Polyendocrine metabolic ovarian syndrome (PMOS) and diet

Polyendocrine metabolic ovarian syndrome (PMOS), previously known as polycystic ovary syndrome or (PCOS), is a common complex hormonal condition, which affects how the ovaries work. Diet and exercise can improve symptoms. This Food Fact Sheet will look at PMOS and how to manage it with lifestyle changes.

What are the symptoms of PMOS?

PMOS is a syndrome (a collection of symptoms), which affects up to one in ten people with ovaries. Having two or more of the following signs and symptoms can lead to being diagnosed with PMOS:

1. **Having 20 or more fluid-filled sacs (follicles) surrounding the eggs in the ovaries**. An adult ultrasound of the ovaries is used to detect these
2. **Irregular or absent periods** (menstruation) due to eggs not being regularly released from the ovaries
3. **Higher or more active levels of a group of hormones known as androgens (also known as male type hormones such as testosterone)**. You may have a blood test to detect these, or your doctor may ask you about symptoms you may be experiencing such as acne, hair on the face, or hair thinning on the scalp

Other common symptoms of PMOS include:

- food cravings, particularly for carbohydrates or sugary foods
- difficulty with weight management
- fertility problems
- depression and anxiety
- binge eating
- body image concerns
- tiredness
- sleep disturbances

Many of these symptoms are related to high hormone levels. Up to 80% of people with PMOS are resistant to the effects of insulin (a hormone which helps the body use energy from food), so you may have more insulin in your blood to compensate. High insulin levels can also increase testosterone levels and lead to acne, more hair and irregular periods.

Long term health concerns associated with PMOS include heart disease, diabetes and endometrial cancer.

How can food help manage PMOS symptoms?

The symptoms of PMOS can be controlled using a combination of lifestyle changes. Hair can be removed (e.g. threading, waxing or permanent hair-reduction) and medication can be taken.

You may have read about various fad diets for managing PMOS too. International guidelines recommend adopting a healthy lifestyle, including healthy eating and regular activity. However, there is not one way of eating that works best. A dietitian can support you with creating healthy lifestyle habits tailored to you, which will help manage your PMOS symptoms.

The following general nutrition principles can help improve PMOS symptoms:

Eat regularly

Eating regularly helps keep your blood sugar levels stable, reducing insulin resistance (when your body's cells stop responding properly to the hormone insulin). Having regular, varied and balanced meals or snacks is a great place to start in achieving a healthy diet.



Choose low Glycaemic Index carbohydrates and wholegrains

Glycaemic Index (GI) is a ranking system, showing how quickly your blood sugar rises after eating different carbohydrates. Low GI diets, choosing mostly low or moderate GI foods, which cause your blood sugar levels to rise slowly, can be useful to reduce the symptoms of PMOS because it can improve insulin levels and reduce insulin resistance. You may find swapping some high GI foods for low GI foods helpful. Many wholegrains have a low GI and are also linked with having more regular periods.

Have balanced meals

Having balanced meals and snacks can also improve insulin levels, as adding protein and fats to low GI carbohydrates can reduce the impact of the whole meal on blood sugar levels. This is called glycaemic load. Having balanced meals means including protein-rich foods, healthy fats and lots of low GI fruits or vegetables, as well as high-fibre and low GI carbohydrate foods. This also helps keep you fuller for longer and reduces cravings.

Include omega-3 fats

Oily fish is a rich source of omega-3 fats, which can help lower inflammation commonly seen in those with PMOS. Aim for one to two portions a week of oily fish and/or try to include some plant-based sources of omega-3 such as seaweed, algae, chia and flaxseeds, and walnuts.

If you are trying for a baby, it is particularly important that you have enough nutrients in your diet and that you take a folic acid supplement. Speak to your doctor or dietitian about this.

Does your weight make a difference?

PMOS can affect people of all sizes. If you are living with overweight, some weight loss may improve PMOS symptoms, however this can be challenging for many people with PMOS. Insulin resistance, food cravings and binge eating can make weight loss with PMOS hard.

It is important not to follow fad or restrictive diets. Instead, try to focus on what to include in your diet and trying some of the suggestions in this Food Fact Sheet is a good place to start. The most important thing is finding something that suits your lifestyle without missing out on important foods or nutrients.

Using movement to manage PMOS

There are many benefits to being physically active but the most relevant to PMOS is that it improves your body's response to insulin. Many types of movement have been shown to improve PMOS symptoms. This includes strength/resistance training, cardiovascular and HIIT training, as well as more gentle forms of movement like yoga. It's important to find something that you enjoy and can fit into your lifestyle. Guidelines suggest aiming for 150 minutes per week of moderate intensity activity or 75 minutes per week of more vigorous activity and including some strength/resistance training twice a week.

Top tips

- Focus on foods you can include in your diet, rather than what to restrict
- Aim for regular, healthy, balanced meals
- Choose high fibre and low GI carbohydrates, as well as wholegrains such as oats, muesli or wholegrain bread
- Balance your meals by including protein-rich foods such as meat, fish, eggs, dairy, beans, pulses, tofu, nuts and seeds, in addition to healthy fat sources in moderate amounts such as olive oil, nuts and seeds, rapeseed oil and avocados
- Try to include oily fish and other plant-based sources of omega-3 fatty acids such as seaweed, algae, chia and flaxseeds and walnuts
- Include a variety of fruit and vegetables
- Weight loss can be hard with PMOS but may improve symptoms
- Find exercise you enjoy and do it regularly
- Prioritise rest and sleep and minimise stress
- For some people with PMOS taking a supplement may be beneficial. Discuss this with your dietitian or doctor before starting one

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