Chronic Obstructive Pulmonary Disease

COPD: Major Recommendations (2008)

Chronic Obstructive Pulmonary Disease Evidence-Based Nutrition Practice Guideline

Recommendations are categorized in terms of either conditional or imperative statements. While conditional statements clearly define a specific situation, imperative statements are broadly applicable to the target population and do not impose restraints on their application.

Conditional recommendations are presented in an if/then format, such that:

IF CONDITION then ACTION(S) because REASON(S)

Fulfillment of the condition triggers one or more guideline-specified actions. In contrast, imperative recommendations include terms such as "require," "must," and "should," and do not contain conditional text that would limit their applicability to specified circumstances.

Resources Available with Each Recommendation

In addition to the recommendation statement and strength rating, you will find on each recommendation page:

- A brief narrative summary of the evidence analyzed to reach the recommendation
- A statement of justification, or reason for the strength of the recommendation
- Detailed information on the evidence supporting the recommendations and background narrative (available in the Supporting Evidence section toward the bottom of each recommendation page)
- A reference list at the end of each recommendation page that includes all the sources used in the evidence analysis for the particular recommendation (each reference is hyperlinked to a summary of the article analyzed in the evidence analysis).

Below, you will find a list of the Chronic Obstructive Pulmonary Disease Recommendations, organized according to the stage of the Nutrition Care Process and by topic.

To see the Recommendation Summary, just click on the Recommendation title.

Also view the Executive Summary of Recommendations or print the guideline features under Print Reports.

Chronic Obstructive Pulmonary Disease (COPD) Major Recommendations

COPD: Medical Nutrition Therapy

Assessment

COPD: Assessment of Quality of Life
COPD: Assessment of Weight Status and Body Composition
COPD: Assessment of Energy Needs
  Determination of Energy Needs
  Energy Needs in Stable COPD
  Energy Needs During Exacerbation
  Critical Illness and Energy Expenditure Algorithm
COPD: Bone Density Screening

Intervention

COPD: Medical Food Supplements
  Medical Food Supplements for Inpatients
  Medical Food Supplements for Outpatients
  Macronutrient Composition of Medical Food Supplements
  Frequent Small Amounts of Medical Food Supplements
COPD: Treatment of Osteopenia and Osteoporosis
COPD: Antioxidant Vitamins
COPD: Omega-3 Fatty Acids
COPD: Milk Consumption and Mucus Production
COPD: Integrated Care
COPD: Oxygen Therapy
COPD: Pharmacotherapy

Monitoring and Evaluation

COPD: Monitor and Evaluate Quality of Life
COPD: Monitor and Evaluate Weight Status and Body Composition

Recommendations Summary

COPD: Medical Nutrition Therapy 2008

Click here to see the explanation of recommendation ratings (Strong, Fair, Weak, Consensus, Insufficient Evidence) and labels (Imperative or Conditional). To see more detail on the evidence from which the following recommendations were drawn, use the hyperlinks in the Supporting Evidence Section below.

- Recommendation(s)
  COPD: Medical Nutrition Therapy

Registered dietitians should provide Medical Nutrition Therapy (MNT) for individuals with chronic obstructive pulmonary disease (COPD). MNT should focus on prevention and treatment of weight loss and other comorbidities.

Rating: Consensus

Imperative

- Risks/Harms of Implementing This Recommendation
  None.

- Conditions of Application
  The focus of Medical Nutrition Therapy in COPD changes during palliative and hospice care.

- Potential Costs Associated with Application
  None.
- Referral to specialist care generally has the purpose to confirm diagnosis, perform additional investigations, optimize and initiate treatment or exclude other illnesses. This is indicated for COPD patients with:
  - Disease onset under 40 years of age
  - Frequent exacerbations (two or more per year) despite adequate treatment
  - Rapidly progressive course of disease [decline in forced expiratory volume in one second (FEV1), progressive dyspnea, decreased exercise tolerance, unintentional weight loss]
  - Severe COPD (FEV1 under 50% predicted) despite optimal treatment
  - Need for oxygen therapy
  - Onset of comorbid illness (osteoporosis, heart failure, bronchiectasis, lung cancer)
- Possible indication for surgery.
- In advanced stages of COPD, both energy balance and protein balance are disturbed. Therefore, nutritional therapy may only be effective if combined with exercise or other anabolic stimuli. Nutritional intervention per se should focus more on prevention and early treatment of weight loss to preserve energy balance.

Recommendation Strength Rationale

Minority Opinions
Consensus reached.

Supporting Evidence
The recommendations were created from the evidence analysis on the following questions. To see detail of the evidence analysis, click the blue hyperlinks below (recommendations rated consensus will not have supporting evidence linked).

