

Living Well with COPD™

Chronic Obstructive Pulmonary Disease

A plan of action for life

Learning guide for patients and their families

Integrating a healthy diet into your life

- The link between COPD and what you eat
- Maintaining a healthy weight
- Healthy and balanced eating starts with a healthy plate
- Suggestions for healthy eating when having COPD related problems
- Your plan for integrating new eating habits

This guide belongs to:

Nutritionist:

Tel.:

Health professional:

Tel.:

Institution:



The skills you need to manage your COPD

Chronic Obstructive Pulmonary Disease, or COPD, is a disease that can affect every part of your life. The more the disease progresses, the impact can become considerable on your daily activities. The exacerbations of the disease, or periods of symptoms aggravation, are the main cause of hospitalization in people with COPD and can also affect your quality of life. Fortunately, there is a lot that you can do to overcome and prevent these limitations, and improve your well-being. This is why we have created this module on COPD self-management.

How can this program help me with self-management of the disease?

This module is part of the "Living well with COPD" program. This is an educational program in which you learn skills to manage your disease and adopt healthy new lifestyle behaviours. The "Living well with COPD" program has been tested as part of a research project and the results have been very encouraging. Patients who used this program in collaboration with their health professional, "case manager" or resource person and physician had fewer exacerbations needing hospitalization or emergency room visits. Their quality of life also improved, enabling them to do more of the activities they enjoyed, and better live with their disease.

National and international guidelines agree that patient education and self-management are valuable for people with COPD. The self-management program "Living well with COPD", that you can adapt to your own situation, has been created by medical experts in collaboration with COPD patients.

This module is your guide. Use it to write down your questions or concerns. Share it with people close to you so that they can understand what you are going through. Discuss whatever thoughts and feelings you have with your case manager, professionals in your healthcare team and your physician.

Best of luck in your program!



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Welcome to the module “Integrating a healthy diet into your life”

A healthy and balanced nutrition is essential for everyone, in particular those who have a chronic disease such as COPD.

Perhaps you have already acquired healthy eating habits: it is important to maintain them. This module will help you identify ways of improving your eating habits and of establishing a plan to integrate new ones in the short term and to maintain them in the long term.

Healthy eating starts with enjoyment! By maintaining your new habits, you will have a better chance to satisfy your physical needs and to improve your quality of life.

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Healthy and balanced nutrition

In order to breathe, your body needs a vast amount of energy and fuel. Eating may be compared to filling up your car's gas tank.

The quality of the fuel is very important.

According to you, why are healthy and balanced meals important?

Goals:

- To ensure proper intake of essential nutrients to meet the needs of your body.
- To maintain a healthy weight by eating a balanced diet.

Benefits:

1. Conserves energy
2. Improves quality of life
3. Improves physical capacity
4. Prevents infections



The link between COPD and your diet

COPD is a chronic disease that can have consequences on your everyday life. It is often associated with the following symptoms:

- Breathlessness
- Fatigue
- Loss of appetite
- Sensation of fullness (early satiety)
- Digestive problems (for example, abdominal bloating or constipation)
- Episodes of aggravation of your respiratory symptoms (exacerbations)

In your case, are there symptoms that are causing you problems?

These various symptoms and situations can adversely affect you when comes time to feed yourself, to prepare meals or to shop for groceries. They can contribute to bad eating habits and eventually to deficient nutrition. When your illness worsens, you can lose weight and, more importantly, muscles (muscle mass), which is undesirable.

A healthy diet is one way to break this vicious circle. It is very important to remain active and to follow your treatment plan.

Your diet can help you improve your health.

In the following pages you will find information and tips to better control these inconveniences.

Did you know that maintaining your muscle mass has a positive impact on COPD control?

Loosing muscle mass in your arms and legs means that you will be more tired and that it will be more difficult for you to do your chores.

Furthermore, if your respiratory muscles are touched (those that allow air in and out of your lungs), you will have a harder time breathing in and out.

Following a regular exercise program will help you maintain your muscle mass. Your health professional can help you develop a plan suited to your needs.

You can also refer to the module **"Integrating an exercise program into your life"** from the series "Living well with COPD".

