

primary biliary cholangitis

# A guide to nutrition for patients with primary biliary cholangitis (PBC)

This guide provides practical advice and information to help you make informed choices about your diet and manage your symptoms effectively

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## Introduction

Primary Biliary Cholangitis (PBC) is a chronic liver disease that can significantly impact your overall health. While there's no cure for PBC, a well-balanced diet can help manage symptoms, improve nutrient absorption, and support your liver's function.

This comprehensive guide provides practical advice and information to help you make informed choices about your diet and manage your symptoms effectively. We'll delve into the specific nutritional needs of PBC patients, offer practical tips for meal planning, and provide delicious recipe ideas.

By following these guidelines and working closely with your healthcare provider, you can take control of your health and live a fulfilling life with PBC.

# Understanding PBC and its impact on nutrition

Primary biliary cholangitis (PBC), previously known as primary biliary cirrhosis, is a chronic autoimmune disease of the liver [1], In simpler terms, it means your body's defense system mistakenly attacks the bile ducts in your liver. These ducts are small tubes that carry bile, a fluid that helps with digestion. When these ducts are damaged, bile can back up in your liver and cause damage over time [2].

While the exact cause of PBC is unknown, it is likely a combination of genetic and environmental factors [3].PBC is more common in women than men, and most people are diagnosed after age 40 [2].

PBC is often associated with other autoimmune diseases, such as autoimmune thyroid diseases, Raynaud's disease, Sjögren's syndrome, scleroderma, autoimmune hepatitis, and an increased risk of urinary tract infections in women [5]. This means that if you have PBC, you may be more likely to develop other autoimmune conditions, which could necessitate further dietary modifications or considerations.

### How PBC affects your nutritional needs

PBC can affect your body's ability to absorb nutrients from food, especially fats and fat-soluble vitamins (vitamins A, D, E, and K) in the later stages of the disease [6]. This can lead to various issues, including:

- **Malnutrition:** Due to impaired nutrient absorption and potential digestive issues, PBC can lead to malnutrition, which can manifest as weight loss, fatigue, and muscle loss [6].
- Vitamin deficiencies: Deficiencies in fat-soluble vitamins can have wide-ranging effects on your health, including bone health, vision, and

blood clotting [6].

- Osteoporosis: PBC can increase your risk of osteoporosis, a condition that weakens bones [6].
- **Itching:** Itching (pruritus) is a common and often distressing symptom of PBC. Medications like cholestyramine can help manage this symptom [3].

Please note: No medication should be taken without consulting a doctor.

• Other complications: As PBC progresses, it can lead to more severe liver damage, including cirrhosis (scarring of the liver) and liver failure [3]. These complications can further affect your nutritional needs and require more specialized dietary management.

Currently, there is ongoing research into the use of fibrates as a potential treatment option for PBC [3].

# General dietary guidelines for people with PBC

While there's no one-size-fits-all diet for PBC, some general guidelines can help you maintain good nutrition and manage your symptoms [6]. These guidelines are similar to those for maintaining overall good health but are especially important for people with PBC.

#### **Focus on a balanced Diet**

A balanced diet includes a variety of foods from all food groups, providing your body with the necessary nutrients [8]. Here's a breakdown of the key components:

- **Fruits and vegetables:** Aim for at least five servings per day. They are packed with vitamins, minerals, and fiber, which are essential for overall health and can help manage PBC symptoms.
- **Lean protein:** Choose lean sources of protein, such as fish, poultry, beans, lentils, and tofu. Protein is crucial for maintaining muscle mass and strength, which can be affected by PBC7.
- Whole grains: Opt for whole grains like brown rice, quinoa, and whole-wheat bread over refined grains like white bread, pasta, and rice. Whole grains provide more fiber and nutrients, which can help regulate blood sugar and cholesterol levels.
- Healthy fats: Include healthy fats like those found in olive oil, avocados, nuts, and fatty fish. These fats are important for absorbing fat-soluble vitamins and have anti-inflammatory properties.

- **Non-starchy vegetables:** Include plenty of non-starchy vegetables like broccoli, asparagus, kale, and spinach [9].
- Low glycemic fruits: Choose low glycemic fruits like berries and melons [9].