References

Chronic Obstructive Pulmonary Disease

Quick Links

Recommendations Summary
COPD: Assessment of Quality of Life 2008

Click here to see the explanation of recommendation ratings (Strong, Fair, Weak, Consensus, Insufficient Evidence) and labels (Imperative or Conditional). To see more detail on the evidence from which the following recommendations were drawn, use the hyperlinks in the Supporting Evidence Section below.

Recommendation(s)
COPD: Assessment of Quality of Life

Registered dietitians should assess the quality of life of individuals with COPD, especially as it relates to their ability to obtain, prepare and consume food to meet nutritional needs. Research indicates that individuals with COPD may have more impairment with activities of daily living and those who are malnourished (as defined by BMI) may also have lower lung function measurements, more dyspnea and lower nutritional intakes.

Rating: Fair

Imperative

- Risks/Harms of Implementing This Recommendation
  None.

- Conditions of Application
  None.

- Potential Costs Associated with Application
  None.

- Recommendation Narrative

Four studies were evaluated regarding the factors affecting body weight, dietary intake and quality of life for patients with COPD.

- Patients with COPD may have more impairment with activities of daily living (Monzo et al, 1998; Odencrants et al, 2005)
- In addition, patients with COPD who are malnourished (as defined by BMI) may have lower lung function measurements, more dyspnea and lower nutritional intakes (Cochrane and Afolabi, 2004; Katsura et al, 2005).

Recommendation Strength Rationale

Conclusion Statement was given Grade II.

Minority Opinions
Consensus reached.

Supporting Evidence
The recommendations were created from the evidence analysis on the following questions. To see detail of the evidence analysis, click the blue hyperlinks below (recommendations rated consensus will not have supporting evidence linked).

References
Recommendations Summary

COPD: Assessment of Weight Status and Body Composition 2008

Click here to see the explanation of recommendation ratings (Strong, Fair, Weak, Consensus, Insufficient Evidence) and labels (Imperative or Conditional). To see more detail on the evidence from which the following recommendations were drawn, use the hyperlinks in the Supporting Evidence Section below.

Recommendation(s)

COPD: Assessment of Weight Status

Registered dietitians should use BMI and weight change to assess weight status in individuals with COPD. Studies report that in individuals with COPD, the prevalence of lower BMI (under 20 kg/m²) may be as high as 30% and the risk of COPD-related death doubles with weight loss.

Rating: Fair

Imperative

COPD: Measurement of Body Composition

In individuals with stable COPD, registered dietitians should evaluate body composition. Studies report that even for those with BMI greater than 20 kg/m², body composition differs from healthy controls in that fat-free mass index and bone mineral density are lower in individuals with COPD.

Rating: Fair

Conditional

Risks/Harms of Implementing This Recommendation

None.

Conditions of Application

Body composition measurements apply to individuals with stable COPD.

Potential Costs Associated with Application

Cost of equipment, supplies and staff needs to be addressed in body composition measurement. Insurance coverage for body composition measurement may vary.

Recommendation Narrative

Eight studies regarding weight and body composition in people with COPD were reviewed:

- In people with COPD, the prevalence of malnutrition (as defined by a BMI less than 20 kg/m²) may be as high as 30% and the risk of COPD-related death doubles with weight loss (Prescott et al., 2002; Chailleux et al., 2003; Ergun et al., 2003; Cochrane and Afolabi, 2004)
- Even for the 70% with BMI greater than 20 kg/m², body composition differs from healthy controls in that fat-free mass index and bone mineral density are lower in people with COPD (Engelen et al., 1999; De Benedetto et al., 2000; Karakas et al., 2005; Vestbo et al., 2006)
- Further research is needed regarding the prognosis of people with COPD who have BMI greater than 20 kg/m².

Recommendation Strength Rationale

Conclusion statement was given Grade II.

Minority Opinions

Consensus reached.

Supporting Evidence

The recommendations were created from the evidence analysis on the following questions. To see detail of the evidence analysis, click the blue hyperlinks below (recommendations rated consensus will not have supporting evidence linked).

What is the relationship between weight loss and patients with COPD?

References


Quick Links

COPD: Assessment of Energy Needs 2008

Click here to see the explanation of recommendation ratings (Strong, Fair, Weak, Consensus, Insufficient Evidence) and labels (Imperative or Conditional). To see more detail on the evidence from which the following recommendations were drawn, use the hyperlinks in the Supporting Evidence Section below.

- **Recommendation(s)**

**COPD: Determination of Energy Needs**

Registered dietitians should assess energy needs of individuals with COPD, based on indirect calorimetry measurements, since resting energy expenditure (REE) based on measurement is more accurate than estimation using predictive equations. Studies report that the total daily energy needs of individuals with COPD are highly variable.

