PATIENT INFORMATION BOOKLET
FOR VENTRICULAR TACHYCARDIA
CATHETER ABLATION

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THE NORMAL HEART

- The primary function of the heart is to pump blood (and the oxygen and nutrients within blood), to all areas of the body.

- There are four main areas within the heart: two upper chambers called the "atria", and two lower chambers called the "ventricles".

- The atria collect blood from vessels leading from various parts of the body into the heart. This blood is then pumped from the atria into the ventricles. The right ventricle sends blood to the lungs to be nourished with oxygen, and the left ventricle pumps the oxygenated blood through arteries leading back to all parts of the body.

- In summary, the atria receive blood, and the ventricles pump blood. The regular beating (also known as “pumping”, “contracting” or “squeezing”) of the heart, moves blood throughout the body in this manner.
In a normal adult heart, there are between 60 to 100 heartbeats per minute which occur at regular intervals. This is known as “sinus rhythm” or “normal heart rhythm”. It is normal, with exercise and stress, for the heart rate to increase above 100 heartbeats per minute.

What makes the heart beat?....the heart has it’s own electrical system. Heartbeats are controlled by automatically-initiated electrical impulses (signals) traveling through the heart.

These electrical signals, are initiated from the heart’s “Sinoatrial node” or “SA node”, located in the right atrium. They activate or cause the muscle cells within the heart to contract (pump).

In the normal heart, these electrical impulses initiate at the SA node, then flow through the right and left atria, and then flow down through the “AV node”, which is the only pathway leading to the ventricles. The AV node is a very important part of the electrical system of the heart, as it helps to regulate the heart rate by preventing rates from going too fast. The movement of the electrical signal through the ventricles causes them to contract and pump blood to the lungs and the rest of the body.

ARRHYTHMIAS OF THE HEART

When something goes wrong with the heart’s electrical system, the heart does not beat at a regular rate or rhythm.

Abnormal heart rates and rhythms are known as “arrhythmias” (pronounced: a-rith-mee-uhs) and can be either too slow (bradycardias) or too fast (tachycardias).

When there is an arrhythmia present, the heart cannot adequately pump an appropriate amount of blood to the body.

Arrhythmias that are the result of a damaged or malfunctioning heart can be dangerous or fatal. This is why it is important to have arrhythmias accurately diagnosed.
DIAGNOSIS OF ARRHYTHMIAS

- The doctors in our clinic are Cardiologists who specialize in the electrical function of the heart. These specialists are known as Electrophysiologists.

- To diagnose an arrhythmia, your doctor may ask questions about your past health, perform a physical examination, order blood tests and order other specific tests, depending on the type of arrhythmia suspected. These tests may include:

  - Echocardiogram (a non-invasive ultrasound image of your heart that will show how well your heart and heart valves are functioning)

  - 24 or 48 hour electrocardiogram (ECG), more commonly known as a Holter monitor (non-invasively records the electrical activity in your heart during normal daily activity). This is the best way to determine if a patient’s symptoms are due to an arrhythmia, but a recording must be taken during an episode. The doctors can determine the type and severity of the arrhythmia based on the readings from the ECG.

    Illustration of patient wearing a 24-hour holter monitor

  - Event Monitor: (the same as holter monitor but you will turn it on yourself when you are experiencing palpitations in order to record your heart rhythm).

  - A “stress test” (you will be asked to walk on a treadmill while your heart is being monitored or your heart may be “stressed” with drugs if you are not physically able to exercise).

  - Electrophysiology study (a minor invasive procedure where a catheter is inserted into the heart, through a vein in the leg or neck, to record specific electrical activity inside the heart in order to pinpoint the type and location of the arrhythmia)
VENTRICULAR TACHYCARDIA (VT)

- Ventricular Tachycardia, is also known as VT or “V-Tach”. With VT, the electrical signals in the ventricle(s) (lower chambers of the heart) do not follow the normal route or pathway through the heart.