What kind of exercise do you do? How often?



A healthy weight

Do you know how much you weigh? Why is it important to keep an eye your weight?

Have you gained or lost any weight over the last 6 months? Was this change voluntary?

A body weight that is too low or a significant weight loss can be associated to a lower respiratory function and thus affect your physical capacity and your endurance, as well as increase your risk of infection. A nutritionist can guide you to increase sources of energy and protein in your diet.

Excess weight requires additional work from your heart and lungs. This too can increase your breathlessness and risk of other illnesses such as hypertension, diabetes and cardiovascular disease. A balanced diet suited to your needs can help you lose weight gradually. Be aware that weight loss must be gradual to maintain your general health and your muscle mass.

A healthy weight

It is important to **keep an eye on your weight** and to keep your health professional informed of weight variations, especially when they are not planned.

Reaching and maintaining a healthy weight allows you to conserve energy, improve your quality of life and prevent infections.

Whether you would like to lose or gain weight, **do it under the supervision of a nutritionist**. This professional is the best person to help you build a healthy and balanced diet.

Healthy and balanced diet

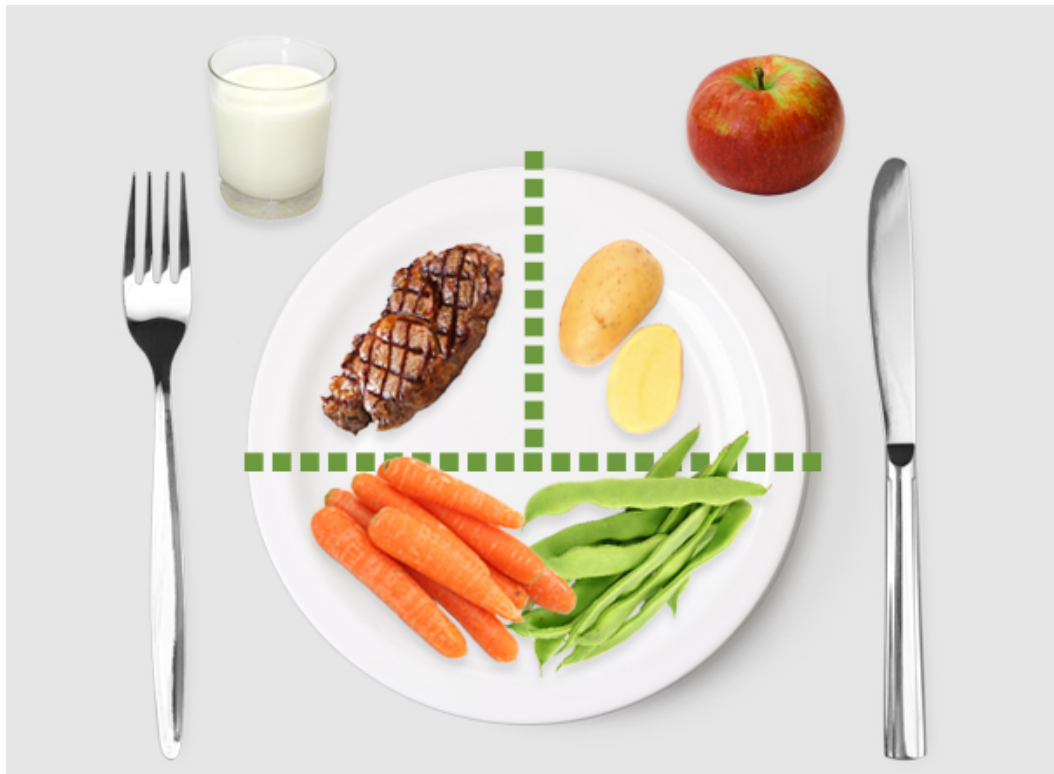
The quality of the food you choose is vital to maintain good health. The same goes for the quantity of food you eat, which often diminishes as the disease progresses.

You need to focus on quantity and quality.

Using the **healthy plate** to build your menu, you will always be on target for a healthy and balanced diet.



