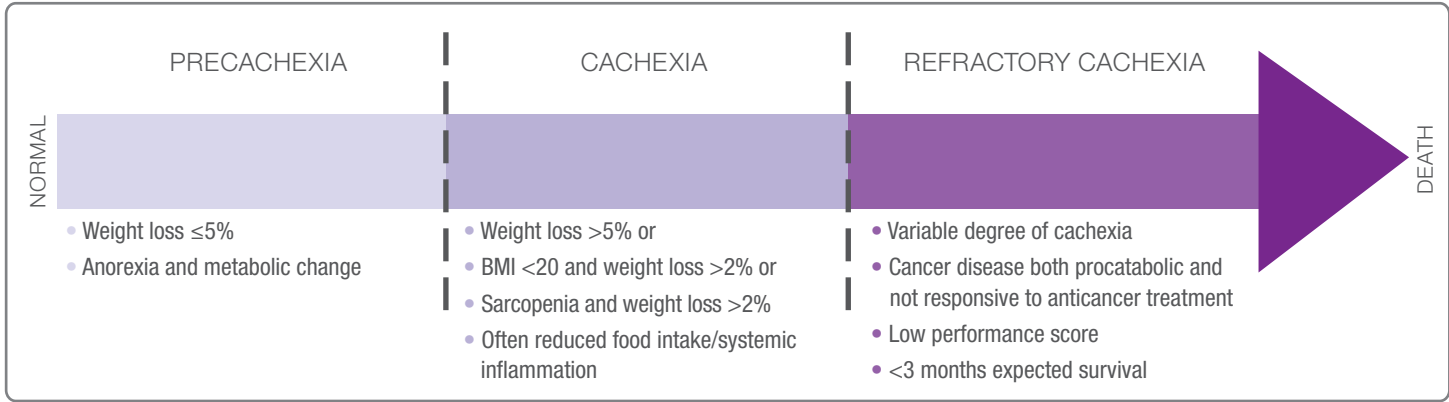
People with cancer often experience weight loss and decreased quality of life. Weight loss may be one of the first signs of cancer and is just one aspect of a more complicated condition known as cancer cachexia.

Cancer cachexia includes anorexia, early satiety, fatigue, muscle loss, decreased strength and physical function. These impairments lead to reduced tolerance to anticancer therapy, loss of mobility and independence, depression, anxiety, and decreased survival.<sup>1,3</sup>

Early intervention with nutrition therapy as part of the comprehensive cancer treatment can help minimize cancer cachexia's life altering affects.

CACHEXIA AND METABOLIC CHANGES

STAGES OF CANCER CACHEXIA



Reprinted from The Lancet Oncology, 12, Fearon K, Strasser F, Anker SD, et al, Definition and classification of cancer cachexia: an international consensus, 489-495, Copyright (2011), with permission from Elsevier.

Metabolic changes begin in the first stage of cachexia and are caused by circulating factors released by the tumor leading to increased proinflammatory cytokine production, systemic inflammation, hypercatabolism, anorexia, decreased food intake, and increased metabolic rate.<sup>4-7</sup> These conditions are associated with poor clinical outcomes:

- loss of weight and muscle mass
- poor quality of life (QOL)
- reduced treatment tolerance

Standard oral supplements do not address the metabolic changes causing weight loss and cachexia, as well as the resultant complications in quality of life, strength, functionality and treatment interruptions.<sup>1</sup>

PROSURE: AN ESSENTIAL PART OF A COMPLETE TREATMENT PLAN

ProSure contains EPA\*, which helps stabilize weight by attenuating metabolic changes associated with tumor-associated proinflammatory cytokine production. Combining EPA with protein and calories promotes appetite, improves strength and helps build lean body mass, in turn helping to improve physical activity and QOL while improving response to treatment. ProSure contains a unique blend of prebiotic fiber to help promote digestive tract health with EPA from fish oil and antioxidants to support immune health.

Conventional nutritional support (i.e., dietary counseling, standard oral supplements) does not address the metabolic changes causing weight loss and cachexia.