**Rating: Weak**

**COPD: Energy Needs in Stable COPD**

When using predictive equations to assess energy needs of individuals with stable COPD, registered dietitians should account for the presence of inflammation and level of physical activity. Studies report that the presence of inflammation increases resting energy expenditure and that the level of physical activity has varying effects on total daily energy needs.

**Rating: Weak**

**COPD: Energy Needs During Exacerbation**

When using predictive equations to assess energy needs of individuals with COPD during an exacerbation, registered dietitians should account for the presence of inflammation.

**Rating: Weak**

- **Risks/Harms of Implementing This Recommendation**
  - Anxiety may be caused by indirect calorimetry procedures employing a face mask or canopy
  - In some individuals, estimation of resting energy expenditure with predictive equations may lead to under- or over-feeding.

- **Conditions of Application**
  For further information regarding determination of resting energy expenditure, refer to Appendix. For more information on energy expenditure and the critically ill, refer to the Critical Illness and Energy Expenditure Algorithm.

- **Potential Costs Associated with Application**
  Cost of equipment, supplies and staff needs to be addressed in indirect calorimetry measurements. Insurance coverage for indirect calorimetry may vary.

- **Recommendation Narrative**

18 studies regarding energy needs in people with COPD were reviewed.

- The total daily energy needs of people with COPD are highly variable due to differences in resting energy expenditure and in levels of physical activity (Hugli et al, 1996; Baarends et al, 1997; Creutzberg et al, 1998; Carter et al, 2003; Slinte et al, 2003)
- In stable COPD and during an exacerbation, the presence of inflammation increases resting energy expenditure (Schols et al, 1996; Vermeeren et al, 1997; Nguyen et al, 1999; Schols et al, 1999; Creutzberg et al, 2000; Cohen et al, 2003; Calikoglu et al, 2004; Broekhuizen et al, 2006)
- Further research on the influence of thermic effect of food, breathing efficiency and medications on energy needs in people with COPD is needed (Mosier et al, 1996; Baarends et al, 1997; Burdel et al, 1997; Dore et al, 1997; Baarends et al, 1998).

- **Recommendation Strength Rationale**
  - Conclusion statement was given Grade III.

- **Minority Opinions**
  Consensus reached.

- **Supporting Evidence**
  The recommendations were created from the evidence analysis on the following questions. To see detail of the evidence analysis, click the blue hyperlinks below (recommendations rated consensus will not have supporting evidence linked).

  **What are the factors affecting energy needs in patients with COPD who are ambulatory/stable or during an exacerbation?**

- **References**

In people with COPD, what are the primary risk factors for the development of osteoporosis?

What is the relationship between steroids and bone mineral density in people with COPD?

The recommendations were created from the evidence analysis on the following questions. To see detail of the evidence analysis, click the blue hyperlinks below.

**Supporting Evidence**

- **Chronic Obstructive Pulmonary Disease**
- **Chronic Obstructive Pulmonary Disease (COPD) Guideline (2008)**

## Quick Links

**Recommendations Summary**

**COPD: Bone Density Screening 2008**

*Click here* to see the explanation of recommendation ratings (Strong, Fair, Weak, Consensus, Insufficient Evidence) and labels (Imperative or Conditional). To see more detail on the evidence from which the following recommendations were drawn, use the hyperlinks in the Supporting Evidence Section below.

1. **Recommendation(s)**
   
   **COPD: Bone Density Screening**
   
   Registered dietitians should recommend bone density screening for individuals with COPD. Research indicates that individuals with COPD are at increased risk for osteoporosis and vertebral fractures.

2. **Rating:** Fair
   
   **Imperative**
   
   - **Risks/Harms of Implementing This Recommendation**
     
     Bone density screening may be contraindicated in pregnancy.
   
   - **Conditions of Application**
     
     None.
   
   - **Potential Costs Associated with Application**
     
     Cost of equipment, supplies and staff needs to be addressed in bone density screening. Insurance coverage for screening may vary.

3. **Recommendation Narrative**

12 studies regarding the relationship between steroids and bone mineral density in people with COPD were reviewed.

- Four studies report significant associations of cumulative corticosteroid use (both oral and inhaled, over 1,000mg) with changes in biochemical bone markers, decreased bone mineral density and increased fracture risk (DuBois et al, 2002; Walsh et al, 2002; Melton et al, 2004; de Vries et al, 2005).
  - However, six studies based on inhaled corticosteroid use for at least one year report conflicting findings (Strijuijs and Mulder, 1997; Lung Health Study Group, 2000; Dinc et al, 2001; Johneck et al, 2002; Halpern et al, 2004; Scanlon et al, 2004).
- Two studies support a significant association between COPD and bone mineral density or fracture risk, independent of steroid use (McEvoy et al, 1998; Yeh et al, 2002).
  - Further research on the relationship among the type, dose and duration of corticosteroid use, confounding variables and bone mineral density is needed.

