# Taking Control of Your Risk Factors

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While recovering from your heart attack or heart surgery, look toward the future. You can help prevent future heart problems by reducing risk factors that may have contributed to your heart disease.

## SECTION 1

## Heart Healthy Living

- 1. Identify your heart risks, such as high blood cholesterol, high blood pressure, smoking, lack of exercise and high stress lifestyle.
- 2. What can you do to reduce these risks? Changing one risk factor will have a positive effect on others.
- 3. Establish priorities and set realistic goals for yourself.
- 4. Use this notebook and the staff of The Heart Center as well as your physicians to get started and guide you through successful change.

## **SECTION 2**

## Uncontrollable Risk Factors

Uncontrollable risk factors cannot be changed. You must live with them.

However, it is important to be aware of what they are, because they may increase your risk of coronary heart disease.

- ✔ Family history of stroke, vascular disease or coronary artery disease
- 🖌 Age
- ✓ Gender (male/female)

If one or more of these uncontrollable risk factors applies to you, it's even more important to change the controllable risk factors.

## Family History

If your parents, grandparents or siblings have heart disease or vascular disease, or have suffered a stroke, your risk of heart attack increases. The younger family members were when they developed these health problems, the greater your risk. In addition, you may also inherit a tendency for high blood cholesterol levels.

## Age

The older you get the greater your chance of developing heart disease. Coronary artery disease is associated with aging. The longer we live, the longer our arteries are subject to the wear and tear of daily living. They are also exposed to other risk factors, like high blood pressure, and diabetes that contribute to the development of heart disease.

## Gender

Men have a higher risk of developing heart disease than women. However, after menopause the risk for women begins to catch up with men. Estrogen, the female hormone, seems to play a protective role by raising the "good" cholesterol, high density lipoprotein (HDL).

## SECTION 3

## Controllable Risk Factors

Controllable risk factors are those you have some control over by changing your habits. The good news is that changing one behavior usually has an impact on several of your risk factors. These risk factors include:

- ✓ High blood pressure (hypertension)
- ✓ Smoking
- ✓ High blood cholesterol levels (high fat diet)
- ✔ Lack of exercise
- ✔ Stress
- ✔ Diabetes
- ✔ Obesity
- ✔ Obstructive Sleep Apnea

## **High Blood Pressure**

High blood pressure (hypertension) may damage artery walls and speed plaque buildup. It also makes the heart have to work harder. It is best to keep your resting blood pressure below 140/90.

#### What you can do ...

✓ take medicines as prescribed, even when you feel well.

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- ✔ quit smoking
- ✓ exercise regularly
- ✔ eat a low-salt (sodium) diet
- ✓ control your stress
- ✔ lose weight, if needed

#### Smoking

Cigars, cigarettes, pipes, and smokeless tobacco all contain nicotine. Nicotine, a highly addictive drug, has three immediate physical effects: it increases heart rate, elevates blood pressure, and constricts blood vessels. Unlike the increased heart rate from physical activity, the increased heart rate caused by nicotine continues even when the person is at rest.

Smokeless tobacco: Spit tobacco and snuff are not safe alternatives to smoking. The amount of nicotine absorbed from smokeless tobacco is 3 to 4 times greater than the amount from a cigarette.

Smokers also have carbon monoxide in their blood, which reduces the oxygen available for your body to use. It also makes your blood more likely to clot, and increases the build-up of plaque in the arteries. Your risk of heart disease goes up directly with the number of cigarettes you've smoked over your lifetime. Even smoking as few as four cigarettes a day can damage your blood vessles. Your risk of heart disease begins to go down as soon as you quit. Also, avoid secondhand smoke. It produces the same harmful poisons as smoking.