The healthy plate¹



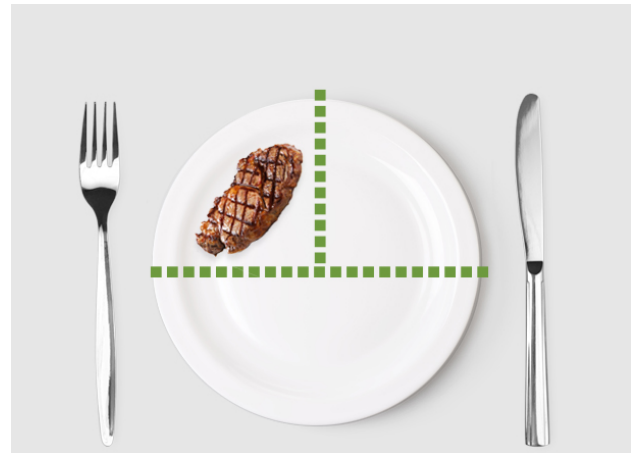
Ideally, make sure that:

- **1/2** your plate is filled with **vegetables**
- **1/4** of your plate contains **meat and substitutes**
- **1/4** of your plate contains **grain products and/or starch**
- You complete your meal with a **dairy product or a substitute** and/or a **fruit, if you are still hungry.**

The healthy plate: meat and substitutes

Start building your plate:

- 1/4 of your plate should contain meat and substitutes, which are a source of protein, fat and iron.

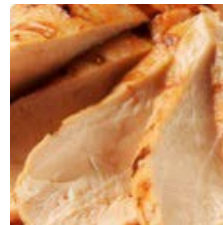


Role of proteins

- Maintain your muscle mass (keep your muscles strong, maintain your autonomy and your lung capacity)
- Prevent infections
- Keep you feeling full until the next meal

Sources of meat and substitutes

- Beef, chicken, fish, eggs, tofu, legumes, nuts and grains, peanut butter



Remember

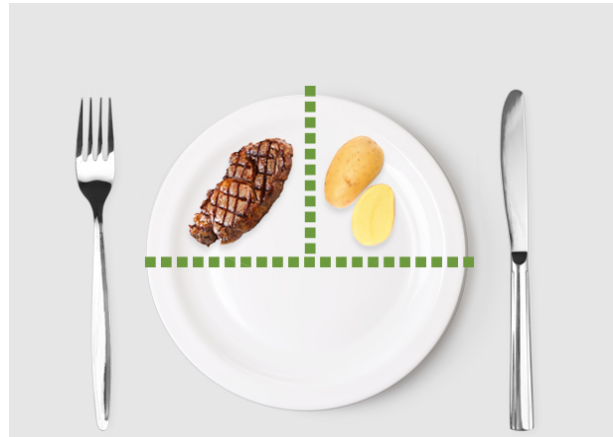
- Milk and cheese are good sources of protein that do not require preparation
- Meat and substitutes (proteins) should be part of every meal, even breakfast.



The healthy plate: grain products and starch

Continue building your plate:

- **1/4** of your plate should contain **grain products and starch**.



Role of grain products and starch

- Important source of dietary fiber (helps intestinal regularity)
- Body's main source of energy

Sources of grain products and starch

- Cereals (oats, wheat, barley, etc.), rice, pasta, potatoes, bread, crackers

Remember

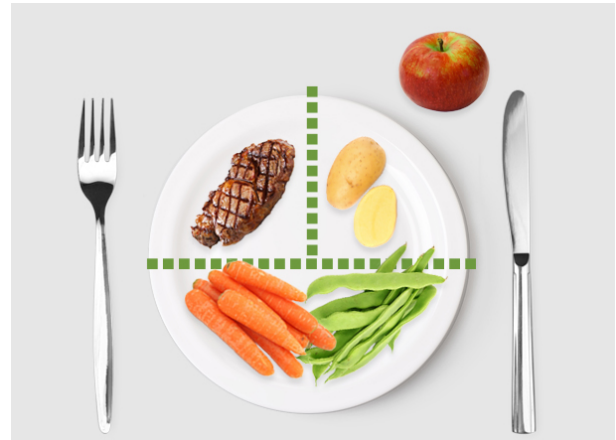
- Choose whole grain products that will help intestinal regularity because of their dietary fiber content



The healthy plate: fruits and vegetables

Continue building your plate:

- 1/2 your plate should be filled with **vegetables**
- you may complete your meal by adding a **fruit**



Role of fruits and vegetables

- Source of dietary fiber, antioxidants, vitamins and minerals.