- VT is a condition where the heart experiences at least 3 consecutive rapid heartbeats (at a rate of over 100 beats per minute) in one of the ventricles.

- The ventricles, during VT, can beat at rates ranging from 100 - 300 beats per minute. VT can be experienced as spontaneous bursts of rapid beats, or as a sustained rapid rhythm, lasting for several seconds or minutes.

- VT is often categorized by the length of each “episode” (of tachycardia). If the episode stops by itself in less than 30 seconds, then it will be considered a “Non-sustained VT”. If it lasts more than 30 seconds, even if it terminates on its own, it will be considered a “Sustained VT”.

- VT can be life-threatening as it may reduce blood pressure causing lightheadedness or sudden loss of consciousness, particularly when the VT is very fast and patients have underlying heart diseases. VT may also degenerate into a condition known as “Ventricular Fibrillation” or “V-Fib” which causes rapid irregular trembling of the heart. This chaotic trembling or beating can lead to cardiac arrest, (when the heart stops beating altogether), followed by death. VT and VF are major causes of sudden cardiac death.

There are two main types of VT:

- **Monomorphic VT:** In Monomorphic VT the appearance of all the beats on the electrocardiogram (ECG) match each other. All of the beats look the same because the electrical impulse initiating the heartbeat is either being generated from a single point in a ventricle, or is due to a re-entry circuit within a ventricle. The most common Monomorphic VT is related to scars in the heart muscle from prior heart attacks.
An ECG reading showing Monomorphic VT. The waveforms of electrical impulses (heartbeats) are all the same in appearance. This indicates that the electrical impulses that are initiating/perpetuating the VT, are emanating from the same location within the heart.

- **Polymorphic VT** is characterized by changes in the appearance of beats on the electrocardiogram (ECG) reading. Polymorphic VT can also arise in patients with heart disease from prior heart attacks or inflammation of the heart muscle. In some patients, polymorphic VT arises from drug toxicity and electrolyte abnormalities (imbalanced blood levels of potassium, magnesium and calcium). Polymorphic VT tends to be more unstable than monomorphic VT and can degenerate to ventricular fibrillation; thereby causing sudden death.

An ECG reading showing Polymorphic VT. The waveforms of electrical impulses (heartbeats) are all different in appearance. This indicates that the electrical impulses that are initiating/perpetuating the VT, are emanating from various locations within the heart.
CAUSES OF VENTRICULAR TACHYCARDIA (VT)

- VT typically occurs among people who have structural heart defects and those whose hearts have been strained and/or damaged by heart attack, heart disease, or heart surgery.

- VT can develop as an early or late complication of a heart attack when the electrical signals that trigger heart beats are disrupted. Heart attacks often scar portions of the heart muscle. These scars cause electrical signals to follow abnormal pathways around them, sometimes leading to continuous circuits, which causes rapid and continuous contractions (heartbeats).

- VT may occur in patients with:
  - Heart Attack (scar tissue may form in the muscle of the ventricles, days, months, or even years after a heart attack)
  - Cardiomyopathy or myocarditis (inflammation of heart muscle)
  - Heart failure
  - Heart surgery
  - Valvular heart disease
  - Anti-arrhythmic medications
  - Electrolyte imbalance, such as a low potassium level
  - Genetic or inherited predisposition to VT
  - Idiopathic (unknown cause)
SYMPTOMS OF VENTRICULAR TACHYCARDIA (VT)

- Even at rates of 150 – 200 beats per minute, VT may cause minimal symptoms in some people, while others can be very symptomatic. For the majority of cases, patients at least feel palpitations. Even though few or no symptoms may be experienced, VT can be extremely dangerous.

- Symptoms may start and stop suddenly. When the heart beats very quickly, it does not effectively pump an adequate amount of blood to the rest of the body. This causes many symptoms related to low blood pressure.

