Introduction:

You recently had a surgery to replace or repair, one or more of the valves in your heart. The risk of heart valve infection is greater for patients who have artificial valves, or who have had a heart valve repaired with artificial material.

Because of this, you must now take special steps to ensure that your valve(s) continue to work well and remain healthy.

This booklet will help you learn how to protect your valves from infection. This type of infection is known as **Endocarditis**.

**Your Heart and Valves:**

![Heart and Valves Diagram]

- Inner Lining of the Heart Chambers (Endocardium)
- Right Ventricle
- Left Ventricle
- Pulmonary Artery
- Aorta
What is Endocarditis?

Endocarditis is an infection that enters your blood stream and attacks the lining of your heart and valves. This lining is called the endocardium.

It can cause growths, holes, or scarring of the valve. This can result in serious damage to your valves and heart. If untreated, it can be life-threatening.

What Causes Endocarditis?

It is normal for bacteria to be found in the mouth, on the skin, in the bowel and in the bladder.

These bacteria often find their way into our blood but our body is usually able to protect us.

The endocardium (lining of the heart and valves) is normally smooth and stops bacteria from sticking to the heart and valves.

When a valve has been repaired or replaced, the endocardium is disrupted and bacteria may stick to these disrupted areas.
Who Can Get Endocarditis?

- It is more common in men than women
- It happens more often in people who are elderly or in poor health
- People with heart defects
- People who have had their heart valves replaced or repaired
- People who use intravenous drug users

What Can Happen to People With Endocarditis?

Endocarditis can cause serious damage to the heart valve(s). The damaged valves can prevent normal blood flow through and out of the heart. If the heart can no longer properly pump blood to the lungs and rest of the body, serious illness and even death can result.

Endocarditis can also lead to heart failure.

The growths that can occur on infected valves can break off and travel to the brain, lungs, kidneys, and liver, blocking off blood flow to these organs.

These traveling growths can spread the infection throughout the body.

Treatment:

Treatment for endocarditis will include antibiotics that will help to fight the infection. It can take up to 6 weeks for the antibiotic to kill the bacteria that are stuck to the valve(s) or heart lining.

You may need to stay in hospital so that you can be given antibiotics. Sometimes surgery may be required to fix damaged heart valves and heart structures.

Prevention:

Antibiotics may be given before some procedures and surgeries to help decrease the risk of getting endocarditis, BUT it does not guarantee you will never develop endocarditis.

Therefore it is important for you to continue to take care of your valve(s) and look out for any possible signs or symptoms of endocarditis.
Below are examples of procedures that **may** require antibiotics before the start of the procedure:

- Professional teeth cleaning or other dental work
- Surgeries involving the lungs, stomach, bowel, bladder, gall bladder, or prostate
- Tests such as scopes to look inside your lungs, bowels, or bladder.
- Procedures of infected tissue

**What Can You Do to Help Prevent Endocarditis?**

- **Always** tell your doctor, nurse practitioner and dentist of your replaced or repaired heart valve.
- **Ask** your doctor, nurse practitioner, dentist, or nurse if you are unsure if you need antibiotics before a procedure.
- **Carry** the wallet card that was given to you.
- **Check** with your doctor, nurse practitioner or dentist before your appointment to find out the type and amount of antibiotics you **may** need to take to prevent infection.
- **Take** good care of your teeth and gums. Brush your teeth at least twice a day with a soft brush, and visit your dentist every 6 months.
- **Twice** a year people with dentures should have checkups to make sure that their gums are healthy and their dentures fit properly.
How do I know if I have Endocarditis?

Call your Family Doctor or the Community Nurse Practitioner right away if you have:

- Severe fatigue or weakness
- Fever or chills, excessive sweating or night sweats
- Cough that will not go away
- Loss of appetite or unexplained weight loss
- Muscle or joint aches and pains
- Swelling of feet, legs or waistline
- Red skin spots on the palms of the hands or soles of the feet
- Small dark lines under the finger nails
- Dark yellow or red urine
- New rashes

If you cannot get an appointment right away, please go to the nearest Emergency Department.

Have someone drive you to the nearest Emergency Department, or call 911 if you have:

- Headache and confusion
- Sudden weakness in the face or limbs
- Sudden shortness of breath

If you have any questions, please write them down and feel free to ask your nurse, nurse practitioner or doctor.

For more information visit http://www.smgh.ca/care-services-support/library/

Click on the Health Library logo.

If you have a general health question or concern, and have nowhere to turn, call Telehealth Ontario, 1-866-797-0000. They can provide experienced health advice 24 hours a day, 7 days a week. It is confidential and there is no need to provide your health insurance number.
Name: __________________________ Surgery Date: ________________

Drug Allergy: _______________________________________________________

Valve Position: □ Aortic  □ Mitral  □ Tricuspid

Type of valve: □ Tissue  □ Mechanical  □ Ring

Anticoagulated with Warfarin? □ Yes  □ No

Anticoagulation Duration: ________________________________

The holder of this card may require prophylactic antibiotic therapy for the prevention of endocarditis.

Dental procedures for which prophylaxis is recommended:

*All dental procedures such as professional teeth cleaning and other dental work that involves manipulation of gingival tissue or the peri-apical region of teeth, or perforation of the oral mucosa.

Dental procedures for which prophylaxis is NOT recommended:

Routine anesthetic injections through non-infected tissue; taking dental radiographs; placement of removable prosthodontic or orthodontic appliances; adjustment of orthodontic appliances; placement of orthodontic brackets; and shedding of deciduous teeth and bleeding from trauma to the lips or oral mucosa.

Antibiotic prophylaxis is RECOMMENDED for all invasive diagnostic or therapeutic procedures. These include:

Gastrointestinal/genitourinary and other procedures involving the respiratory tract, infected skin, infected tissues just under the skin, or infected musculoskeletal tissue.

Please discuss the need for antibiotics with your doctor or dentist.
Recommended Antibiotic Prophylactic Regimens for Dental Procedures:

<table>
<thead>
<tr>
<th>Regimen - Single Dose 30 - 60 minutes before procedure</th>
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<tbody>
<tr>
<td><strong>Oral Agent</strong></td>
</tr>
<tr>
<td>Amoxicillin 2 grams</td>
</tr>
<tr>
<td><strong>UNABLE TO TAKE ORAL MEDICATION</strong></td>
</tr>
<tr>
<td>Ampicillin 2 grams IM or IV*</td>
</tr>
<tr>
<td>Cefazolin 1 gram IM or IV*</td>
</tr>
<tr>
<td>Ceftriaxone</td>
</tr>
<tr>
<td><strong>ALLERGIC TO PENICILLINS OR AMPICILLIN- ORAL REGIMEN</strong></td>
</tr>
<tr>
<td>Cephalexin 2 grams</td>
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<tr>
<td>Clindamycin 600 milligrams</td>
</tr>
<tr>
<td>Azithromycin 500 milligrams</td>
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<tr>
<td>Clarithromycin</td>
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<tr>
<td><strong>ALLERGIC TO PENICILLINS OR AMPICILLIN AND UNABLE TO TAKE ORAL MEDICATION</strong></td>
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<tr>
<td>Cefazolin 1 gram IM or IV*</td>
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<td>Ceftriaxone</td>
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<tr>
<td>Clindamycin 600 milligrams IM or IV*</td>
</tr>
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*IM—intramuscular; IV—intravenous

Adapted from: Prevention of Infective Endocarditis: Guidelines from the American Heart Association (2007)
http://circ.ahajournals.org/cgi/reprint/CIRCULATIONAHA.106.183095