#### What You Can Do ...

- ✔ Quit smoking (classes and support groups help)
- Ask your doctor about nicotine replacement
- Control your stress (try deep breathing ... instead of a cigarette)
- Exercise regularly (go for a walk when you have the urge to smoke)



#### **Initial Steps to Quitting**

When a cardiac event brings you to the hospital, your physician will counsel you to quit smoking. This is an ideal opportunity to make this your "Quit Day". Your physician may also prescribe oral medication or nicotine replacement to help support your smoking cessation efforts.

No matter how much or how long you've smoked, your risk of heart disease goes down when you quit. The

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following steps need to begin immediately after you are discharged from the hospital:

- Make your home a non-smoking environment
- Make your vehicle a non-smoking environment
- ✓ Do not buy any more cigarettes, packs or cartons
- ✓ Do not carry cigarettes, matches or lighters on your person (pockets, purses)
- ✓ Tell everyone you know that you've quit
- ✓ Drink water or fruit juice instead of coffee
- ✓ Substitute healthy activities/foods in place of the cigarette
- ✓ Avoid temptation by staying away from situations you associate with pleasurable smoking

#### Tips to help you quit!

- For the first few days after you quit, spend as much free time as possible in places where smoking is prohibited – libraries, museums, theaters, churches.
- 2. Avoid alcohol, coffee and other beverages that you associate with smoking.
- 3. Strike up a conversation instead of a match for a cigarette.
- If you miss the sensation of having a cigarette in your hand, play with something else – a pencil, a paper-clip, a marble.
- 5. If you miss having something in

your mouth, try cinnamon sticks or celery.

- 6. Avoid temptation by staying away from situations you associate with pleasurable smoking.
- 7. Find new habits and develop a non-smoking environment around you.
- 8. Tell everyone that you are now a nonsmoker.
- Avoid resuming the habit by anticipating future situations/crises that might lead to smoking and assert your reasons for not giving in.
- 10. Take deep rhythmic breaths (similar to smoking) to relax.
- 11. Remember your goal and the fact that the urge will eventually pass.
- 12. Think positive thoughts and avoid negative ones.
- 13. Brush your teeth.
- 14. Do brief exercise (stretches, knee bends, a short walk.)
- 15. Call a supportive friend.
- 16. Compile a list of "Urge Activities" and start at the top when it hits.
- 17. Eat several small meals. This maintains constant blood sugar levels and helps prevent the urge to smoke. Avoid sugary or spicy foods that trigger a desire for cigarettes.
- Above all, reward yourself. Plan to do something fun for doing your best.

#### When you get the "crazies"

1. Keep oral substitutes handy: carrots, pickles, apples, celery,

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raisins, gum.

- Take 10 deep breaths, hold the last one while lighting a match. Exhale slowly and blow out the match. Pretend it is a cigarette and put it out in an ashtray.
- 3. Take a shower or bath if possible.
- 4. Learn to relax quickly and deeply. Make yourself limp, visualize a soothing, pleasing situation, and get away from it all for a moment. Concentrate on that peaceful image and nothing else.
- 5. Light a candle, instead of a cigarette.
- 6. Never allow yourself to think that "one won't hurt," because it will.

#### What if I smoke after quitting?

It's hard to stay a nonsmoker once you've had a cigarette, so try everything you can do to avoid that "one." The urge to smoke will pass. The first 2 to 5 minutes will be the toughest. If you do smoke after quitting:

- ✓ This doesn't mean you're a smoker again do something now to get back on track.
- Don't punish yourself you're still a nonsmoker.
- Think about why you smoked and decide what to do the next time it comes up.

#### What happens after I quit?

- ✓ Sense of smell and taste come back
- ✓ Smoker's cough goes away
- ✓ Food digests more normally
- ✓ Breathe much easier

- ✓ Easier to climb stairs
- ✓ Feel free from the mess, smell and burns in clothing

#### **Nicotine Replacement Therapy**

Nicotine replacement products are designed to relieve some of the withdrawal symptoms people experience when they quit smoking.