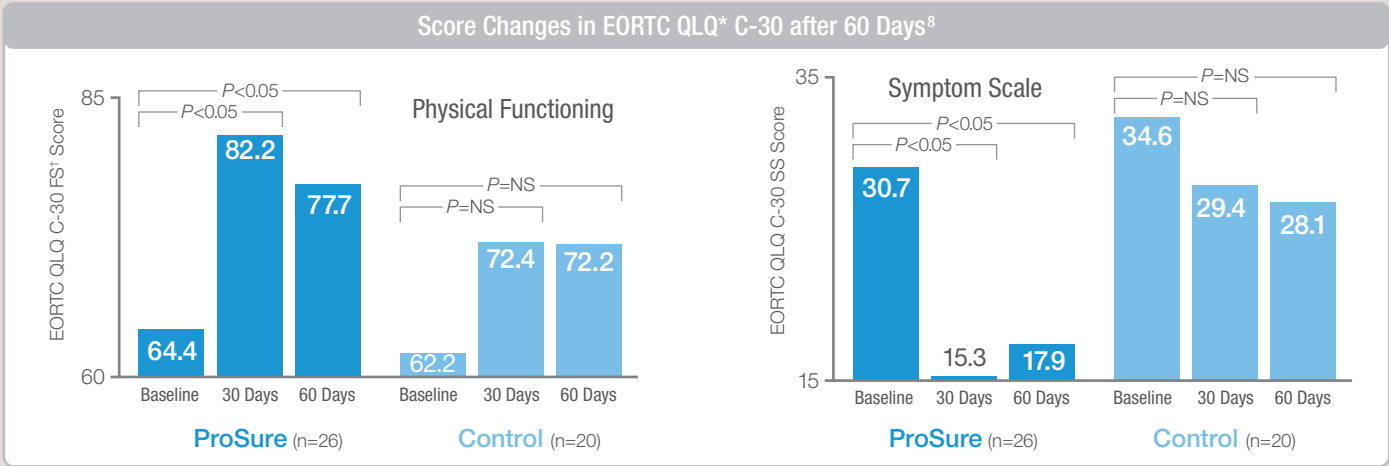
\* Eicosapentaenoic acid

CLINICALLY DEMONSTRATED RESULTS

SIGNIFICANTLY IMPROVED QUALITY OF LIFE (QOL)<sup>8</sup>

IMPROVED NUTRITIONAL INTAKE, WEIGHT, AND REDUCTION OF C-REACTIVE PROTEIN (CRP) ALL CONTRIBUTE TO QOL.

- In a prospective, randomized, blinded, controlled trial in 46 patients with lung cancer undergoing chemotherapy, a significant improvement was seen in physical functioning and symptoms in patients who consumed ProSure.
- QOL improvement was paralleled by significant improvements in appetite, energy and protein intake, body weight, and reduction in CRP in patients who consumed ProSure.
- Similar results were not seen in the control (high-protein, energy dense, non-EPA enriched supplement) group

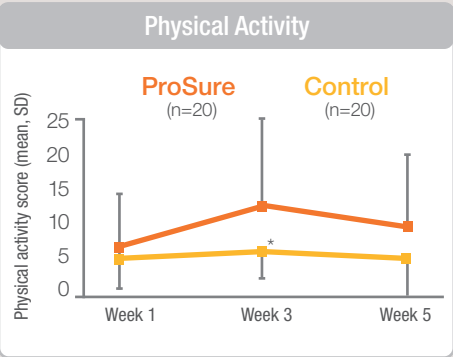


<sup>†</sup>FS=Functional Status    SS=Symptom Scale    \*EORTC QLQ=European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire

SIGNIFICANT INCREASE IN PHYSICAL ACTIVITY LEVEL (PAL)<sup>9</sup>

IMPROVED NUTRITIONAL INTAKE, WEIGHT, AND LEAN BODY MASS ASSOCIATED WITH AN INCREASE IN PHYSICAL ACTIVITY

- In a double-blind, randomized, placebo-controlled trial in patients with Stage III non-small cell lung cancer undergoing chemo-radiotherapy, a higher daily physical activity score (measured by wearing a Physical Activity Monitor) was found in the ProSure group compared to the control group at weeks 3 and 5,  $P < 0.05$ .<sup>9</sup>
- Patients in the ProSure group had better weight maintenance during weeks 1, 2, and 4 (1.1 kg, 1.3 kg, and 1.7 kg,  $P < 0.05$ ) and better fat-free mass (lean body mass) maintenance after 3 and 5 weeks (1.5 and 1.9 kg, respectively;  $P < 0.05$ ).<sup>10</sup>
- At 4 weeks, the ProSure group had higher energy and protein intake than the control group,  $P = 0.01$ .<sup>10</sup>