13 studies regarding the primary risk factors for the development of osteoporosis in people with COPD were reviewed.

- People with COPD are at increased risk for osteoporosis and vertebral fractures and the prevalence ranges from 25% to 60% (Szymanski et al, 2002; Papanicolaou et al, 2003; Sonino et al, 2005).
- Four studies support a positive correlation between low body weight or BMI with decreased bone mineral density in subjects with COPD (Nishimura et al, 1997; Incalzi et al, 2000; Katsura and Kida, 2002; Bolton et al, 2004).
- Additional risk factors reported include older age, smoking and corticosteroid use (Yeh et al, 2002; Melton et al, 2004; de Vries et al, 2005).
  - Emerging research reports associations between hypercapnia, vitamin D status and bone mineral density (Dimai et al, 2001; Karagad et al, 2003; Forli et al, 2004).
  - Further research is needed in these areas.

4. **Recommendation Strength Rationale**

Both Conclusion Statements were given Grade II.

5. **Minority Opinions**

Consensus reached.

6. **Supporting Evidence**

The recommendations were created from the evidence analysis on the following questions. To see detail of the evidence analysis, click the blue hyperlinks below (recommendations rated consensus will not have supporting evidence linked).

**What is the relationship between steroids and bone mineral density in people with COPD?**

In people with COPD, what are the primary risk factors for the development of osteoporosis?

**References**


Chronic Obstructive Pulmonary Disease

Recommendations Summary

COPD: Medical Food Supplements 2008

Click here to see the explanation of recommendation ratings (Strong, Fair, Weak, Consensus, Insufficient Evidence) and labels (Imperative or Conditional). To see more detail on the evidence from which the following recommendations were drawn, see the hyperlinks in the Supporting Evidence Section below.

Recommendation(s)

COPD: Medical Food Supplements for Inpatients

For inpatients with COPD who have low BMI (under 20kg/m²), unintentional weight loss, reduced oral intake or who are at nutritional risk, registered dietitians should initiate provision of medical food supplements. Studies report that medical food supplementation for seven to 12 days results in increased energy intake in the inpatient setting.

Rating: Fair

COPD: Medical Food Supplements for Outpatients

For outpatients with COPD who have low BMI (less than 20kg/m²), unintentional weight loss, reduced oral intake or who are at nutritional risk, registered dietitians should recommend consumption of medical food supplements. In the outpatient setting, studies report that medical food supplementation results in increased energy intake, with weight gain more likely when combined with exercise.

Rating: Fair

COPD: Macronutrient Composition of Medical Food Supplements

Registered dietitians should advise that the selection of medical food supplements for individuals with COPD should be influenced more by patient preference than the percentage of fat or carbohydrate. There is limited evidence to support consumption of a particular macronutrient composition of medical food supplementation.

Rating: Fair

COPD: Frequent Small Amounts of Medical Food Supplements

Registered dietitians should recommend frequent small amounts of medical food supplements for individuals with COPD. Studies report that frequent small amounts of medical food supplements are preferred to avoid post-prandial dyspnea and satiety and to improve compliance.

Rating: Fair

Risks/Harms of Implementing This Recommendation

None.

Quick Links

Supporting Evidence Section

Chronic Obstructive Pulmonary Disease (COPD) Guideline (2008)
The recommendations were created from the evidence analysis on the following questions. To see detail of the evidence analysis, click the blue hyperlinks below (recommendations rated consensus will not have supporting evidence linked).

### Conditions of Application

These recommendations apply to individuals with COPD who have low BMI (less than 20kg/m²), unintentional weight loss, reduced oral intake or who are at nutritional risk.

### Potential Costs Associated with Application

Medical food supplements may be costly.

### Recommendation Narrative

For the recommendation on COPD: Medical Food Supplements for Inpatients:

- In the inpatient setting, nutritional supplementation for seven to 12 days results in increased energy intake and weight maintenance, as nutritional needs may be higher during hospitalization (Forlì et al., 2001; Thorisdóttir and Gunnarsdóttir, 2002; Vermeeren et al., 2004).

For the recommendation on COPD: Medical Food Supplements for Outpatients:

- In the outpatient setting, nutritional supplementation results in increased energy intake, with weight gain more likely when combined with exercise (Schols et al., 1995; Akrabawi et al., 1996; Schols et al., 1998; Vermeeren et al., 2001; Cai et al., 2003; Creutzberg et al., 2003; Broekhuizen et al., 2005; Planas et al., 2005).