- Some symptoms of VT, when the heart is beating rapidly, include:
  - Sensation of feeling the heart beat (palpitations)
  - Sensation of heart racing or fluttering
  - Chest discomfort (angina)
  - Light-headedness or dizziness
  - Shortness of breath
  - Loss of consciousness (fainting/syncope)

- Some patients have implantable defibrillators (Implantable Cardioverter Defibrillators - ICDs) because they have suffered a cardiac arrest from VT or VF in the past, or they may be at high risk of developing VT or VF. These ICDs are designed to deliver pacing therapy and/or an electric shock to the heart during an episode of VT or VF to “electrically reset” the heart. Patients with an ICD may experience a shock from their device if they develop VT or VF. If a shock is delivered, it is supposed to stop the VT or VF before patients feel unwell or lightheaded.
RISKS OF VENTRICULAR TACHYCARDIA (VT)

- Complications and risks associated with VT vary in severity depending on the rate and duration of the rapid heart rate episode, and the existence of other heart conditions.

- As mentioned earlier, VT can degenerate into VF which causes rapid irregular trembling of the heart. This chaotic trembling or beating can lead to cardiac arrest, (when the heart stops beating altogether), followed by death.

- Some patients with an ICD may receive a shock from their device when they develop VT or VF. Receiving an ICD shock for VT or VF does not damage the heart, and is in fact life saving. However, receiving multiple shocks in a short period of time is very concerning because this indicates that the patient’s heart is electrically unstable. Such patients need urgent medical attention and therapy to improve the electrical stability of their heart in order to reduce the risk of recurrent ICD shocks.
TREATMENT OPTIONS FOR VENTRICULAR TACHYCARDIA (VT)

- VT is typically treated when it causes symptoms or results in multiple ICD therapies (pacing and/or shocks).
- A patient’s treatment choices will depend on the cause and type of VT, severity of symptoms, tolerance and responsiveness to medications, and risk of sudden cardiac death.
- Treatment options for VT primarily address stopping a VT episode and preventing future VT episodes, including ICD shocks, from occurring.
- The treatment options for VT include (i) antiarrhythmic medications, (ii) VT catheter ablation, and/or (iii) implantation of an ICD (if not already done).

More details for each of these treatment options can be found below....

- **Arrhythmic Medication**

  - **Rhythm-controlling medicines** (antiarrhythmics) may help prevent VT episodes in the first place, but also may help to return the heart to normal sinus rhythm if VT develops. For some patients, these drugs are initially effective, but VT recurrences may be experienced after a period of time. These medications may also cause side effects such as nausea and fatigue. Some of these medications include Amiodarone, Sotalol, Propafenone, and Mexilitine.

  - Antiarrhythmic medications all have potential side effects. For instance, Amiodarone is a strong and very effective antiarrhythmic medication. However, Amiodarone may also have potential long term risks including scarring of the lungs, liver, and thyroid gland. In order to reduce these risks with Amiodarone, blood tests need to be performed every 3-6 months by your Cardiologist or family doctor to make sure there is no damage to your thyroid gland or liver. Sotalol is another commonly used antiarrhythmic medication. Although it does not work as well to prevent VT compared to amiodarone, it has fewer long-term side effects. Sotalol may not be tolerated by patients with poor heart muscle function. Patients should be aware of these risks and should discuss them with their doctor.
• **Implantable Cardioversion Defibrillators (ICDs)**

- ICDs are small devices that are implanted under the skin below the collarbone. The ICD is connected to the heart with wires so that it can continuously monitor the heart's rhythm.

- Your doctor will program the ICD so that when it senses a VT episode, it will automatically administer an electrical shock to stop the episode. The ICD may also be programmed to send a rapid burst of paced beats to interrupt the VT beats without receipt of a shock.

- Implantation of an ICD also aims to reduce dependence on anti-arrhythmic drugs but these drugs may still be required to reduce the frequency at which the ICD administers shocks. **This is because ICDs do not prevent VT, but merely treat VT.** Sometimes, catheter ablation is used instead of, or in combination with antiarrhythmic drugs, to reduce the frequency of ICD shocks.

