

## What is PCOS?

Doctor: Dora, tell me what's been bothering you the most.

Dora: It's my periods. They've never been regular.  
But now I can go four or five months without one.

Doctor: Okay. Anything else you've noticed?

Dora: My weight. I can't seem to shift it.  
I've always struggled with it, but it's getting worse.  
I'm also noticing that I need to remove the hair on my chin more often these days.

Doctor: Let's talk a bit more about your periods.

The womb is told to have periods by hormones from the ovary.  
These hormones are made when it grows and releases eggs.  
When the ovary doesn't grow and release eggs regularly, the periods are irregular.  
The ovary has to be told to grow and release eggs by signals from the brain.

There are three main reasons why the ovary might not grow and release eggs regularly.  
First, the ovary might be running out of eggs,  
so it can't respond to these signals.  
Second, the signals from the brain might be too low.  
So the ovary doesn't do anything.  
The third reason is by far the most common.  
The signals are there, but they're out of balance.  
This means that the ovary gets mixed messages and gets confused.  
It will start growing an egg, but not know what to do.  
So it pauses the egg, grows, pauses, grows, pauses, grows.  
And sometimes releases.

When you have a scan of the ovaries, you see these little paused eggs,  
like dots on the ovary.  
In the past, we didn't know they were paused eggs and called them cysts.  
So it's known as Polycystic Ovary Syndrome.  
These paused eggs produce a little bit extra male type  
hormones that can cause spots, skin changes or extra hair.

Professor Colin Duncan: Dora has Polycystic Ovary Syndrome or PCOS.  
PCOS can run in families, but we haven't found any genes that can fully explain it.  
It is likely that the tendency to have PCOS is in place before you're born.  
Symptoms of PCOS can become more obvious after weight gain.  
As well as a hormone imbalance,  
having PCOS means you're more likely to have metabolic imbalance.  
Metabolism is how our bodies process food.  
People with PCOS have a higher level of a storage hormone,  
which means the body is better at storing energy than using it.  
That can make weight gain more likely and weight loss more difficult.

Polycystic Ovary Syndrome is common.  
Around one in ten women will have PCOS.

The key features are polycystic ovaries on a scan, irregular periods and evidence of increased male type hormone. Not all people with PCOS will have the same symptoms. Although most have all three symptoms, just two is enough to make the diagnosis. That means that the diagnosis of PCOS does not always need a scan, and not all those with PCOS have irregular periods. A similar number of women will have polycystic ovaries on a scan, but no other features of PCOS.

There is no cure for PCOS and how we manage it depends on what the main problem is at the time. There are treatments available to help with periods, with skin and other problems, and with fertility. Weight management is important, as weight loss can improve PCOS by itself. There aren't good drugs targeting the metabolism imbalance at the moment, but some medications and food supplements may be useful in combination with diet and exercise.

Doctor: I just want to highlight some of the key features about PCOS. There are no cysts on the ovary in Polycystic Ovary Syndrome. The ovaries are not much bigger than normal size and it's not associated with pain. The ovary is probably a victim of the environment that it finds itself in. Every now and then an egg will be released. That means a pregnancy may happen when you wish it to, but it also means that contraception is needed if you don't want to become pregnant. If you have PCOS and want to get pregnant, doctors are able to help with this.

Professor Colin Duncan: PCOS is common and seeking help from your GP will allow an accurate diagnosis to be made. You may be treated by your GP, or referred to a specialist. A doctor will talk to you about the best way to manage your symptoms. Sometimes the internet can be misleading, but there are some very useful resources available. Take a look at the support and guidance offered by the PCOS charity Verity and the NHS Inform website for more information.

This is one of a series of animations highlighting reproductive health issues produced by the MRC Centre for Reproductive Health at the University of Edinburgh.