- Authors of a Cochrane review published in 2005, of 12 studies, concluded that nutritional supplementation for more than two weeks had no significant effect on anthropometric measures, lung function or exercise capacity in patients with stable COPD (Ferreira et al., 2005).

For the recommendation on COPD: Macronutrient Composition of Medical Food Supplements:

- Three studies report conflicting findings regarding the effect of macronutrient composition of supplementation on lung function (Akrabawi et al., 1996; Vermeeren et al., 2001; Cai et al., 2003).

- Further research on the effect of nutritional supplementation and macronutrient composition in people with COPD is needed.

For the recommendation on COPD: Frequent Small Amounts of Medical Food Supplements:

- ESPEN Recommendation 2.5: “Frequent small amounts of oral nutritional supplements (ONS) are preferred to avoid postprandial dyspnea and satiety and to improve compliance.” (Grade B).

### Recommendation Strength Rationale

- Conclusion statement was given Grade II
- ESPEN recommendation received Grade B.

### Minority Opinions

Consensus reached.

### Supporting Evidence

The recommendations were created from the evidence analysis on the following questions. To see detail of the evidence analysis, click the blue hyperlinks below (recommendations rated consensus will not have supporting evidence linked).

**What effect does nutritional supplementation have on patients with COPD?**

#### References

- References not graded in Academy of Nutrition and Dietetics Evidence Analysis Process

### Chronic Obstructive Pulmonary Disease

### Chronic Obstructive Pulmonary Disease (COPD) Guideline (2008)
Risks/Harms of Implementing This Recommendation

None.

Conditions of Application

This recommendation applies to people with COPD who have osteopenia or osteoporosis.

Potential Costs Associated with Application

None.

Recommendation Narrative


Synopsis of Major Recommendations to the Clinician:

- Advise on adequate amounts of calcium (at least 1,200mg per day, including supplements, if necessary) and vitamin D (800 IU to 1,000 IU per day of vitamin D3 for individuals at risk of insufficiency).
- Advise avoidance of tobacco smoking and excessive alcohol intake.
- Initiate therapy in those with BMD T-scores up to -2.5 at the femoral neck, total hip or spine by DEXA, after appropriate evaluation.

Recommendation Strength Rationale


Minority Opinions

Consensus reached.

Supporting Evidence

The recommendations were created from the evidence analysis on the following questions. To see detail of the evidence analysis, click the blue hyperlinks below (recommendations rated consensus will not have supporting evidence linked).

References


Recommendation(s)

COPD: Antioxidant Vitamins

Registered dietitians should encourage individuals with COPD to consume a diet that meets the Recommended Dietary Allowances (RDA) for vitamin A, vitamin C and vitamin E. Several studies report reduced serum or tissue levels of vitamin A, vitamin C and vitamin E in individuals with COPD, however adequately powered studies have not been conducted to evaluate the effects of intake above the RDA.

Rating: Weak

Imperative

Risks/Harms of Implementing This Recommendation

None.

Conditions of Application

Smokers may require an additional 35mg per day of vitamin C over that needed by non-smokers. Non-smokers regularly exposed to tobacco smoke are encouraged to ensure that they meet the RDA for vitamin C.

Individuals with COPD on anticoagulant therapy should be monitored when taking vitamin E supplements.

Potential Costs Associated with Application

None.

Recommendation Narrative

Eight studies regarding the relationship between antioxidants and COPD were reviewed.

- Six studies report reduced serum or tissue levels of vitamins A, C or E in people with COPD (Calikoglu et al, 2002; Couillard et al, 2002; Daga et al, 2003; Agacdiken et al, 2004; Tug et al, 2004; Gosker et al, 2005).
- Three studies regarding supplementation report insignificant effects. However, these studies were limited in scope, duration and power (Daga et al, 2003; Agacdiken et al, 2004; Cerda et al, 2006).

Further research on the relationship between antioxidants and COPD is needed.

Recommendation Strength Rationale

Conclusion statement was given Grade III.

Minority Opinions

Consensus reached.

Supporting Evidence

The recommendations were created from the evidence analysis on the following questions. To see detail of the evidence analysis, click the blue hyperlinks below (recommendations rated consensus will not have supporting evidence linked).

What relationship do antioxidants, such as vitamins A, C and E and flavonoids, have on pathogenesis and/or exacerbations in patients with COPD?
on the evidence from which the following recommendations were drawn, use the hyperlinks in the
Click here
COPD: Omega-3 Fatty Acids 2008
Recommendations Summary
Quick Links
http://www.andeal.org
© 2015 Academy of Nutrition and Dietetics (A.N.D.), Evidence Analysis Library. Printed on: 12/16/15 - from:

What effect does consumption of omega-3 fatty acids have on patients with COPD?
(recommendations rated consensus will not have supporting evidence linked).
The recommendations were created from the evidence analysis on the following questions. To see detail of the evidence analysis, click the blue hyperlinks below
Supporting Evidence
Imperative
Rating: Weak
Registered Dietitians should encourage individuals with COPD to consume a diet that meets the Adequate Intake (AI) for omega-3 fatty acids. Adequately powered studies have not been conducted to evaluate the effects of intake above the AI.