- Clinical studies have shown ICDs to be very effective at stopping life-threatening VT episodes, however patients must be aware that ICDs are associated with a low risk of infection, device malfunction/failure, and lead dislodgement. In addition, ICDs can sometimes deliver shocks inappropriately for a non-life threatening rapid heart rhythm that is mistaken to be VT.
Illustration of an implanted ICD device

• **Catheter Ablation**

- Despite antiarrhythmic medications, many patients have recurrent and debilitating symptoms from VT and/or ICD shocks. At the same time, many who experience improvements with antiarrhythmic drug therapy are concerned about long-term drug side effects. In these cases, a procedure known as catheter ablation may be recommended if the patient is a suitable candidate.

- Catheter ablation is a moderately invasive heart procedure that attempts to control the underlying cause of VT, namely the abnormal electrical triggers and pathways that initiate and maintain VT. It is important to understand that catheter ablation aims to control the majority of VT episodes, but may not cure VT completely.

- The majority of patients who have undergone catheter ablation, experience a substantial long-term reduction in the number of VT episodes.

- If the patient has a type of VT that can cause sudden cardiac arrest, an ICD is usually implanted. With catheter ablation, even if the procedure was deemed successful, the ICD is generally left in (or one may be implanted if the patient had not already received one), as extra protection, given that the consequences of an unexpected VT episode could be fatal.

- VT catheter ablation has been performed worldwide since the early 1990’s, and University Health Network does the largest number of such procedures in Canada.
The success rate of VT catheter ablation depends on the severity of heart disease, but in general 70% of patients have no VT recurrence after undergoing VT catheter ablation when followed for 6 months. In two-thirds of patients, the number of VT episodes is reduced by greater than 75%. Most patients continue to take some antiarrhythmic medication following VT catheter ablation, but the dose can generally be reduced; thereby avoiding potential side effects.

Catheter ablation is performed by inserting thin, flexible wire-like tools (called “catheters”) into the blood vessels (artery and/or vein) of the patient’s leg. The catheters are then threaded through the blood vessels into the heart with the use of x-ray imaging.

The doctor will then attempt to find abnormal tissue and electrical pathways in the ventricle(s) of your heart, that are believed to initiate and perpetuate the VT episodes.

To ablate and destroy the abnormal tissue and electrical pathways, a burst of radio-frequency energy (a low-voltage, high-frequency current) is emitted from the tip of the catheter at the appropriate site.

Once ablated, a small scar or lesion forms within the tissue through which electrical signals can no longer flow. Also, this scarred tissue will not be able to initiate any abnormal electrical signals.
Illustration of high-frequency energy being emitted from the tip of the catheter into the heart tissue to create a scar/lesion through which electrical signals cannot pass. (image courtesy of Biosense Webster)

- Catheter ablation for VT usually takes 2 to 4 hours but can take up to 6 hours to perform. The time will vary depending on the number of locations within the heart that are involved in triggering and perpetuating the VT.

- The patient is given adequate sedation to relieve any potential discomfort. In some cases, a general anesthetic is administered and the airway is protected with a breathing tube. This ensures that the patient does not feel any discomfort during the procedure.
For some patients, catheter ablation is the most effective treatment option for their VT, particularly when antiarrhythmic medications have not worked and they are having recurrent ICD shocks. However, it is important to keep in mind that catheter ablation is an invasive procedure associated with a complication rate of 10%. These complications commonly include:

- Stroke (1-2%)
- Heart attack or heart failure (1%)
- Serious perforation of the heart muscle (1%)
- Injury to blood vessels (artery and/or vein) in the leg (5%)
- Cardiac arrest or death (1%)

In some patients, catheter ablation cannot access the area of the heart responsible for the VT, when approached from the blood vessels in the leg. In these cases, catheter ablation is performed by accessing the area just outside the heart, known as the epicardium. This requires careful insertion of a needle under the rib cage to access the epicardium. This approach has a complication rate of approximately 5% including:

- Heart attack or heart failure (1%)
- Serious perforation of the heart muscle (1%)
- Injury to liver or diaphragm (breathing muscle) (1%)
- Injury to lung or intestine (1%)
- Cardiac arrest or death (1%)

Patients should also be aware that for some, VT may temporarily worsen after their catheter ablation for a short period of time.