Remember

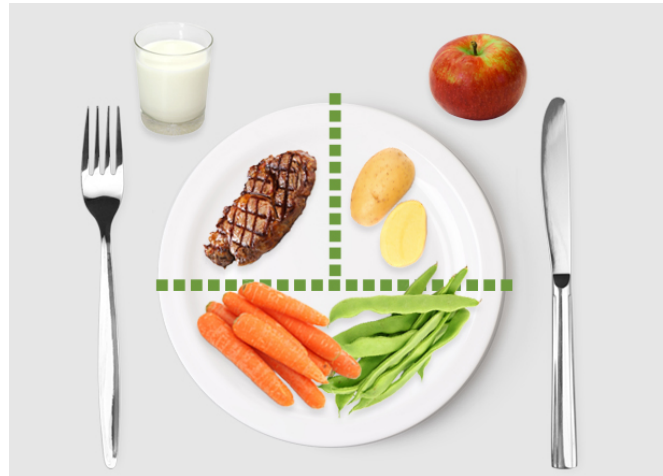
- Aim for a variety of colours, flavours and textures
- It is recommended to eat at least one dark green vegetable and one orange vegetable (or fruit) per day
- They can be eaten fresh, frozen, pureed, in a soup, salad, raw, etc.



The healthy plate: dairy products and substitutes

Complete your plate:

- by adding a **dairy product or substitute**



Role of dairy products and substitutes

- Source of protein, fat, calcium and vitamin D



Role of calcium and vitamin D

- Building and maintaining healthy bones

Source of dairy products and substitutes

- Yogurt, milk, enriched soy milk, cheese



Remember

- Aim for 2-4 portions per day: do not limit yourself to meals, think of having them as snacks.

Nutritious snacks

When necessary, snacks can be perfect to fill your energy needs, complete your meal or when you have a little craving in between meals.

Examples of nutritious snacks:

- Yogurt
- Cheese
- Nuts
- Fruits with yogurt, cheese or nuts
- Raw vegetables with cheese
- Whole grain crackers with peanut butter, humus, tofu spread or cheese
- Bowl of cereal with milk
- Nutritional supplement
- Milk
- Soy milk



To determine whether a snack is necessary or not, speak to your nutritionist. She can help you adapt your diet and suggest snacks that are appropriate to your needs.

What about hydration?

Hydration is also a factor you should not neglect. According to the Canadian Lung Association, it is important to drink a lot of liquids (water, juice, herbal tea) to thin out the mucus and eliminate it more easily. ²

Good hydration will also reduce risks of constipation.

How many glasses of liquid do you drink every day?

We recommend 6 to 8 glasses of liquid per day, *if you do not have medical restrictions*. Make a habit of bringing along a bottle of water and of drinking regularly.



Improvements (if applicable):

How do I know if I eat well?

Use a simple and practical tool such as the self-evaluation of your meal according to the healthy plate model.

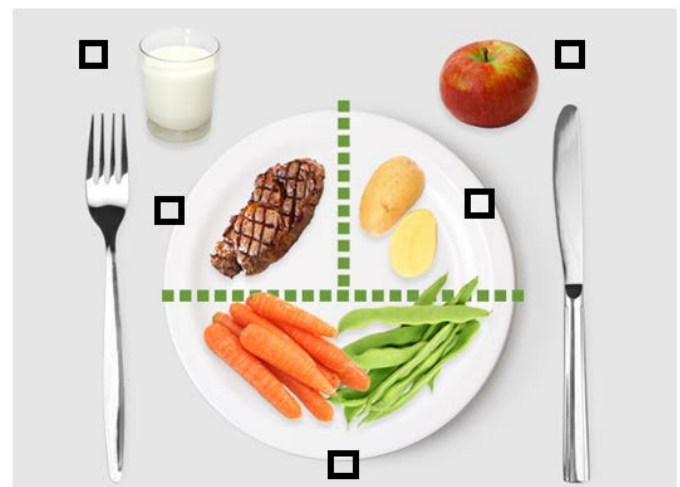
For each meal and snack, write all the foods you have eaten over the last day. Then, checkmark sections of the healthy plate corresponding to your meal.

