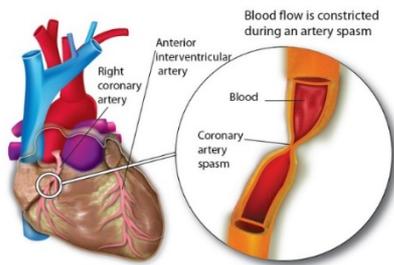


## What is Coronary Artery Spasm?



Coronary Artery Spasm can also be referred to as Variant Angina, Prinzmetal Angina or Vasospastic Angina. Symptoms occur when the coronary arteries go into spasm and blood flow to the heart is reduced.

Coronary Artery Spasms can affect both men and women and unlike traditional effort induced angina due to obstructive Coronary Artery Disease, it can happen whilst resting and not under any exertion

## Symptoms of Coronary Artery Spasm

There are lots of symptoms you might have with Coronary Artery Spasm. Below are just a few of these. Sometimes other less common symptoms may also be experienced.



Severe or sudden chest pain, pressure, squeezing or tightness



Shortness of breath or having difficulty with breathing even when sitting still



Feeling suddenly dizzy or sick or becoming sweaty/clammy

In Coronary Artery Spasm, the chest pain can be very severe and can present like a heart attack. The pain can come from nowhere, stopping you in your tracks. You may also feel nauseous, sweaty or light-headed, with pain that might spread into your neck, jaw and back (particularly in the area between the shoulder blades). You may also feel what is sometimes described as 'a sense of impending doom'. This just means that you very quickly become aware that there is something very wrong and you sense that you are in need of urgent help.

The chest pain in people who suffer from coronary artery spasm tends to occur at rest, for no apparent reason, mainly at night or in the early morning. In general, the exercise capacity is not affected.

Once spasms release, the pain can often disappear quickly and completely. If the Coronary Artery Spasm episode is severe or continues for a long time, this can lead to a heart attack, so it is important to get help urgently if you experience any of these symptoms.

In some instances, after an episode of Coronary Artery Spasm, you may be left feeling exhausted and sore and this can sometimes continue for a number of days after the episode.

It is important to remember that some of the symptoms mentioned above can also occur in other circumstances and in other conditions too, such as oesophageal spasm, so they might also be non-cardiac in nature. However, it is important to rule out a coronary problem when these symptoms appear.

## Triggers



Stress, cold weather and emotional upset (whether happy or sad), seem to be amongst some of the most common triggers, but triggers can also include;

The use of stimulant drugs such as cocaine, alcohol abuse or withdrawal, hyperventilation, exposure to extreme cold, allergies, antimigraine medications, some anti-depressants and very rarely even the consumption of coffee and spicy foods. Genetic links have also been reported in some cases.

Importantly, coronary spasm is usually relieved quickly by the administration of sublingual nitrates.

Experiencing these symptoms in itself may induce anxiety, especially if the symptoms are new to you, are not what you are used to, or if they continue to escalate or reoccur.

***If you have chest pain that is new to you, or that concerns you in any way, you should always seek immediate medical help.***

## Path to Diagnosis



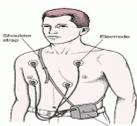
The path to diagnosis should involve your primary care clinician (general practitioner) and secondary care team including a cardiologist in an outpatient clinic. If you feel unwell with chest pain that lasts longer than 15 minutes (despite using a GTN spray, if available) then you should consider attending the emergency department.

Initial presentations of Coronary Artery Spasm are often severe, so tend to be seen in Accident and Emergency Departments. Whilst trying to discover the cause of your symptoms, you might be given an ECG (Electrocardiogram) and blood tests to work out if you have raised Troponins (a type of protein) in your blood. Testing Troponins is an important step as adverse results can sometimes be an indicator of cardiac damage. However, it is also important to remember that raised Troponins can sometimes happen as a result of other things too, that are not cardiac. A second follow up Troponin test is usually taken around 6 hours later (though timings can vary depending on which Troponin test you have) and the results of the tests are then compared to see if there have been any changes.

There are a number of tests you may undertake on your journey to diagnosis of Coronary Artery Spasm. Diagnosing Coronary Artery Spasm can often be difficult as characteristic changes on ECG will usually only show up during the time when the spasms are happening.

Tests may include some or all of the following –

- Ambulatory ECG



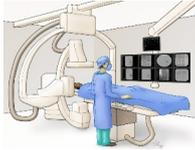
- This means wearing ECG leads over a period of a few days/nights to try and catch a Coronary Artery Spasm happening.

- Stress Echocardiogram



- Your heart rate is increased by exercise, or it is chemically induced, to look at how your blood vessels and heart react when the heart is having to work harder.

- Coronary Angiogram, Provocative Angiogram or Challenge Cath.



- This test is primarily done to ascertain whether you might also have blockages in the blood vessels in your heart. If no blockages are found, you may be referred to have a “provocative” test for coronary spasm with the administration of acetylcholine or ergonovine that can induce spasms under controlled conditions and close monitoring.

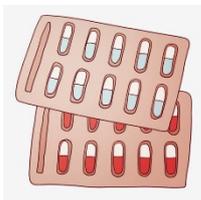
- Cardiac MRI (Magnetic Resonance Imaging) or PET (Positron Emission Tomography) Scan



- Both of these scans are non-invasive, but both involve a chemical stressor being administered during the scan to monitor in real time what effect the stressor is having on the heart, on blood flow and on how the blood vessels react.



### How is Coronary Artery Spasm Treated?



There are several medications used to treat the symptoms of Coronary Artery Spasm, mainly calcium channel blockers, nitrates both fast acting (GTN spray/tablet) and slow release (Isosorbide dinitrate). Beta-blockers can worsen symptoms for Coronary Artery Spasm patients so tend to be avoided. Certain types of Beta Blockers are however useful in some instances. Lifestyle changes and statins are often recommended to help controlling symptoms and preventing coronary disease progression.



Lifestyle changes can be an important factor in treating Coronary Artery Spasm. Smoking for example, can damage the lining of blood vessels, so stopping smoking can be an important step in helping to reduce Coronary Artery Spasm symptoms. Maintaining a healthy weight, diet and exercise regime can also have positive effects on symptom control. As can ensuring sufficient sleep and a reduction in stress levels. Adopting healthy habits and stress relieving strategies such as yoga, meditation or Tai Chi, to name but a few, can also be beneficial, not only for angina symptoms, but also to overall wellbeing.

It is important to note that each patient may require an individually tailored medication protocol, as medications can behave differently in different individuals.

*N.B. Nothing in these summary sheets should be considered in any way as advice or recommendation. All information contained in these sheets is an opinion only and is shared here only in the hope that it is of interest to other patients and medical professionals. Always consult your own medical practitioner before trying any new medications or therapies and before changing any of your current routines.*