What is SCAD?

SCAD is an uncommon heart condition that cannot be predicted or prevented – yet.

An abnormal channel (called a false lumen) develops in a coronary artery which extends, compressing the true channel, resulting in a blockage or narrowing that prevents normal blood flow. This can cause heart attack, heart failure or cardiac arrest and can be fatal.

The cause of false lumen formation is unclear but there are currently two theories for the mechanism:

- 'Inside-out': a tear develops in the artery wall forming a dissection flap that interferes with blood supply.
- 'Outside-in': micro-vessels within the artery wall leak blood creating a bruise between the layers, which causes vessel narrowing and sometimes ruptures to form a dissection flap.

We don't yet know what causes SCAD. Some associations have been described with: female sex, Fibromuscular Dysplasia (FMD), connective tissue disorders, pregnancy and post-partum, extreme emotional stress and extreme exercise.

Beat SCAD

Beat SCAD was created by SCAD survivors who met on social media while trying to find support and information about SCAD. They helped initiate the UK research and Beat SCAD works closely with the research team.

Beat SCAD's vision is a world that understands SCAD, where those affected are quickly and accurately diagnosed and never feel alone.

Beat SCAD's mission is to:

- raise awareness of SCAD among medics, SCAD patients, their family and friends
- provide support for patients, family and friends
- raise funds for research into SCAD

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Registered charity number 1164066

Further information

Beat SCAD
beatscad.org.uk | contactus@beatscad.org.uk

UK SCAD research project at the Leicester Biomedical Research Centre scad.lcbru.le.ac.uk

Physical activity & exercise considerations for SCAD and FMD patients (European Heart Journal)
tinyurl.com/2xbnjbf4

PCR-EAPCI Textbook Percutaneous Interventional Cardiovascular Medicine (chapter on SCAD) tinyurl.com/vepc6n33

Facebook groups
SCAD – UK & Ireland Survivors
For SCAD patients bit.ly/1Mizg9a

SCAD Family and Friends Support Group
bit.ly/1TMQDwc

BHF tinyurl.com/53d5ee4f

Fibromuscular Dysplasia Society of America Information about FMD fmdsa.org

beatscaduk

@beatscaduk

bit.ly/1TXhiLV

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Other leaflets in this series:

- What is SCAD?
- Diagnosed withSCAD?
- SCAD for health professionals
- Pregnancy-related SCAD case studies

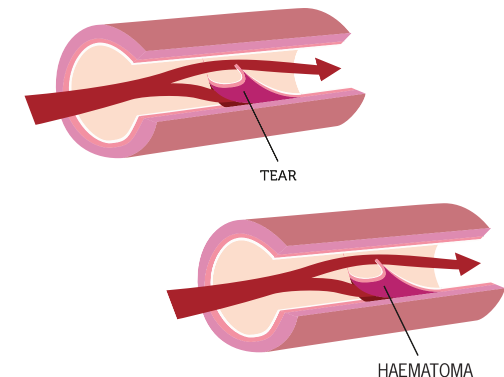
Download pdfs from beatscad.org.uk/downloads or request printed leaflets from our shop (beatscad.org.uk/shop).

Aftercare for SCAD patients

Spontaneous Coronary Artery Dissection

"Patients may need GP support as they recover from the physical trauma of SCAD and often find they need support for their mental well-being too."

Dr David Adlam, interventional cardiologist & lead SCAD researcher



beat SCAD
Spontaneous Coronary Artery Dissection

After a SCAD patients can feel overwhelmed and may have to deal with both physical and emotional challenges. We hope this information will help healthcare professionals and patients navigate these obstacles.

Post-SCAD chest pain

Recurrent chest pain is very common after SCAD. Hospital readmission for chest pain after SCAD is also very common. The cause of these symptoms is not fully understood. It may relate to a period of coronary vascular hyper-reactivity or arise from the healing and remodelling processes which follow SCAD.

It is important to understand most recurrent chest pains do not seem to be a high-risk sign and in most patients these symptoms will improve over time, although this may take 18 months to two years after the index event. However sometimes admission is necessary for a more detailed assessment.

Determining how to react to an episode of chest pain post-SCAD can be difficult. Given the risk of recurrence (current figures suggest 10% in the first five years), it is recommended that ECG and troponin tests should always be considered. However, chest pains are often very different from the index presentation, are self-limiting and 'atypical' in that there is no clear provocation with, for example, exercise.

Over time patients and their clinicians can often 'learn' which pains can be managed conservatively and which require further assessment or admission.

In some patients the pain is cyclical, usually pre-menstrual. Anecdotally, cyclical symptoms may respond to low-dose progesterone-based contraception (eg progesterone hormonal coil). For those who get non-cyclical spasm-like pain, vasodilator (antianginal) treatments may improve symptoms in some patients.

Referral to a specialist

Beat SCAD has found patients benefit from referral to a SCAD specialist and strongly encourage GPs to refer patients to one of the **NHS Clinics** held by Dr David Adlam at Glenfield Hospital or Dr Abtehale Al-Hussaini at the Chelsea and Westminster.

For more information see beatscad.org.uk/clinic-referrals. If referral is not possible, SCAD specialists are happy to be contacted by GPs to discuss care of a SCAD patient.

Medication reviews

Many SCAD patients don't have high blood pressure or cholesterol issues, but may still be prescribed medication more suited to atherosclerotic heart disease. A medication review with a SCAD specialist or cardiologist is recommended.

SCAD management

The 2020 European Society of Cardiology Guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation (tinyurl.com/2p8xn9bd) include a section on SCAD. And a chapter in a textbook for interventional cardiologists (tinyurl.com/vepc6n33) discusses all aspects of SCAD management.

Associated conditions

Many SCAD patients are also diagnosed with extra-coronary abnormalities including Fibromuscular Dysplasia (FMD). It is recommended that patients are scanned from head to hip to investigate if they have other abnormal arteries which may require follow-up. Other rarely associated conditions (fewer than 5% of all SCADs) include connective tissue disorders such as Ehlers-Danlos, Loeys-Dietz or Marfan Syndromes, so further testing may be required. For more information, see beatscad.org.uk/associated-conditions.

Cardiac rehab & exercise

All SCAD patients should be referred to, and encouraged to participate in, a cardiac rehabilitation programme to aid their recovery.

A paper published in the European Heart Journal, recommends moderate aerobic exercise, interval training, resistance training using lower resistance and higher repetitions. Patients are advised to be cautious when doing high endurance aerobic training, muscle-building exercises or Yoga poses that involve extreme head and neck positions. They should avoid abrupt high-intensity exercise, contact sports, extreme head positions and exercises involving the Valsalva manoeuvre.

Mental health

The psychological impact of SCAD can be huge and patients may experience anxiety, depression or PTSD. As mental well-being is linked with physical recovery, taking a holistic approach can be invaluable.

Having quick and easy access to counselling and other support to manage stress, grief and other emotional issues, is vital. Patients can also be encouraged to explore concepts like mindfulness, healing through breathing and journal-keeping.

Peer support

Peer support aids recovery. Others with the same diagnosis can help with understanding the condition and give hope for the future. We encourage healthcare professionals to direct patients to Beat SCAD for support.

SCAD research

Dr David Adlam is leading the UK SCAD research project at the Leicester Cardiovascular Biomedical Research Centre. For more information: scad.lcbru.le.ac.uk.