



What's new in 2021 for Heart Health

By Dr. Delia Roberts

Cardiovascular disease, the second leading cause of death in Canadians, is on the rise and accounts for nearly a quarter of all deaths in British Columbia¹. Things like heart attacks, strokes, and problems with heart rhythms or the ability of the heart to effectively pump blood, plus high blood pressure and the health of the blood vessels all fall under the category of cardiovascular disease. And with the COVID-19 pandemic the incidence of these illnesses are predicted to increase further, due to the increased mental and emotional stress and the reduction in physical activity due to the lockdown². Thus, faced with an aging, stressed and more sedentary population this article will take a look at what's new for what works – or doesn't work - for the prevention and treatment of cardiovascular disease.

Blood Pressure

Hypertension Canada completes a comprehensive review of their guidelines for the prevention, diagnosis, risk assessment and treatment of hypertension in adults and children

every two years. The latest version was released in 2020 and continues to emphasize accurate measurements of blood pressure before choosing a course of treatment. Blood pressure is best measured using an electronic device in a quiet room, while seated in an upright posture, back supported and feet flat on the floor. There are also specific requirements for placement of the cuff that are important to make sure that the readings are correct. Because some people's blood pressure is higher when the measurement is taken in the presence of a doctor or health professional (known as white coat hypertension), an easy-to-wear automatic cuff may also be used to take and record a measurement every 20-30 minutes over 24 hours (known as ambulatory blood pressure). Diagnosis of hypertension now also takes into consideration whether the measurements were based on office, ambulatory or home measurements, as well as the presence of diabetes and other risk factors. Also emphasized is the recommendation that low dose aspirin (ASA) not be taken as a

preventative treatment for stroke or heart attack unless you have already had one of these events. The very modest advantages are not worth the increased risk of bleeding.

Diabetes

Any discussion about cardiovascular disease needs to include diabetes because diabetes has a very strong impact on the health of the heart and blood vessels. People with diabetes are three times as likely to die of heart disease, and at an earlier age than people without diabetes. But what's new about the relationship between diabetes and cardiovascular disease is that some new blood glucose lowering drugs called sodium-glucose cotransporter inhibitors (SGLT2i), have been found to have protective effects for the heart and blood vessels (and the kidneys). Studies have shown that these drugs are effective at lowering the risk of hospitalization for heart failure for people with existing cardiovascular disease. Also exciting is the finding that these drugs are able to lower the risk of developing cardiovascular disease for people with diabetes and other risk factors who haven't yet developed cardiovascular disease, which is great news!

Blood Lipids

Long included as part of a heart health check-up, the routine measurement of blood lipids is now done non-fasting and is only recommended every 5 years for people over the age of 40 years unless other risk factors (things like diabetes, cardiovascular disease, obesity, COPD, kidney and inflammatory disease) are present. In the 2021 Canadian Cardiovascular Society Guidelines the approach is focused on making collaborative treatment decisions where both the physician and patient work together to make a plan for lowering cholesterol levels, including the use of lifestyle changes and statin and non-statin drugs. To do so, the recommendations include focusing on the use of non-high density

Continued on page 20...



lipoprotein cholesterol (non-HDL-C) or Apolipoprotein B (ApoB) levels rather than low density lipoprotein (LDL) levels, as was previously used as the key decision-making blood test. Both ApoB and non-HDL-C are thought to be more accurate markers of total blood lipid levels and lipid related cardiovascular risk. In addition, the new recommendation is to include a once-in-a-lifetime measure of another lipoprotein (Lp(a)) which is genetically determined and which provides information on the inherited predisposition for cardiovascular disease. The 2021 review also included an analysis of whether the use of over-the-counter omega-3 polyunsaturated fatty acid (PUFA) supplements such as fish oil, could reduce cardiovascular disease risk. Using very large and long-term databases the conclusion was that no benefit could be shown from taking these dietary supplements.

Heart Attack

Heart attacks can be caused by a number of different mechanisms, but new evidence shows that one of the most common types occurs most frequently in the winter months. These heart attacks are caused by atherosclerosis (a disease that develops when inflammation and high cholesterol in the blood lead to the deposit of this fat on the inside of blood vessels). A heart attack can occur if the fatty plaque deposits inside of the blood vessels supplying the heart break off and block blood flow, starving heart muscle of oxygen. In people where this occurred, blood pressure was also higher in the winter. One reason why winter increases the rate of these heart attacks might be because of the way blood flow to the hands and feet is reduced to conserve heat when out in the cold, which would raise blood pressure because all that blood is now in a smaller circulatory area. Another theory is that people eat more fatty and salty foods in cold weather, or even exercise less when it's cold and wet outside, all of which lead to higher blood pressures. Another possibility is that people

often get more infections in the winter including the flu, which raises the level of inflammation in the body. It's known that plaque rupture is also associated with inflammation.