Patients considering catheter ablation should have an understanding of these risks, and should discuss them with their doctor.
Catheter Ablation Treatment Summary:

The chart below summarizes the treatment options described above in relation to treatment goals and effects on VT:

<table>
<thead>
<tr>
<th>TREATMENT</th>
<th>GOAL</th>
<th>EFFECT ON VT</th>
<th>INVASIVENESS</th>
<th>ON-GOING DRUGS REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhythm Control Drugs</td>
<td>To prevent VT or VF recurrences; thereby reducing ICD shocks</td>
<td>Suppresses electrically unstable circuit</td>
<td>Non-invasive</td>
<td>Drugs req’d indefinitely and ICD device may also be required</td>
</tr>
<tr>
<td>(Anti-arrhythmics)</td>
<td></td>
<td>causing VT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catheter Ablation</td>
<td>To prevent VT or VF recurrences; thereby reducing ICD shocks</td>
<td>Destroys the electrical circuits in the heart</td>
<td>Moderately invasive</td>
<td>Depending on success,,, antiarrhythmic drugs. may be discontinued or their dose reduced</td>
</tr>
<tr>
<td>ICD Device Implant</td>
<td>To treat VT or VF episode with pacing or shock in order to prevent sudden cardiac death</td>
<td>Terminates current VT or VF episode (no effect on disease or future episodes)</td>
<td>Moderately invasive</td>
<td>Antiarrhythmic drugs may still be required indefinitely</td>
</tr>
</tbody>
</table>

Regardless of the VT treatment option you decide upon, it is important that you do not stop or alter your antiarrhythmic medications until directed to do so by your doctor or nurse practitioner.
If Catheter Ablation is your Choice:

Preparing for Catheter Ablation:

- You will be given specific instructions regarding medication prior to your procedure. If you are taking an antiarrhythmic drug, you may be asked by your doctor to reduce the dose or stop it all together 1-4 weeks before catheter ablation.

- You will be required to come to the pre-admission clinic 7–14 days prior to your procedure. All the necessary preparations and instructions for the day of your procedure will be discussed with you during this appointment. It is also an opportunity for you to ask any questions, if you would like to come with a prepared list. Most patients are admitted on the morning of their procedure.

- If you are taking Coumadin (blood thinner), you will be asked to discontinue it 1 week before catheter ablation. During this time, you may be put on a blood thinner known as Heparin (which may be dispensed under another name). Heparin is injected every day for 5 days, and you will be given full instructions about Heparin administration by our hospital’s Thrombosis Clinic. Your doctor will decide if you need to take Heparin before your procedure.

- You may have an echocardiogram performed a few weeks before catheter ablation. This procedure is done as an outpatient. The echocardiogram uses ultrasound to take pictures of your heart and to ensure that there is no blood clot in the ventricles where catheter ablation will be performed.

- You may have a Doppler study of your legs performed a few weeks before catheter ablation. This procedure is done as an outpatient. The Doppler study uses ultrasound to take pictures of the blood vessels of your legs to ensure that they are large enough to permit the catheters to be inserted for your catheter ablation procedure.

- You may have a coronary angiogram performed a few weeks before catheter ablation. This procedure is done as an outpatient. The coronary angiogram takes pictures of the blood vessels in your heart using dye injected from a catheter placed around the heart. If there are significant narrowings in blood vessels of your heart, you may require a procedure to open the narrowings (angioplasty) before undergoing catheter ablation.