References

References not graded in Academy of Nutrition and Dietetics Evidence Analysis Process

Chronic Obstructive Pulmonary Disease

Quick Links

Recommendations Summary
COPD: Omega-3 Fatty Acids 2008

Click here to see the explanation of recommendation ratings (Strong, Fair, Weak, Consensus, Insufficient Evidence) and labels (Imperative or Conditional). To see more detail on the evidence from which the following recommendations were drawn, use the hyperlinks in the Supporting Evidence Section below.

Recommendation(s)
COPD: Omega-3 Fatty Acids

Registered Dietitians should encourage individuals with COPD to consume a diet that meets the Adequate Intake (AI) for omega-3 fatty acids. Adequately powered studies have not been conducted to evaluate the effects of intake above the AI.

Rating: Weak
Imperative

Risks/Harms of Implementing This Recommendation
None.

Conditions of Application
Individuals with COPD on anticoagulant therapy should be monitored when taking omega-3 fatty acid supplements.

Potential Costs Associated with Application
None.

Recommendation Narrative
Six studies regarding the consumption of omega-3 fatty acids and COPD were reviewed.

- One randomized trial reports improvements in subjects with COPD after consuming an omega-3 fatty acid-rich supplement (Matsuyama et al, 2005).
- Further research on the consumption of fatty acids and COPD is needed.

Recommendation Strength Rationale

Minority Opinions

Conclusion Statement was given Grade III

Consensus reached.

Supporting Evidence
The recommendations were created from the evidence analysis on the following questions. To see detail of the evidence analysis, click the blue hyperlinks below.

What effect does consumption of omega-3 fatty acids have on patients with COPD?

References

© 2015 Academy of Nutrition and Dietetics (A.N.D.), Evidence Analysis Library. Printed on: 12/16/15 - from:
http://www.andeal.org

References not graded in Academy of Nutrition and Dietetics Evidence Analysis Process


Chronic Obstructive Pulmonary Disease

Chronic Obstructive Pulmonary Disease (COPD) Guideline (2008)

Quick Links

Recommendations Summary

COPD: Milk Consumption and Mucus Production 2008

Click here to see the explanation of recommendation ratings (Strong, Fair, Weak, Consensus, Insufficient Evidence) and labels (Imperative or Conditional). To see more detail on the evidence from which the following recommendations were drawn, use the hyperlinks in the Supporting Evidence Section below.

- Recommendation(s)
  - COPD: Milk Consumption and Mucus Production
    Registered dietitians should advise individuals with COPD that the consumption of milk and milk products is unrelated to mucus production. Studies report no significant effect of milk and milk product consumption on mucus production or various lung function parameters, despite individual sensory perception.
    Rating: Weak
    Imperative
    - Risks/Harms of Implementing This Recommendation
      Limiting milk and milk product consumption can lead to low intakes of many nutrients, including calcium.
    - Conditions of Application
      None.
    - Potential Costs Associated with Application
      None.
    - Recommendation Narrative
      Authors of a narrative review published in 2005, of 49 references, concluded that while some people may perceive some aspects of mucus production after consuming milk and milk products (either cow’s or soy), there is no significant effect of milk and milk product consumption on mucus production or various lung function parameters (Wuthrich et al, 2005).
      Further research on milk and milk product consumption on mucus production in people with COPD is needed.
    - Recommendation Strength Rationale
      Conclusion statement was given Grade III.
    - Minority Opinions
      Consensus reached.

- Supporting Evidence
  The recommendations were created from the evidence analysis on the following questions. To see detail of the evidence analysis, click the blue hyperlinks below (recommendations rated consensus will not have supporting evidence linked).
  What effect does the consumption of milk and milk products have on mucus production for patients with COPD?
  - References
    References not graded in Academy of Nutrition and Dietetics Evidence Analysis Process

Chronic Obstructive Pulmonary Disease

Chronic Obstructive Pulmonary Disease (COPD) Guideline (2008)

Recommendations Summary

COPD: Integrated Care 2008

Click here to see the explanation of recommendation ratings (Strong, Fair, Weak, Consensus, Insufficient Evidence) and labels (Imperative or Conditional). To see more detail on the evidence from which the following recommendations were drawn, use the hyperlinks in the Supporting Evidence Section below.