If you did not mark all the sections, write possible improvements so that your meals can mimic the healthy plate.

Checkmark sections of the healthy plate corresponding to this example.

Example of a dinner

- Steak
- One potato
- One piece of cake



Can you think of any improvements? Which ones?

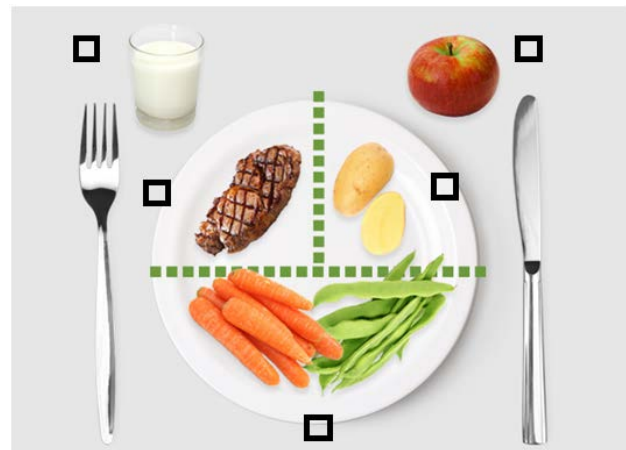
Do you think that this plate could be improved? You are right! Missing sections are vegetables, fruits and dairy products. The piece of cake does not fit in the basic healthy plate but could be added on occasion.

All you have to do to improve this meal is to add vegetables and to replace the cake with a fruit or yogurt.

Your healthy plate: your turn to choose!

What are you eating?
Breakfast
Morning snack

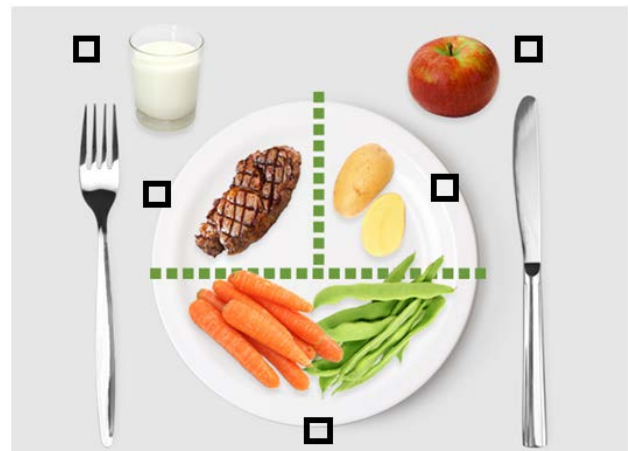
Improvements (if applicable)



Your healthy plate: your turn to choose!

What are you eating?
Lunch
Afternoon snack

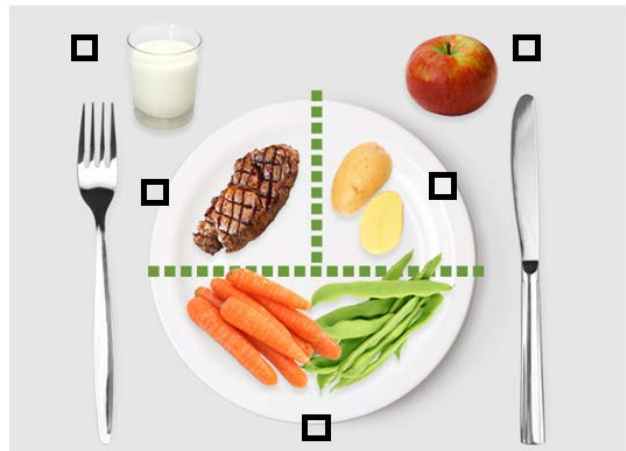
Improvements (if applicable)



Your healthy plate: your turn to choose!

