



In Canada, thousands of people die every year from heart disease and stroke; half of these deaths occur before the victim reaches the hospital. The three major factors contributing to the risk of heart disease are smoking, high blood pressure and high cholesterol.

Non-traumatic chest pain is often caused by a build-up of cholesterol plaque or a blood clot in the arteries.

- **Angina** is caused by a *temporary or partial blockage* of the coronary arteries that supply blood (food and oxygen) to the heart muscle. These blockages can occur when a fatty deposit (plaque) builds between the layers of the artery (atherosclerosis) and reduces blood flow.
- A **Heart Attack** is caused by a *complete* blockage of the coronary arteries that supply blood (food and oxygen) to the heart muscle. Without oxygen, the heart muscle begins to die (necrosis) resulting in reduced heart contractions or cardiac arrest (heart stops beating).

SIGN & SYMPTOMS

Angina Attack	Heart Attack
Pain can last 20-30 minutes	Pain can last longer than 30 minutes
Rest, oxygen and medication can relieve the pain	Rest and oxygen can reduce the pain, but nothing completely relieves the pain
Typically no pain radiation	Pain radiation - shoulders, arms, jaw, neck and through the back
Level of consciousness – Ranges from alert to confused	
Breathing – Ranges from normal to shortness of breath	
Circulation – weak and rapid pulse (difficulty finding a radial pulse)	
Skin – pale, cool and clammy/sweaty (can also be grey or cyanotic)	
Pain – varies, but often described as pressure, tightness or squeezing in the chest	
Nausea and/or vomiting – can feel like an upset stomach or indigestion	

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Weakness, dizziness and fatigue

The above-listed signs and symptoms are the classic/typical symptoms, however, symptoms can be 'atypical.' If there is doubt, have it checked out.

TREATMENT

Standard First Aid trained rescuers do not diagnose. Because of this, all treatment of non-traumatic chest pain should include:

- Scene assessment
- Primary Assessment
 - Call EMS immediately whenever non-traumatic chest pain is present.
 - Assess airway, breathing & circulation
 - Give victim ASA if there are no contraindications (regardless of other medications)
 - Assist victim into a position of comfort (or semi-sitting) and loosen tight clothing
 - Assist victim with any relevant prescribed medication
 - Reassure victim and monitor vital signs

MEDICATION

NITROGLYCERIN	ASA (Acetylsalicylic acid)
Do not give medication to a victim who is not alert (cannot take it themselves)	
When assisting with nitroglycerin, check to ensure that the medication belongs to the victim.	As ASA is a lifesaving medication, it does not need to belong to the victim to be administered.
Nitroglycerine is a drug that causes the vessels to dilate (open up) allowing blood flow around a blockage.	ASA is an anticoagulant and can be beneficial in the treatment of chest pain by reducing further clotting.
Nitroglycerine comes in a tablet, spray or medication patch.	ASA comes in tablet form of 80-81mg (low dose) or 325mg.
Contraindications include: Sexual enhancement medication within the last 2 days (48 hours) When in doubt, ask EMS	Contraindications include: ✓ A - they are not Allergic to ASA or ibuprofen ✓ A – they have not been told by a physician to Avoid taking ASA (considering active bleeds or asthmatic attacks) DO NOT substitute acetaminophen (<i>Tylenol</i>) or ibuprofen (<i>Advil/Motrin</i>) as they can block the blood-thinning effect of ASA
Instruct victim to place tablet or spray under the tongue.	Instruct the victim to chew (1) adult ASA tablet (325mg) <u>OR</u> (2) low dose (81mg) ASA tablets.

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A maximum of 3 nitroglycerine doses can be administered in a 10 minute period.

The victim may take 2 additional low dose ASA tablets if directed by EMS.

A victim who has been prescribed nitroglycerine should also take ASA.

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