It is necessary with all types of nicotine replacement therapy to follow your doctor's orders and use these products only as prescribed.

The goal in using nicotine medications is to stop smoking completely. If you plan to take nicotine replacement medications, begin using them on the day you quit. If you continue to have strong urges to smoke or are struggling to stop smoking completely, ask your healthcare provider about additional help.

#### Nicotine Patch

The nicotine patch releases a constant amount of nicotine in the body; the nicotine absorbs right through the skin and into the bloodstream, eventually reaching the brain.

Less nicotine is obtained through the patch than in cigarettes. The patch does not contain all the tars and poisonous gases that are found in cigarettes.

Most nicotine patch products are changed once every 24 hours. The nicotine level in the body stays relatively constant day after day. Always inform your physician that you are

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using nicotine patches.

Wearing the nicotine patch lessens the withdrawal symptoms such as tenseness, irritability, drowsiness, and lack of concentration. Some side effects from wearing the patch can include:

- ✔ headache
- ✔ dizziness
- ✔ upset stomach
- ✓ weakness
- ✓ blurred vision
- ✓ vivid dreams
- ✓ mild itching and burning on the skin
- ✔ diarrhea

#### Nicotine Gum

The term 'gum' is misleading. Although it actually is a gum-like substance, it contains enough nicotine to reduce the urge to smoke. However, nicotine gum is not chewed like regular gum. Instead, you chew it briefly, till the urge passes, and then 'park' it between your cheek and gum until the next urge occurs, then you repeat the process. The nicotine is absorbed through the lining of the mouth.

Like nicotine patches, nicotine gum helps take the edge off cigarette cravings without providing the tars and poisonous gases found in cigarettes. It is a temporary aid that reduces symptoms of nicotine withdrawal after quitting smoking.

Nicotine gum must be used properly

in order to be effective. Steps for nicotine gum users to follow include:

- ✓ Stop all smoking when beginning the nicotine gum therapy
- ✓ Do not eat or drink for 15 minutes before using, or while chewing the gum
- Chew the gum slowly off and on for 30 minutes to release most of the nicotine then 'park' it between the cheek and gum to allow the absorption of nicotine into the lining of the cheek
- ✓ Chew enough gum to reduce withdrawal symptoms (10-15 pieces a day but no more than 30 a day)
- Use the gum every day for a month, then start to reduce the number of pieces you chew a day, chewing only what you need to avoid withdrawal symptoms.
- ✓ Discontinue use of gum after three months.

#### Nicotine Inhaler

The nicotine inhaler is available by prescription only. Although similar in appearance to a cigarette, the inhaler delivers nicotine into the mouth, not the lung, and enters the body much more slowly than the nicotine in cigarettes.

Nicotine inhaler puffs must be done frequently, far more often than with a cigarette. Each cartridge lasts for 80 puffs or approximately 20 minutes of use. A minimum of 6 cartridges per day is needed for three to six weeks, then the patient starts tapering off. You do not need to inhale deeply to achieve an effect. Small doses of nicotine provide a sensation in the back of the throat similar to cigarette smoke.

The nicotine inhaler mimics the hand-to-mouth behavior of smoking. It may cause throat irritation and coughing.

#### Nicotine Nasal Spray

Nicotine nasal sprays are available by prescription only. The nasal spray is designed to deliver nicotine to the nasal membranes and reaches the bloodstream faster than any other nicotine replacement therapy product.

Unlike nasal sprays used to relieve allergy symptoms, the nicotine spray is not meant to be sniffed. It is sprayed once into each nostril once or twice an hour. To use, take a deep breath, hold it, spray once into each nostril and exhale through the mouth.

Nasal sprays can be used in response to stress or urges to smoke and help reduce cravings within minutes. Frequent use during the day is required to obtain adequate nicotine levels. It can cause nose and eye irritation, but these symptoms usually disappear within the first week of use.