What are you eating?
Dinner
Evening snack

Improvements (if applicable)



What keeps you from eating well?

1. Did you lose weight without wanting to? Do you think you should lose or gain weight?

2. Do you have any difficulties to shop for food or prepare your meals? Please explain.

3. Are you having difficulties that keep you from eating well (breathlessness, abdominal bloating, digestion, etc.)? Please explain.

What keeps you from eating well?

Within the following examples, identify those corresponding to your current situation. Try to apply the proposed recommendations to minimize the negative impact.

Check if this problem corresponds to your situation	Select recommendations that may be useful
<input type="checkbox"/> Difficulties in preparing meals	<ul style="list-style-type: none"> ○ Plan for meal preparation in large quantities and freeze leftovers ○ Buying prepared or frozen meals may be an option ○ Enquire if you could have access to "Meals on wheels" ○ Rest and take your bronchodilator before preparing meals ○ _____ ○ _____
<input type="checkbox"/> Difficulties in grocery shopping	<ul style="list-style-type: none"> ○ See if your grocery store offers delivery services ○ If you are having financial issues, do not hesitate to speak to your health care team. They can help you find solutions (community kitchen, coupons...) ○ _____ ○ _____

What keeps you from eating well?

Check if this problem corresponds to your situation	Select recommendations that may be useful
<input type="checkbox"/> Breathlessness	<ul style="list-style-type: none"> ○ Rest before meals ○ Take your bronchodilator before a meal ○ Eat more slowly and divide your portions in several small meals ○ Eat soft foods to facilitate chewing and reduce fatigue ○ _____ ○ _____
<input type="checkbox"/> Early satiety (feeling full after a few bites) and anorexia (loss or important decline in appetite)	<ul style="list-style-type: none"> ○ Eat foods that are energy-rich (ex. : whole milk 3.25%, cream soups, dish au gratin, nuts, nutritional supplements) ○ Reduce the amount of liquid ingested with meals. Drink 30-60 minutes before or after your meal to leave room for high energy foods ○ Take 5-6 small meals instead of 3 large ones ○ Eat food that you love ○ If your food has an aftertaste, try to eat it cold. Like this, the aftertaste will be less pronounced ○ _____ ○ _____

What keeps you from eating well?

Check if this problem corresponds to your situation	Select recommendations that may be useful
<input type="checkbox"/> Bloating (sensation of distention due to gas)	<ul style="list-style-type: none"> ○ Eat slowly avoiding to swallow air ○ Do not use a straw to drink ○ Avoid chewing gum and sodas ○ Avoid foods that cause gas (depending on your tolerance) such as: cabbage, cauliflower, broccoli, onions, melon... ○ Take your bronchodilator before a meal ○ Verify the presence of any intolerance (lactose, gluten) ○ _____ ○ _____
<input type="checkbox"/> Constipation	<ul style="list-style-type: none"> ○ Gradually increase your intake of fiber, such as whole grains, legumes, fruits (e.g. prunes), vegetables, etc. ○ If you eat little, you may opt for fiber supplements. Talk to your pharmacist ○ Drink enough liquid. Target 6-8 glasses of liquid per day if you do not have any medical restrictions ○ Take your meals at regular hours to improve your intestinal regularity ○ Remain active ○ _____ ○ _____

Note that if any of these problems becomes persistent or if you are experiencing unwanted weight loss, it is important to be referred to a nutritionist for a complete nutritional evaluation. She will be your best ally to find solutions!

Dietary supplements

Problems discussed in the preceding section may lead to a decline in dietary intake, in appetite and even weight loss.

Do you sometimes eat less than half your meal or skip a meal all together because of lack of appetite?

In this instance, a possible solution would be to take **dietary supplements**. They are available in liquid form, bars or puddings. Commercial formulas, concentrated in calories and protein, **could help** meet your needs. These supplements are sold over the counter at pharmacies and grocery stores. You may also make your own at home.

Examples:

- **Commercial dietary supplements:** choose one with at least 350 calories and 13 g of proteins.
- **Homemade dietary supplements:** see recipes on the following page.