- Your doctor will ask that you not consume any food or liquids from midnight on the evening prior to your procedure date.
**During Catheter Ablation**

- You will be given sedation (continuous intra-venous anesthesia) and pain-relievers for the procedure. It is important that you inform your doctor, at any time during your procedure, if you feel pain and/or discomfort so that your sedation level can be appropriately adjusted. Typically, patients have very little or no pain/discomfort, and they recall very little, if any, of the procedure. If sedation is not enough, you may also receive a general anesthetic with a tube inserted in your airway to help you breath. This may be necessary to better control your blood pressure and discomfort during the procedure.

- You will have a catheter inserted in your bladder so it is easier for you to pass urine while you lie flat for the 2-4 hour procedure, and then the 4 hour post-procedure recovery period.

- Please note that for male patients, the chest and back areas will be shaved to provide a clean, smooth skin surface upon which to apply large patches. These patches help to record electrical signals coming from the heart during the procedure. Everyone involved in your procedure will be wearing sterilized clothing.

- The catheters for the procedure (usually 2-4 in total for VT ablations), will be inserted through blood vessels in your groin (artery and/or vein) or your neck (or both). These areas need to be cleaned and shaved, which will be done by nurses. You will receive a local anesthetic so that you do not feel any pain when the catheters are being inserted. You will, however, feel pressure at the insertion sites, which is normal.

- You will be given a blood thinning drug, known as heparin, to reduce the risk of blood clot formation and stroke, during your procedure.

- The doctor will electrically stimulate your heart during your procedure with electrodes located on the ends of the catheters inside your heart. You will feel your heart racing and you may even feel the same symptoms as during a VT episode. You will be in a safe and controlled environment while these symptoms are being experienced and the activity being induced in your heart will help your doctor to confirm and locate your VT. You may receive an electrical shock to stop the VT if it lowers your blood pressure too much or you feel chest discomfort.

- The doctor performing your procedure may use a computer-aided navigation and mapping system to “see” inside your heart. This system will enable the doctor to build a three-dimensional “map” of your heart that will help the Electrophysiologist performing your procedure, to find the appropriate areas within your ventricle(s) to ablate.
Recovery from Catheter Ablation while in the Hospital:

- Once your procedure is completed, the catheters will be removed from your body but depending on your doctor’s approach, the catheter sheaths (hollow tubes providing access into the leg veins) may be left in for several hours until your blood returns to its normal state. It is important that you remain still during this process and do not move or bend your legs. Pressure will be applied at the catheter insertion sites to minimize bleeding.

- You will be in bed and asked to limit your movement, for approximately 4 hours after the catheter sheaths have been removed.

- You may undergo another echocardiogram the following day while you are still in the hospital.

- If you are feeling well and if your tests are satisfactory to your doctor, you can go home 1-3 days after your catheter ablation procedure.

- It is important to restart your medications after your catheter ablation, and your doctor or nurse practitioner will provide details. Depending on the success of the procedure, your doctor may reduce the dose of your antiarrhythmic drug or discontinue it entirely at the time of your hospital discharge. You may also be asked to start an orally-ingested blood thinning medication known as Coumadin, once you return home, for a minimum of 6 weeks. For those patients not required to take Coumadin, regular ASA (Aspirin) will be required for a minimum of 6 weeks.
Back At Home

- **Activity:**
  - Once back at home, you will still need to limit your activity and stay away from ALL strenuous activity for one week. This will mean that you should not partake in any aerobic/fitness exercise (which would include running, cycling or climbing stairs quickly), and you should not lift anything heavier than 10 lbs for one week. You will then be able to go back to your previous level of activity.
  - It is also important to understand that your “normal” electrical system should continue to function as before the catheter ablation procedure. Your heart will work at rest, or during exercise, as it did before the catheter ablation procedure. The level of exercise should be discussed with your doctor.

- **Return to Work:**
  - If you work, and your work is not physically demanding, you may be able to return to work after a few days. If your work is physically demanding, work should be delayed for one week, and for some, depending on how you feel, up to two weeks may be required.

- **Driving:**
  - Each case is different but you must inquire with your doctor or nurse practitioner as to if/when you may return to driving.