- Recommendation(s)
  - COPD: Integrated Care
    Registered dietitians should implement Medical Nutrition Therapy (MNT) and coordinate nutrition care with a team of clinical professionals. An interdisciplinary team approach is optimal to integrate MNT, for individuals with COPD, into overall disease management and involves redesigning standard medical care to integrate rehabilitative elements into a system of patient self-management and regular exercise.
    Rating: Consensus
    Imperative
    - Risks/Harms of Implementing This Recommendation
      None.
    - Conditions of Application
      None.
Potential Costs Associated with Application

None.

Recommendation Narrative


- Integrated care for chronic obstructive pulmonary disease (COPD) involves the patient and a team of clinical professionals cooperating with secondary care and rehabilitation services
- Optimal disease management involves redesigning standard medical care to integrate rehabilitative elements into a system of patient self-management and regular exercise
- COPD is often accompanied by deconditioning, comorbid illnesses and symptoms of depression. Even in patients with mild disease, health status can be substantially compromised.

Recommendation Strength Rationale


Minority Opinions

Consensus reached.

Supporting Evidence

The recommendations were created from the evidence analysis on the following questions. To see detail of the evidence analysis, click the blue hyperlinks below (recommendations rated consensus will not have supporting evidence linked).

References


Chronic Obstructive Pulmonary Disease

Chronic Obstructive Pulmonary Disease (COPD) Guideline (2008)

Quick Links

Recommendations Summary

COPD: Oxygen Therapy 2008

Click here to see the explanation of recommendation ratings (Strong, Fair, Weak, Consensus, Insufficient Evidence) and labels (Imperative or Conditional). To see more detail on the evidence from which the following recommendations were drawn, use the hyperlinks in the Supporting Evidence Section below.

Recommendation(s)

COPD: Oxygen Therapy

Registered dietitians should reinforce the use of supplemental oxygen for individuals with COPD in whom it is prescribed, especially as it relates to their ability to obtain, prepare and consume food to meet nutritional needs. Studies report that supplemental oxygen improves the ability of individuals with COPD to perform activities of daily living and exercise.

Rating: Weak

Conditional

- Risks/Harms of Implementing This Recommendation

There is a risk of fire or explosion with the use of supplemental oxygen.

- Conditions of Application

This recommendation applies to individuals with COPD for whom oxygen therapy has been prescribed.

- Potential Costs Associated with Application

Cost of equipment, supplies and staff needs to be addressed in the use of supplemental oxygen. Insurance coverage for supplemental oxygen may vary.

- Recommendation Narrative

- Authors of a Cochrane review published in 2005, of 31 studies concluded that ambulatory oxygen, defined as the use of supplemental oxygen during exercise and the activities of daily living, improves exercise performance in people with moderate to severe COPD (Bradley and O'Neill, 2005)
- Research regarding the effect of supplemental oxygen on food intake and nutritional status is needed.

- Recommendation Strength Rationale

- Conclusion statement was given Grade III

- Minority Opinions

Consensus reached.

Supporting Evidence

The recommendations were created from the evidence analysis on the following questions. To see detail of the evidence analysis, click the blue hyperlinks below (recommendations rated consensus will not have supporting evidence linked).

What is the evidence for use of supplemental oxygen in people with COPD?

- References


- References not graded in Academy of Nutrition and Dietetics Evidence Analysis Process

Recommendations Summary
COPD: Pharmacotherapy 2008

Click here to see the explanation of recommendation ratings (Strong, Fair, Weak, Consensus, Insufficient Evidence) and labels (Imperative or Conditional). To see more detail on the evidence from which the following recommendations were drawn, use the hyperlinks in the Supporting Evidence Section below.

- Recommendation(s)
  COPD: Collaboration on Pharmacotherapy
  Registered dietitians should collaborate with other members of the health-care team regarding the use of pharmacotherapy for individuals with COPD, including drug effectiveness and potential nutrition-related side effects. The change in lung function after treatment with any drug does not help in predicting other clinically-related outcomes.

Rating: Consensus
  Imperative
- Risks/Harms of Implementing This Recommendation
  None.
- Conditions of Application
  None.
- Potential Costs Associated with Application
  None.
- Recommendation Narrative
  - The medications for chronic obstructive pulmonary disease (COPD) currently available can reduce or abolish symptoms, increase exercise capacity, reduce the number and severity of exacerbations and improve health status.
  - At present, no treatment is shown to modify the rate of decline in lung function
  - The change in lung function after brief treatment with any drug does not help in predicting other clinically-related outcomes
  - Combining different agents produces a greater change in spirometry and symptoms than single agents alone.

Rating Strength Rationale

Minority Opinions
Consensus reached.