Usually, two portions of dietary supplements may be necessary to replace one meal. If you are able to eat a little, like half your normal portion, then one portion of dietary supplements should be enough to meet your needs.

Speak to your nutritionist to adequately adjust your needs in energy and protein.

Recipe for homemade dietary supplements³

Energizing milk shake (2 portions)

Ingredients :

- 1 cup (250ml) whole milk (3.25%)
- $\frac{1}{4}$ cup (60ml) powdered milk
- $\frac{1}{3}$ cup (90ml) ice cream (your choice of flavour)
- $\frac{1}{3}$ cup (90ml) fresh or frozen fruits of your choice
- 1 Tbsp. (15ml) honey, sugar or maple syrup

Use a blender to mix all ingredients well.

Nutritional value per portion: 260 calories, 12 g protein.

« Super milk shake » (2 portions)

Ingredients :

- 1 cup (250ml) whole milk (3.25%)
- $\frac{1}{4}$ cup (60ml) powdered milk
- $\frac{1}{2}$ cup (125ml) ice cream
- $\frac{1}{4}$ cup (60ml) pasteurized liquid eggs
- 2 Tbsp. (30ml) vegetable oil
- $\frac{1}{4}$ cup (60ml) wheat germ

Mix all ingredients in a blender until homogenous.

Nutritional value per portion: 410 calories, 19 g protein.

Questions and Answers

Q: *Is it true that a person living with COPD has higher needs in energy?*

A: Yes. At rest your body needs 17% to 25% more energy because of COPD.

Q: *Why are energy needs higher in the presence of COPD?*

A: When a person has COPD, their body works harder to breathe. This requires more energy as is the case during physical exercise. Inflammation will also increase energy needs.

Q: *What is a chronic inflammation?*

A: It is a defense mechanism of the body, a response from the immune system. Inflammation becomes 'chronic' when the immune system constantly produces various substances that are stressful to our body and affect its normal functioning. Age, smoking, infections, COPD exacerbations are all factors that increase inflammation.

Q: *Can certain foods reduce inflammation?*

A: Foods rich in Omega-3, such as fatty fish (ex. salmon, trout, sardines...) can help reduce inflammation.

Questions and Answers

Q: On occasion, I will choke and cough while eating and have a hoarse voice. Should I worry?

A: It can occasionally happen that people with COPD have a hard time swallowing, but this is temporary. However, if the situation persists we may be dealing with dysphagia. Discuss this with your nutritionist or your physician who can evaluate your condition and give you tricks to prevent respiratory infections.

Q: Should we adjust our nutrition during corticosteroid therapy?

A: If you are taking cortisone in pill form (ex.: prednisone) on more than 3 occasions during the year or for more than 3 months, you should make some adjustments such as limiting salt at the table and salty foods, avoiding concentrated sugars and eating a minimum of 3 to 4 portions of dairy products per day. In addition, you should discuss the relevance of calcium and vitamin D supplements with your nutritionist.

Q: I have lost weight without trying to... What should I do?

A: Usually, people with emphysema or pulmonary fibrosis lose a lot of weight: they are less hungry and feel full more quickly. In these cases, it could be helpful to increase dietary fat which will provide a lot of energy. Here are some examples: fat (cream, butter, oil), whole dairy products (milk, cheese), meat, eggs, fatty fish (e.g. salmon), nuts (almonds, pistachios, hazelnuts).

Questions and Answers

Q: *Can certain foods relieve COPD?*

A: Unfortunately, there are no miracle foods. However, you can choose certain foods rich in fatty polyunsaturated acids from the Omega-3 series. They are your allies because of their anti-inflammatory properties. You can find them in fatty fish (tuna, mackerel, herring, salmon, trout, halibut), mussels and northern shrimps.

Give yourself a chance to try new recipes!

Dietary Myths

Cheese causes constipation

False.

No food can be held responsible for constipation. It is the sum of your lifestyle that can influence your intestinal regularity. Most often the real causes of constipation are linked to a low consumption of dietary fiber, insufficient hydration and lack of physical activity.⁴ Constipation may also be a secondary effect of your medication.

