

# Everything you need to know about cachexia

Cachexia (*pron.* ka-kek-see-a) is a condition that causes extreme weight loss and muscle wasting. It is a symptom of many chronic conditions, such as cancer, chronic renal failure, HIV, and multiple sclerosis.

A recent estimate suggested that over 160,000 people in the United States who stay in hospital with a cachexia diagnosis every year.

There are other conditions that cause a person to lose weight, but people with cachexia lose weight even if they are still eating.

Usually, a person who does not eat enough food will lose only fat. A person with cachexia will lose both fat and muscle mass.

## Causes

Cachexia causes extreme weight loss and muscle loss. It is a symptom of cancer and other conditions.

The interaction of many different factors causes cachexia. People with cachexia have abnormal levels of certain substances in their body. These imbalances cause weight loss and muscle wasting.

A number of factors contribute to cachexia, including the levels of these substances, the conditions that cause them, and the reaction they provoke from the body.

These substances interact with each other and lead to cachexia through several pathways, including:

- increasing metabolism and the spending of energy
- causing inflammation
- increasing the breakdown of muscle
- preventing muscle growth

Researchers are still studying the many links and other potential causes that can lead to cachexia.

## Risk factors

There are certain chronic conditions linked to cachexia, usually in the end-stages of the disease. A person with one of the following conditions should talk to their doctor about steps to prevent the development of cachexia and how to improve quality of life.

Examples of these conditions include:

- cancer, especially lung, pancreas, and stomach
- chronic obstructive pulmonary disease (COPD)
- chronic renal failure, with an estimated fourth of all people with the condition showing signs of malnourishment
- congestive heart failure
- Crohn's disease
- cystic fibrosis
- HIV
- rheumatoid arthritis

## **Symptoms**

**Involuntary weight loss:** Weight loss occurs despite getting adequate nutrition or a high number of calories.

**Muscle wasting -** This is the characteristic symptom of cachexia. However, despite the ongoing loss of muscle, not all people with cachexia appear malnourished. A person who was overweight before developing cachexia may appear to be of average size despite having lost a significant amount of weight.

**Loss of appetite, or anorexia -** Not only does food become not appealing, but a person with cachexia will also lose their desire to eat any food at all.

**Reduced functional ability -** Common symptoms, such as malaise, fatigue, and low energy levels make it hard for a person to do the things they enjoy and want to do. Often a person cannot complete daily activities, such as getting dressed and brushing the teeth.

**Swelling or edema- -**When there are low levels of protein in the blood, fluid moves into the tissues, causing swelling, especially in the legs of people who are still able to sit and stand.

As cachexia is sometimes difficult to recognize, doctors use a variety of criteria for diagnosis. In the most common system, the person must meet the following criteria for a cachexia diagnosis:

- non-deliberately losing more than 5 percent of their body weight over six to 12 months
- a body mass index (BMI) of less than 20 in a person under 65 years old, or a BMI of less than 22 in a person over 65 years.
- less than 10 percent body fat

## **Complications**

The fat and muscle wasting in cachexia is serious and can potentially speed up death. Cachexia is a significant factor in around 20% of deaths due to cancer, according to a study from 2017.

Complications of cachexia include:

- diminished quality of life and loss of the ability to live independently
- impaired response to treatments
- reduced immunity
- escalating symptoms of the underlying chronic condition
- a reduced life expectancy from the underlying disease

## **Treatments**

There is no single medicine or treatment plan that has been shown to be effective for treating cachexia. Many factors contribute to its cause, so a treatment plan incorporating several types of therapy will most likely be necessary. Simply increasing the number of calories or changing the diet will not show results.

Some helpful steps include:

Focusing on the social aspects of eating - People get pleasure from sitting together over a meal even when they are not in the mood to eat. Emphasizing the social importance of eating instead of the amount of food may help a person reposition their emotional and psychological relationship to eating.

Eat frequent small, meals - People with cachexia are more likely to tolerate eating high-calorie meals in small portions throughout the day rather than three set meals. Drinks containing nutritional supplement drinks are available to increase calorie intake between the small meals.

Emotional support - The family of a person with cachexia should understand that as an underlying disease progresses to its end stage, people will sometimes not want to eat. Once they reach this stage, friends and family should not force the person with cachexia to eat. Muscle wasting and weight loss will continue whether a person with the condition eats or not.

Appetite stimulants - Medications, such as dronabinol, megestrol, and glucocorticoids, may improve appetite. However, eating more will not stop the progression of symptoms or improve muscle wasting. An increased appetite may help a person participate in family and social meals and feel a little less isolated, which has benefits for mental health.

Light exercise - As long as the person can tolerate it, exercise might help build some muscle mass. However, evidence is not available as to the effectiveness of exercise as a measure against cachexia.

## **Prevention**

Cachexia is usually a side effect of an underlying medical condition, so the focus for prevention lies in keeping the underlying chronic condition at bay. Some conditions, such as COPD or HIV, are potentially preventable. However, other conditions that cause cachexia are largely unavoidable, such as cancer, rheumatoid arthritis, or Crohn's disease.

An active lifestyle with balanced nutrition may reduce the risk of a chronic condition that could lead to cachexia.

### **What is cancer anorexia-cachexia syndrome?**

People who have cancer sometimes experience a condition known as cancer anorexia-cachexia syndrome (CACS). It is cachexia, but with anorexia as part of the syndrome. Like cachexia, increasing calorie intake does not reverse the severe muscle wasting CACS causes.

The characteristics of CACS include:

- muscle wasting
- weight loss
- loss of appetite
- severe weakness or loss of strength and low energy level/fatigue
- poor quality of life
- poor response to chemotherapy with increased side effects
- poor prognosis

The diagnosis is made by meeting the following three criteria:

- A person eats fewer than 20 calories/kg of body weight or loses 5 lbs over 2 months.
- They want a better appetite, to eat more, and to put on weight.
- The doctor believes that putting on weight would be helpful for the person.

As with cachexia, there is no effective treatment for CACS. The steps that can help people with only cachexia might also work for people with CACS.

### **Takeaway**

Cachexia is an often irreversible side effect of diseases including cancer and HIV. It causes severe weight loss and muscle wastage.

An approach to treatment incorporating a range of therapies can help, but cachexia is normally a condition that accompanies the end stage of an underlying medical issue. It is responsible for one-fifth of deaths from cancer.

The best way to prevent cachexia is taking action to reduce the risk of underlying conditions, such as cancer and kidney failure.

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