#### Nicotine Lozenge

Nicotine lozenge is the newest nicotine replacement product to be approved by the FDA. *COMMIT* is the only one approved by the FDA for smoking cessation. There are several other unapproved tobacco alternative products that should be avoided.

*COMMIT* comes in the form of a hard candy, and releases nicotine as it slowly dissolves in the mouth. Biting or chewing the lozenge will cause more nicotine to be swallowed quickly and result in indigestion and/or heartburn. The lozenge is available in two strengths to better tailor its use to your need.

- ✓ Do not exceed more than 20 lozenges per day.
- ✓ Each lozenge will last about 20-30 minutes.
- ✓ Do not eat or drink 15 minutes before using the lozenge or while it is in your mouth.
- ✓ The most frequent side effects are soreness of the teeth and gums, indigestion, and throat irritation.

#### Non-Nicotine Medication

A non-nicotine pill, Bupropion is available by prescription only. It is designed to treat depression and aids in quitting smoking. Brand names include Wellbutrin and Zyban.

It is recommended to start taking Wellbutrin 1 to 2 weeks before you stop smoking. Avoid drinking alcohol with this medication.

This medication may make you dizzy. Avoid activities which require alertness when using this medication. Call your physician right away if you have severe headaches, increased agitation, confusion, hallucinations or other unusual thoughts or feelings. Allergic reactions to this medication include itching or hives, swelling in face or hands, swelling or tingling in the mouth or throat, tightness in chest, and trouble breathing.

## **High Cholesterol**

Cholesterol is a fatty substance your body needs to make cells. Too much cholesterol in your blood can clog your arteries. Low density lipoprotein (LDL) is considered the "bad" cholesterol, as it is the fat commonly found in heart blockages. High density lipoprotein (HDL) is considered the "good" cholesterol because it picks up the excess LDL in your bloodstream and returns it to the liver to be broken down. Triglycerides are another kind of blood fat that contributes to blockages in the arteries.

You should have your cholesterol level checked six to eight weeks after your hospitalization. Recent illnesses, including a heart attack or surgery,



## Cholesterol Levels

It is important for you to know what your cholesterol levels are, and what this number means for you!

The national cholesterol guidelines have the following goals for people with known heart disease:

Total Cholesterol < 160 mg/dl LDL Cholesterol < 100 mg/dl HDL Cholesterol > 40 mg/dl Triglycerides < 150 mg/dl

can affect a patient's cholesterol levels in the hospital.

#### What you can do ...

- ✓ Eat a low fat, low cholesterol diet (lowers total cholesterol and LDL)
- ✓ Exercise regularly (raises the HDL)
- ✔ Quit smoking (raises the HDL)
- ✓ Drink alcohol in moderation, if at all (alcohol can increase triglycerides)
- ✓ Take cholesterol-lowering medications if prescribed
- ✔ Lose weight if needed
- ✓ Monitor your cholesterol level with regular checkups

#### Lack of Exercise

If you do not get regular exercise, your heart may be losing the ability to work well. People who are physically active have fewer heart attacks. Regular exercise burns calories, improves muscle tone and helps to maintain ideal weight. Exercise also increases HDL cholesterol (good cholesterol) and is a great way to manage stress!

The Exercise chapter in this book gives specific guidelines for cardiac patients to begin and maintain a safe and progressive exercise program. Also, adding more activity into your daily life helps to lower your cardiac risks.

#### What you can do ...

- ✓ Start a regular exercise program
- ✓ Build more activity into your daily life:
  - take the stairs instead of the elevator
  - park farther away from the entrance of the building
  - walk to errands close to home instead of taking the car

✓ Become involved in an outpatient cardiac rehabilitation program

#### Stress

Physical and emotional stress cause your brain and adrenals to release hormones and cortisol that can raise your heart rate, blood pressure, cholesterol and triglyceride levels, and may contribute to obesity and abdominal fat. If stressful situations pile up one after another, this long term activation of the hormones can disrupt almost all of your body's processes. The artery walls may be injured thus setting the stage for blockages in the arteries. Low to moderate amounts of stress are healthy, but severe or prolonged stress can do harm.