Supporting Evidence
The recommendations were created from the evidence analysis on the following questions. To see detail of the evidence analysis, click the blue hyperlinks below (recommendations rated consensus will not have supporting evidence linked).

- References

Quick Links

Recommendations Summary
COPD: Monitor and Evaluate Quality of Life 2008

Click here to see the explanation of recommendation ratings (Strong, Fair, Weak, Consensus, Insufficient Evidence) and labels (Imperative or Conditional). To see more detail on the evidence from which the following recommendations were drawn, use the hyperlinks in the Supporting Evidence Section below.

- Recommendation(s)
  COPD: Monitor and Evaluate Quality of Life
  Registered dietitians should monitor and evaluate the quality of life of individuals with COPD, especially as it relates to their ability to obtain, prepare and consume food to meet nutritional needs. Research indicates that individuals with COPD may have more impairment of activities with daily living and those with lower BMI may also have lower lung function measurements, more dyspnea and lower nutritional intakes.

Rating: Fair
  Imperative
- Risks/Harms of Implementing This Recommendation
  None.
- Conditions of Application
  None.
- Potential Costs Associated with Application
  None.
- Recommendation Narrative
  Four studies were evaluated regarding the factors affecting body weight, dietary intake and quality of life for patients with COPD.

- Patients with COPD may have more impairment with activities of daily living (Monzo et al, 1998; Odencrants et al, 2005)
- In addition, patients with COPD who are malnourished (as defined by BMI) may have lower lung function measurements, more dyspnea and lower nutritional intakes (Cochrane and Afolabi, 2004; Katsura et al, 2005).

**Recommendation Strength Rationale**

- Conclusion statement was given Grade II.

**Minority Opinions**

Consensus reached.

**Supporting Evidence**

The recommendations were created from the evidence analysis on the following questions. To see detail of the evidence analysis, click the blue hyperlinks below (recommendations rated consensus will not have supporting evidence linked).

**What are the factors affecting body weight, dietary intake and quality of life for patients with COPD?**

**References**


**Chronic Obstructive Pulmonary Disease**

**Chronic Obstructive Pulmonary Disease (COPD) Guideline (2008)**

**Quick Links**

**Recommendations Summary**

**COPD: Monitor and Evaluate Weight Status and Body Composition 2008**

*Click here* to see the explanation of recommendation ratings (Strong, Fair, Weak, Consensus, Insufficient Evidence) and labels (Imperative or Conditional). To see more detail on the evidence from which the following recommendations were drawn, use the hyperlinks in the Supporting Evidence Section below.

**Recommendation(s)**

**COPD: Monitor and Evaluate Weight Status**

Registered Dietitians should use BMI and weight change to monitor and evaluate weight status in individuals with COPD. Studies report that in individuals with COPD, the prevalence of lower BMI (<20 kg/m²) may be as high as 30%, and the risk of COPD-related death doubles with weight loss.

**Rating:** Fair

**Imperative**

**COPD: Monitor and Evaluate Body Composition**

In individuals with stable COPD, Registered Dietitians should monitor and evaluate body composition. Studies report that even for those with BMI greater than 20 kg/m², body composition differs from healthy controls in that fat free mass index and bone mineral density are lower in individuals with COPD.

**Rating:** Fair

**Conditional**

- **Risks/Harms of Implementing This Recommendation**
  
  None.

- **Conditions of Application**
  
  Body composition measurements apply to individuals with stable COPD.

- **Potential Costs Associated with Application**
  
  Cost of equipment, supplies and staff needs to be addressed in body composition measurement. Insurance coverage for body composition measurement may vary.

- **Recommendation Narrative**
  
  Eight studies regarding weight and body composition in people with COPD were reviewed.
  
  - In people with COPD, the prevalence of malnutrition (as defined by a BMI less than 20 kg/m²) may be as high as 30%, and the risk of COPD-related death doubles with weight loss (Prescott et al, 2002; Chailleux et al, 2003; Engun et al, 2003; Cochrane and Afolabi, 2004).
  
  - Even for the 70% with BMI greater than 20 kg/m², body composition differs from healthy controls in that fat free mass index and bone mineral density are lower in people with COPD (Engellin et al, 1999; De Benedetto et al, 2000; Karakas et al, 2002; Vestbo et al, 2006).
  
  - Further research is needed regarding the prognosis of people with COPD who have BMI greater than 20 kg/m².

**Recommendation Strength Rationale**

- Conclusion Statement was given Grade II

**Minority Opinions**

Consensus reached.

**Supporting Evidence**

The recommendations were created from the evidence analysis on the following questions. To see detail of the evidence analysis, click the blue hyperlinks below (recommendations rated consensus will not have supporting evidence linked).

**What is the relationship between weight loss and patients with COPD?**

**References**