- **What to Watch For:**
  - It is not uncommon for some bruises to develop at the site(s) where the catheters were inserted in your leg. You should, however, contact your doctor immediately if these sites start to swell or remain painful.
  - It is also normal to experience chest discomfort (especially when inhaling deep breaths) for up to a week after your procedure (caused by inflammation).
  - You should contact your doctor immediately if you experience worsening chest discomfort or persistent chest discomfort (more than one week).
- If you experience an ICD shock after your catheter ablation procedure, please contact the ICD clinic at UHN. If you experience multiple ICD shocks within a few hours, call “911” and go to your nearest emergency department.

- Follow-up:

  - Your doctor will see you again in 6-8 weeks after your ablation to see how you are doing. If you continue to experience VT, you may require more antiarrhythmic drugs or possibly a second “touch-up” catheter ablation procedure. Your doctor will reassess your need for antiarrhythmic medications during the followup clinic visit.

If you have any questions or issues following your catheter ablation procedure, please contact us:

  - Nurse Practitioner (Nancy Marco): Mon-Fri 9am-5pm at 416-340-4800 ext 4532
  - For emergency situations after working hours or on weekends, please go to your nearest emergency department.

**SUGGESTED RESOURCES for more information about VT:**

- [www.hrs.online.org](http://www.hrs.online.org) (go to “Patient Education” and “Heart Rhythm Disorders”)*
Summary – VENTRICULAR TACHYCARDIA (VT)

The following is a summary of this information booklet in the format of FAQ’s (Frequently Asked Questions).

**Will catheter ablation permanently cure my Ventricular Tachycardia?**

*It is very important to understand that VT catheter ablation does not cure VT in the majority of patients. The success rate of VT catheter ablation depends on the severity of heart disease, but in general half of patients have no VT recurrence after undergoing VT catheter ablation when followed for 1 year. In two-thirds of patients, the number of VT episodes is reduced by greater than 75%.*

**Will I be able to stop my medications?**

*Depending on the success of the catheter ablation procedure, your doctor may reduce the dose of your antiarrhythmic drugs or discontinue them entirely at the time of your hospital discharge. Most patients, however, will need to stay on their medication initially following their ablation but a decision will be made during follow-up appointments as to whether or not medications can be stopped.*

**What is the risk to me, if I decide not to go ahead with catheter ablation?**

*There are multiple risks with recurrent VT. Firstly, the antiarrhythmic medications used to prevent VT episodes can have harmful side-effects. Recurrent shocks from ICDs can cause psychological stress and anxiety disorders, and possibly even depression. Your decision to seek catheter ablation treatment for your VT should be based on how you feel and any side effects from drug and/or ICD therapy.*

**Will I be asleep during my catheter ablation procedure?**

*You will be sedated adequately to make you feel very calm, and you will be given an adequate amount of medication so that you will not feel pain. There may be some discomfort initially from the injection of a local anaesthetic into the upper thigh and/or neck where the catheters are inserted at the commencement of the procedure. If sedation is not enough, you may also receive a general anesthetic with a tube inserted in your airway to help you breath. This may be necessary to better control your blood pressure and discomfort during the procedure.*
How long will I be in the hospital after my catheter ablation?

*The standard length of stay in the hospital after an ablation procedure is one to three nights.*

Will my heart be damaged from this procedure in any way?

*Catheter ablation for VT is an invasive procedure with a low risk of damaging the heart as follows: heart attack (1%), perforation of the heart muscle (1%), cardiac arrest (1%).*

What should I do if I experience VT episodes after my catheter ablation?

*If you experience rapid palpitations or lightheadness that may be due to VT, you should call “911” and proceed to your nearest emergency department. If you experience an ICD shock that may be due to VT, you should call the ICD clinic at UHN and a physician will try to see you in the next 24-48 hours. If you experience multiple ICD shocks within a few hours that may be due to VT, you should call “911” and proceed to your nearest emergency department.*