It is important to identify your body's signs of stress, as these are different for each person. They may include headache, tight muscles, fatigue, back ache, or anxiety. The Emotional Recovery chapter of this notebook has more information on how to beat stress.

#### What you can do ...

- ✓ Identify stressful areas such as work, relationships or finances
- ✓ Don't expect too much of yourself and others
- ✔ Learn relaxation techniques
- ✓ Talk about your problems with a spouse, friend, clergy or professional counselor
- ✓ Exercise regularly to dispel anger and frustration

## Diabetes

Diabetes is a disease in which the body does not produce or properly use insulin. Insulin is a hormone that is needed to convert sugar, starches and other food

into energy needed for daily life. Heart disease and diabetes

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go hand in hand. Be aware that:

- ✓ According to the American College of Endocrinology, Hemoglobin A1c should be less than 6.5%.
- High blood sugar levels alter the inner lining of the blood vessel, causing plaque buildup. The plaque buildup reduces blood flow to the heart but often does not cause any pain, or angina. Because the low blood flow is pain free, it can cause a lot of damage to the arteries and the heart before it is found. Blood sugar levels should be kept as close to normal as possible.
- Exercise usually makes blood sugar levels go down.
- ✓ It is important to test your blood sugar to monitor if you are taking the right amount of diabetes medicine at the right times, to monitor the effect of your meal plan on blood sugar levels, and to see how your level of activities are affecting your blood sugar levels.
- ✓ It is important to always keep a fast-acting carbohydrate snack such as fruit juice or glucose tablets handy in case you have a low blood sugar.
- ✓ More than 65% of people with diabetes die from heart disease or stroke. Coronary artery disease is the leading cause of death for people with type II diabetes.
- ✓ With diabetes, heart attacks occur earlier in life and often result in

death. By managing diabetes, high blood pressure and cholesterol, people with diabetes can reduce their risk.

#### What you can do...

- Eat a heart healthy diet (low in fat, cholesterol and simple sugars)
- Exercise daily (exercise acts like insulin, helping the uptake of sugar from the blood to the cells)
- ✓ Take medications as prescribed
- ✔ Lose weight if needed

#### Obesity

Being overweight increases the risk for heart disease. Anyone who is overweight should try to avoid gaining additional weight. Additionally, if you are overweight with other risk factors (such as high LDL cholesterol, low HDL cholesterol, or high blood pressure), you should try to lose weight. Being overweight causes the heart to work harder to pump blood throughout the body. You can use the body mass index as a reliable indicator of being overweight.

#### What is BMI?

Body Mass Index (BMI) is a number calculated from a person's weight and height. BMI is a reliable indicator of body fatness for people.

#### How is BMI used?

BMI is used as a screening tool to identify possible weight problems for adults.

## Body Mass Index (BMI)

		The your height in the left-hand column and move across to the given weight. The top row indicates the Dwi.																
		19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Height in inches	58	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167
	59	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173
	60	97	102	107	112	115	123	128	133	138	143	148	153	158	163	168	174	179
	61	100	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	185
	62	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191
	63	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197
	64	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204
	65	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210
	66	118	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	216
	67	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	223
	68	125	131	138	144	151	158	164	171	177	184	190	197	203	210	216	223	230
	69	128	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	236
	70	132	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	243
	71	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250
	72	140	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	258
	73	144	151	159	166	174	182	189	197	204	212	219	227	235	242	250	257	265
	74	148	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	272
	75	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	279
	76	156	164	172	180	189	197	205	213	221	230	238	246	254	263	271	279	287

Find your height in the left-hand column and move across to the given weight. The top row indicates the BMI.