Milk increases production of chest secretions

False.

It is true that milk tends to coat the mouth or throat, leaving an unpleasant sensation. This is due to the creamy texture of milk and possibly to saliva production as opposed to mucus production. This sensation can be diminished by drinking very cold milk. Nothing has proven that drinking milk increases chest secretions.⁵

Integrating a healthy and balanced nutrition

For most people, changing their eating habits is a major challenge. The way we feed ourselves encompasses cultural, personal and even emotional aspects.

You may have already developed healthy eating habits. However, for certain people, strategies discussed in this module can represent an important change. You may have fears and preoccupations. This is completely normal.

The following suggestions may help you integrate new eating habits:

- **Go gradually:**
 - Avoid trying to change everything at once. It is better to introduce one food change at a time. You may decide to take small steps. For example, if you are drinking a soda at each meal, you may choose as an objective to replace it by water and a fresh fruit. Make gradual changes, targeting one meal per day, until you are only drinking one soda per week.
 - In the beginning, your old habits may want to rush back, but if you take time to taste your food, you may discover and appreciate new meals. This type of adjustment may take a few weeks.

Integrating healthy and balanced nutrition

- **Make things easier:**

- Make sure you always have on hand varied and nutritious choices (prepared or frozen meals that are reduced in sodium and fat but rich in protein, vegetables, fruits, cheese, etc.).

- **Stay motivated:**

- Find ways to remember your decision to eat well. For example: eating in a small red plate means that you must eat slowly.
- Be informed: you can find multiple books and learning materials on balanced nutrition. You can borrow them from your local library or even read from internet sites specialized in nutrition.
- Get connected! You can find recipes and videos on food preparation on the internet.
- Who wants to join you? Why not find partners who would like to improve their eating habits? Ask your friends and family or groups of patients.
- Keep in mind that your decision to change is a personal one. You are off to a good start to keep motivated. Your well-being will soon improve.

If you are still experiencing difficulties related to changing your eating habits, talk to your nutritionist. She can help you build a plan adapted to your needs.

My plan for integrating a healthy and balanced nutrition: I act now!

Goals to improve your eating habits must be tackled one at a time. You should have acquired one habit before going on to the next goal.

Set realistic goals, give yourself time and make sure you have all the help you need (parents, friends, professionals, support groups, books).¹

My goals	Acquired habits	Plan to integrate this habit		
		1 month	3 months	6 months
I eat 3 meals per day				
I ask for help in meal preparation and grocery shopping				
I make sure to eat protein at each meal (meat/substitute, dairy products)				
I include vegetables in my lunch and dinner				
I include fruits in my breakfast and snacks				
I take at least 2-4 dairy products and substitutes per day				
I choose whole grain cereals and breads				
I favor milk and fruit based deserts				
I drink 6-8 glasses of liquid per day				
Others : _____ _____ _____				

Let's see if you are ready to integrate a healthy and balanced nutrition into your life

On a scale of 1 to 10, circle the number that best indicates your degree of confidence...

1. ... in your ability to maintain a healthy and balanced diet on a regular basis (at least 5 days per week) during the coming month

1 2 3 4 5 6 7 8 9 10
not at all confident very confident

2. ... in your ability to maintain a healthy and balanced diet on a regular basis (at least 5 days per week) during the coming year

1 2 3 4 5 6 7 8 9 10
not at all confident very confident

3. ... in the fact that your eating plan could help you maintain a healthy weight and be energetic

1 2 3 4 5 6 7 8 9 10
not at all confident very confident

If you are feeling confident, make this healthy and balanced diet a part of your regular routine.

To maintain a healthy and balanced nutrition in the long term

Take a bit of time to review your plan

1. Which goals have you reached?

2. Which factors have helped you reach your maintenance goals?

3. Are you still trying to reach some goals? Which ones?

4. Which factors can help you reach these goals?

Review your maintenance goals and helpful factors with your nutritionist or your health professional.

In summary...

Eating a variety of foods at each meal is your best ally and an additional tool towards optimal management of your illness and of its side effects.

Enjoying your meals is good for your health!

Notes:

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Acknowledgements

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