#### Limit or avoid certain foods

While enjoying a variety of foods is important, some foods can put extra stress on your liver or worsen PBC symptoms [11]. These include:

- **Saturated and trans fats:** Found in fatty meats, butter, and processed foods, these fats can worsen inflammation and raise cholesterol levels [10].
- **Sugar:** Limit added sugars found in sugary drinks, sweets, and processed foods. Excess sugar can contribute to fatty liver disease and other health problems [7]. Be mindful of hidden sugar sources in breads, cereals, yogurts, salad dressings, and condiments [9].
- **Sodium:** If you have fluid retention (edema or ascites), it's crucial to limit sodium intake. Even without fluid retention, reducing sodium is generally beneficial for liver health [9]. If you have fluid overload, you may need a very low-sodium diet [10].
- **Alcohol:** Excessive alcohol consumption can worsen liver damage. Talk to your doctor about how much alcohol, if any, is safe for you [8].
- Raw or undercooked foods: Avoid raw or undercooked shellfish, fish, meat, and unpasteurized milk to reduce the risk of infections [8].

#### **Other Dietary Considerations**

- **Coffee:** Studies suggest that coffee may have a protective effect on the liver and may help reduce the risk of liver cancer in PBC patients [10]. Enjoy coffee in moderation, preferably black and unsweetened.
- **Probiotics:** Probiotics are "good bacteria" that can help maintain a healthy gut flora, which is important for digestion and immunity [10]. You can get probiotics from fermented foods like low-fat yogurt or kefir.

# Specific nutritional needs for PBC patients

In addition to the general guidelines, people with PBC may have specific nutritional needs depending on their individual circumstances and disease progression [7].

#### **Protein**

Maintaining adequate protein intake is crucial for people with PBC, as it helps preserve muscle mass and strength, supports immune function, and aids in the body's repair processes [7]. Aim for 1.0–1.5 grams of protein per kilogram of body weight per day [6]. If you are underweight or malnourished, you may need to increase your protein and calorie intake [12]. However, if you have hepatic encephalopathy, your doctor may recommend minimizing protein, especially from animal sources [9].

#### Food source:

- Lean meats (fish, poultry, lean cuts of beef or pork)
- Eggs
- Dairy products (milk, yogurt, cheese)
- Beans and lentils
- Nuts and seeds
- Tofu and other soy products

#### **Fiber**

Fiber is essential for digestive health and can help manage cholesterol levels, regulate blood sugar, and maintain a healthy weight [7]. Aim for 25-35 grams of fiber per day [6].

#### Food source:

- Fruits and vegetables (especially those with edible skins)
- Whole grains (brown rice, quinoa, oats, whole-wheat bread)
- Legumes (beans, lentils, chickpeas)
- Nuts and seeds

#### Fat

While it may seem counterintuitive, healthy fats are important for people with PBC, as they aid in the absorption of fat-soluble vitamins. However, it's essential to choose the right types of fat. Focus on unsaturated fats.

#### Food source:

- Olive oil
- Avocados
- Nuts and seeds
- Fatty fish (salmon, tuna, mackerel)

If you experience fat malabsorption (difficulty digesting fats), your doctor may recommend limiting your fat intake to about 30–40 grams per day or using medium-chain triglycerides (MCTs) as an alternative source of fat [6]. MCTs are easier for the body to absorb and don't require bile. MCT oil can be added to your diet to increase your energy intake, especially if you are severely malnourished [6]. It's important to note that while fat malabsorption was a concern in the past, it is less common now due to earlier diagnosis and treatment of PBC [14].

#### Calcium and vitamin D

Due to the increased risk of osteoporosis in PBC, ensuring adequate calcium and vitamin D intake is crucial [7]. Calcium is essential for strong bones, and vitamin D helps the body absorb calcium [7].

#### Food source:

- Dairy products (milk, yogurt, cheese)
- Fortified plant-based milk alternatives
- Canned fish with bones (salmon, sardines)
- Leafy green vegetables (spinach, kale, collard greens)

Your doctor may recommend a vitamin D supplement, especially if you have low vitamin D levels [7].

#### Vitamins and minerals

PBC can affect the absorption of various vitamins and minerals, so it's essential to monitor your levels and consider supplementation if needed [6]. Your doctor may recommend blood tests to check for deficiencies and advise on appropriate supplements.

# Practical advice and meal planning tips for PBC patients

Managing your diet with PBC can seem overwhelming, but some practical tips can make it easier.

#### Plan ahead

Planning your meals and snacks in advance can help you make healthier choices and ensure you're getting the necessary nutrients [7]. Here are some tips:

- Create a weekly meal plan: Start by planning your dinners for the week, then use leftovers for lunch [7].
- Make a grocery list: Based on your meal plan, create a grocery list to ensure you have all the ingredients you need [7].
- **Prepare meals in advance:** When possible, cook larger batches of food and freeze portions for later [7].
- **Keep healthy snacks on hand:** This can help you avoid unhealthy choices when you're hungry [7].