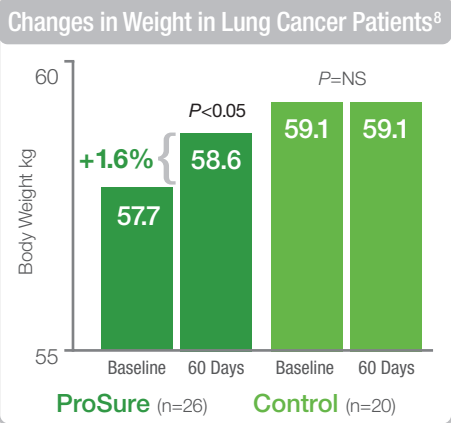


SD=Standard Deviation    \*  $P < 0.05$

SIGNIFICANT INCREASES IN WEIGHT<sup>8</sup>

IMPROVED APPETITE AND NUTRITIONAL INTAKE ASSOCIATED WITH AN INCREASE IN WEIGHT

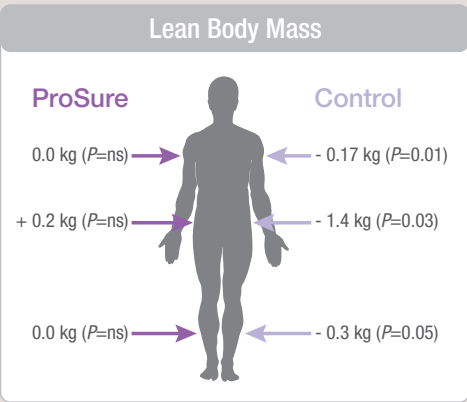
- Significant improvement in weight was seen with ProSure after 60 days (0.9 kg,  $P < 0.05$ ).
- Significant improvements in appetite and protein and energy intake were seen with ProSure ( $P < 0.05$ ).
- Significant effect on inflammatory status at 30 days,  $P < 0.05$ :
  - Decrease in C-reactive protein (CRP)
  - Increase in prealbumin and transferrin



PRESERVES LEAN BODY MASS<sup>23</sup>

HELPS PREVENT THE LOSS OF LEAN BODY MASS

- In a prospective, randomized, double-blind, controlled trial in 53 patients undergoing esophagectomy, lean body mass was maintained throughout the study in the ProSure group compared to patients in the control group who experienced a significant loss of lean body mass (-1.9 kg).
- Significantly attenuated the stress response to surgery for IL-8, IL-10, and TNF- $\alpha$  ( $P < 0.05$ ). IL-8 levels were significantly lower on postoperative days 7 and 14 in the ProSure group compared to the control group ( $P = 0.05$ ).
- No abnormal intra-operative bleeding and no difference between the ProSure group and the control group in prothrombin time, platelets, or D-Dimer levels.



# 16 CLINICAL STUDIES PROVE THAT PROSURE MAY REDUCE CACHEXIA

ProSure is the first and only therapeutic oral nutritional supplement with clinically demonstrated effectiveness.

## Studies conducted in people with cancer show that ProSure can help:

- Promote weight gain<sup>8, 10-22</sup>
- Build or maintain lean body mass<sup>10, 11, 13-15, 18, 20, 23, 24</sup>
- Improve appetite and dietary intake<sup>8, 10, 11, 14, 15, 24-26</sup>
- Attenuate the proinflammatory response<sup>8, 12, 18, 22-24, 27, 28</sup>

## ProSure is also associated with:

- Increased strength in those who gained weight<sup>29</sup>
- Improved physical activity<sup>9, 11, 26</sup>
- Improved quality of life<sup>8, 9, 14, 15, 18, 24, 25, 29, 30</sup>
- Reduced treatment interruptions/toxicities<sup>21, 24, 30, 31</sup>

CACHEXIA  
DOESN'T  
HAVE TO  
INTERRUPT  
LIFE

## PROSURE PRODUCT INFORMATION

- Eicosapentaenoic acid (EPA) that helps decrease the harmful metabolic changes associated with the proinflammatory response to cancer
- High amount of high quality protein (16 g protein per serving) to help build lean body mass and maintain strength and function for improved QOL
- Calorically dense (300 calories per serving) to meet the needs of cancer patients in a reduced volume
- ProSure contains a unique blend of prebiotic fiber to help promote digestive tract health with EPA from fish oil and antioxidants to support immune health.
- Low in fat to help reduce early satiety and feelings of fullness
- MCT (medium chain triglycerides) an easily digested, readily absorbed source of fat
- Short-chain fructooligosaccharide (FOS), a prebiotic fiber, to maintain the health of the digestive tract, help manage diarrhea associated with chemotherapy/radiation and to help relieve constipation associated with pain medications
- Enhanced levels of vitamins and minerals to supplement the diet of people with reduced food intake
- Specially designed to meet the taste preferences of people with cancer

# ProSure

Strength to Fight  
and Get Back to Life



Does not inhibit usual meal intake.<sup>11, 15</sup>

Results in some patients can be seen in as few as three weeks with as little as two servings daily.

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