



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

- **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	
Weakness, dizziness and fatigue	

\*These are the classic/typical symptoms, however symptoms can be 'atypical.' If there is doubt, have it checked out.

**BC & Yukon Branch**

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## TREATMENT

Treatment of non-traumatic chest pain should include:

- Scene assessment and determine patient history/mechanism of injury
  - *What brought on the pain/what were you doing?*
  - *Have you had this pain before? If so, how does this compare to last time? What did you do to make it feel better?*
  - *Do you have any medication?*
- Assist patient into position of comfort (or semi-sitting) and loosen tight clothing
- Call EMS and complete the primary survey (to include ABCs, bleeding and/or injury)
- Assist patient with their medication
- Reassure patient and monitor vital signs

## MEDICATION

NITROGLYCERINE	ASA (Aspirin/acetylsalicylic acid)
A conscious patient should be assisted in taking their own medication in the treatment of non-traumatic chest pain.	
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 can come in a tablet, spray or medication patch. A tablet or spray should be placed under the tongue.	Assist a patient in taking their own ASA provided that: ✓ <b>A</b> - they are not <b>Allergic</b> to ASA or ibuprofen ✓ <b>A</b> – they have not been told by a physician to <b>Avoid</b> taking ASA (considering active bleeds or asthmatic attacks)
A maximum of 3 nitroglycerine doses can be administered in a 10 minute period.	
Do not give nitroglycerine to a patient who is not alert (cannot take it themselves)	Do not give ASA to a patient who is not alert (cannot take it themselves)
Contact EMS prior to assisting nitro to any patient who has taken sexual enhancement drugs such as Viagra, Levitra or Cialis.	Have the patient chew (1) adult ASA tablet (325mg) or (2) low dose (81mg) ASA tablets. The patient may take 2 additional low dose ASA tablets if directed by EMS.
A patient with angina can still have a heart attack. If the patient's nitro does not work (after the second dose), if they do not have their nitro on them or they are wearing the patch (and still experiencing chest pain), call EMS immediately.	<b>DO NOT</b> substitute acetaminophen ( <i>Tylenol</i> ) or ibuprofen ( <i>Advil/Motrin</i> ) as they can block the blood-thinning effect of ASA
A patient who has been prescribed nitroglycerine can also take ASA. If the patient takes aspirin, <b>do not</b> repeat the aspirin dosage!	

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