#### Read food labels

Pay attention to food labels to make informed choices about the foods you're buying [7].Look for:

- **Serving size:** Be mindful of the serving size and how many servings you're consuming.
- Calories: Track your calorie intake to maintain a healthy weight.
- Fat, fiber, protein, sugar, sodium: Aim for foods low in saturated fat, added sugar, and sodium, and high in fiber and protein.
- **Vitamins and minerals:** Check the daily values for essential vitamins and minerals.

#### **Eat regularly**

Eating regular meals and snacks throughout the day can help you manage your energy levels, control hunger, and ensure you're getting all the nutrients you need. Aim for three balanced meals per day, with healthy snacks as needed. If you have a poor appetite, try eating smaller, more frequent meals. People with cirrhosis often eat "little and often," a style of eating called grazing. Eating more often means your body doesn't start breaking down the protein in your muscles for energy.

#### **Limit processed foods**

Processed foods are often high in saturated fat, added sugar, and sodium, which can be detrimental to liver health [7]. Focus on whole, unprocessed foods whenever possible.

#### Stay hydrated

Drinking plenty of water is essential for overall health and can help your liver function properly. Aim for 8 glasses of water per day.

#### Use low-fat cooking techniques

When cooking, opt for low-fat cooking techniques such as baking, broiling, grilling, and steaming [9]. This can help reduce your intake of unhealthy fats and make your meals more liver-friendly.

#### Sample meal plans and recipes

Here are some sample meal ideas and recipes that incorporate the principles of a PBC-friendly diet:

#### **Breakfast:**

- Oatmeal with berries, nuts, and a sprinkle of ground flaxseed. Start your day with a warm bowl of oatmeal topped with fresh or frozen berries, a handful of your favorite nuts, and a sprinkle of ground flaxseed for added fiber and omega-3 fatty acids [16].
- PBC breakfast sandwich. Enjoy a satisfying and nutritious breakfast sandwich made with whole-grain bread, mashed avocado, a handful of sauteed spinach, and a sprinkle of pepper [13].
- Low-fat yogurt with fruit and a drizzle of honey. Opt for a low-fat yogurt and top it with your favorite fruits and a drizzle of honey for a touch of sweetness.

#### Lunch:

- Salad with grilled chicken or fish. Create a vibrant salad with grilled chicken or fish, mixed greens, and a variety of colorful vegetables.
- Sprouted lentil soup with whole-grain bread. Warm up with a hearty bowl of sprouted lentil soup paired with a slice of whole-grain bread [17].

#### **Dinner:**

- Baked lemon herb chicken with sweet potatoes and broccoli. Indulge in a flavorful baked chicken dish seasoned with lemon, herbs, and served with roasted sweet potatoes and steamed broccoli [18].
- Turkey and vegetable stir-fry with brown rice. Enjoy a quick and easy stir-fry with ground turkey, a medley of colorful vegetables, and a side of brown rice.
- Homemade pizza with whole-wheat crust. Create a delicious and healthy pizza using a whole-wheat crust, lean protein sources like chicken or turkey, and a variety of your favorite vegetables [20].

#### Snacks:

- Fruit (fresh or frozen). Keep a variety of fresh or frozen fruits on hand for a quick and nutritious snack.
- Vegetables with hummus. Enjoy a satisfying snack by pairing your favorite vegetables with a healthy dip like hummus.

- A small handful of nuts or seeds. Grab a small handful of nuts or seeds for a healthy and energy-boosting snack.
- Low-fat yogurt or kefir. Opt for a low-fat yogurt or kefir for a probiotic-rich snack that supports gut health [21].

# Importance of working with a healthcare professional

While this guide offers valuable information, remember that everyone's journey with PBC is unique. It's crucial to work with your healthcare professional to develop a personalized nutrition plan that meets your specific needs. They can:

- Assess your nutritional status and identify any deficiencies.
- Provide tailored recommendations based on your disease stage, symptoms, and lifestyle.
- Monitor your progress and make adjustments to your plan as needed.
- Address any concerns or questions you may have about your diet.

## Conclusion

Living with PBC can present challenges, but by focusing on a healthy diet and working closely with your healthcare team, you can manage your symptoms, maintain good nutrition, and improve your overall quality of life. We understand that navigating these dietary changes can be challenging, but remember that you're not alone on this journey. Making gradual, sustainable changes to your eating habits is more effective than drastic, short-term diets. Be patient with yourself, and don't hesitate to reach out to your healthcare team for support and guidance.

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