In contrast, heart attacks caused by plaque erosion were higher in the summer. In this type of heart attack, there is little or no fatty deposit and high cholesterol levels are not a contributing factor. Instead the muscle on the inner wall of the blood vessel interacts with the clotting system form a blood clot, which then reduces blood flow in the vessel. The theory here is that dehydration stresses the insides of the blood vessels more, which would then cause more plaque erosion. Scientists don't know for sure which of these mechanisms cause the seasonal increases in heart attacks, but making sure to keep your hands and feet warm and limit your intake of salty, fatty foods in the winter as well as staying well hydrated won't hurt!

What's still true

Choosing healthy behaviours is still the first and strongest choice in cardiovascular disease prevention and a healthy lifestyle remains key in reducing the progression and severity of these life-threatening conditions. It's thought that 74% of strokes could be prevented by lifestyle interventions. Data from study after study shows that in addition to the traditional risk factors for cardiovascular disease (abnormal lipid levels, hypertension, smoking, and diabetes), things like abdominal obesity, dietary habits, alcohol consumption, and physical inactivity, are strong risk factors for heart attacks and strokes that can be changed in all ages, ethnicities and genders. What is newer is our understanding that mental and emotional health are also extremely important. Lowering stress through relaxation practices, getting enough sleep, learning good communication and coping strategies and building a network of supportive relationships as well as spending time out of doors in green spaces have all been shown to be beneficial in preventing and

reducing the severity and progression of chronic diseases like cardiovascular disease.

The question of what exactly is a healthy diet has also been re-examined and in spite of the controversy around ketosis diets and saturated fats, the data continues to support a Mediterranean style diet low in salt and sugar with plenty of vegetables and fruits. These kinds of diets are made up of mostly unprocessed foods, with limited animal protein and lower fat dairy products. Instead, they include plant-based proteins like legumes, whole grains, olive oil and nuts and lots of fibre.

These are choices that each of us can begin to make today that will have real impact on our risk of developing cardiovascular disease, and will lower our risk of dying of a heart attack, heart failure or stroke should we already have high blood pressure or problems with our heart. If you are interested in getting support to make some of these changes there is a new virtual program available free of charge in British Columbia through your family practice physician or self referral. HealthSteps is a wellness program that provides customized coaching for lifestyle interventions to reduce the risk of chronic diseases. Trained coaches provide one-on-one support to help make long-term changes that will directly improve health. For more information or to sign up visit their [website](#).

Sources:

- 1 [BCCDC COVID Report](#): One Year of the Pandemic in BC
- 2 [StatsCan Study](#): The effect of COVID-19 on physical activity among Canadians and the future risk of cardiovascular disease 🇨🇦

DRB Contracting Ltd. Takes Safety to Heart

Heart disease is the second leading cause of death in Canada behind cancer and strokes are the third leading cause of death. Both heart disease and strokes are related to cardiovascular health. Currently, around 2.4 million adult Canadians aged 20 and over live with diagnosed heart disease.

Heart attacks and strokes are life-and-death emergencies where every second counts. They can strike at anytime, in a moment when you least expect it. Being prepared to jump into action is one of the most important factors to saving a victim's life.

DRB Contracting Ltd, a family-owned and operated business run by Darryl Braaten and Anita Renwall in Clearwater, BC, have been a SAFE Certified company for over 12 years. They take the safety of their worker's very seriously and have taken extra steps in improving workplace safety measures. An innovative idea from Anita, the company's office administrator and safety officer, was to enhance their first-aid and safety kits by including a separate grab kit which is placed in all vehicle glove compartments, both the company and their personal vehicles, as well as in all lunch bags & logging equipment.

Each kit contains a laminated, double-sided SIGNS OF A STROKE and SIGNS OF A HEART ATTACK bookmark, a face mask, low-dose aspirin* for heart attack symptoms and a compression bandage. The kit is stored in a re-sealable Ziplock bag and has an extended shelf-life since the contents are not affected by heat or cold. The kits are meant to provide some additional equipment to provide better first aid treatment until the person gets professional medical aid.

*Aspirin can be an effective measure along with the other recommended first aid treatments for heart attacks. Always make sure the person is not allergic and hasn't been advised by their doctor not to take aspirin. Aspirin is not part of the first aid treatment for strokes.

This idea is cost-effective and easy to implement but can make all the difference to someone's life. Our thanks to DRB Contracting for sharing this safety tip and our hats off to them for making safety a priority.

Disclaimer: The Occupational Health and Safety Regulation contains the minimum requirements for first aid equipment. Proactive companies like DRB assess their workplace risks and supplement their equipment. Always check with a medical professional or qualified first aid training provider to ensure additional contents included in first-aid kits meet the recommended measures or treatments as suggested. 🧘