The BMI ranges are based on the relationship between body weight and disease and death. Being overweight or obese increases the risk of many diseases and health conditions, including the following:

- ✔ Hypertension
- Dyslipidemia (for example, high LDL cholesterol, low HDL cholesterol, or high levels of triglycerides)
- ✔ Type 2 diabetes

# Weight Classifications

Underweight	<18.5
Normal	18.5 - 24.9
Overweight	25.0 - 29.9
Obesity class 1	30.0 - 34.9
Obesity class 2	35.0 - 39.9
Overweight Obesity class 1	25.0 - 29.9 30.0 - 34.9

- ✔ Coronary heart disease
- ✓ Stroke
- ✓ Sleep apnea and respiratory problems

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Even a small weight loss (just 10% of your current weight) may help lower the risk of disease. Weight loss can be accomplished through a combination of proper food choices and exercise.

#### What you can do ...

- Eat a heart healthy diet (taking in fewer calories helps promote weight loss)
- Exercise regularly (choose low impact exercises like walking, bicycling and swimming, if joint pain is a problem)
- ✓ Set realistic short term goals as well as long term goals (1-3 pounds per week is a safe weight loss goal)
- ✓ Reward yourself when goals are achieved
- ✓ Find a weight loss support group

#### **Obstructive Sleep Apnea (OSA)**

Sleep apnea is a serious sleep problem. If you have it, you stop breathing for more than 10 seconds at a time many times while you sleep. Another term for this problem is obstructive sleep apnea.

If you have sleep apnea, your body gets less oxygen when you sleep and you don't sleep well. Common symptons of sleep apnea are:

- ✓ Loud snoring interrupted with pauses in breathing, followed by loud gasps
- ✓ Not feeling rested when you wake in the morning

- ✓ Morning headaches
- Tiredness or sleepiness during the day
- ✓ Trouble concentrating
- ✔ Anxiety, irratability, or depression
- ✓ A strong desire to take afternoon naps
- ✓ Sleepiness while driving

Many people who snore do not have sleep apnea, but nearly everyone who has sleep apnea snores. If you snore and feel you do not ususally get a good night's rest, you should ask your health care provider if you might have sleep apnea.

It is very important to treat sleep apnea. Untreated sleep apnea can have very serious long-term effects on your health. There appear to be many links between cardiovascular disease and OSA. The lower amounts of oxygen and the lack of sleep can raise your blood pressure, cause heart irregularities and inflammation, damage the inner lining of the artery wall, and cause blood clotting problems. It may increase your risk of high blood pressure, heart attacks, and sudden death. Effective treatment of sleep apnea may result in normal blood pressure, relief of fatigue, and weight loss.

#### What you can do ...

✓ If you think you may have sleep apnea, see your health care provider.

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#### What you can do ...

- ✓ If you are being treated for sleep apnea, make sure you go to all your follow-up appointments with your health care provider. If you have a significant weight gain, or weight loss or new symptons, talk to your provider to see if you need to change your treatment.
- Maintain a healthy Body Mass Index (proper weight control)
- Exercise (according to your health care provider's recommendations)
- ✓ Develop good sleeping habits
- ✓ Avoid excessive alcohol use

## **SECTION 4**

#### Making Changes

Rehabilitation from heart disease is a lifetime commitment to exercise, eating well and positive lifestyle changes. Even though you may have had procedures that improved the blood flow through the coronary arteries, the underlying process causing your arteries to form blockages has not been stopped or cured. Therefore, you will need to modify your lifestyle to reduce your risk factors.

If you have several changes to make, you may need to set priorities. Discuss this with your doctors, nurses, or cardiac rehab staff. They can help you decide which changes are most important to tackle first. When you are discouraged, focus on how good you will feel once you have successfully made the needed changes. Ask for the support of family members and friends. Or even better, ask them to make the changes with you. It makes it easier for you and will benefit them as well! Set realistic goals. Don't set yourself up for failure by doing too much too soon.