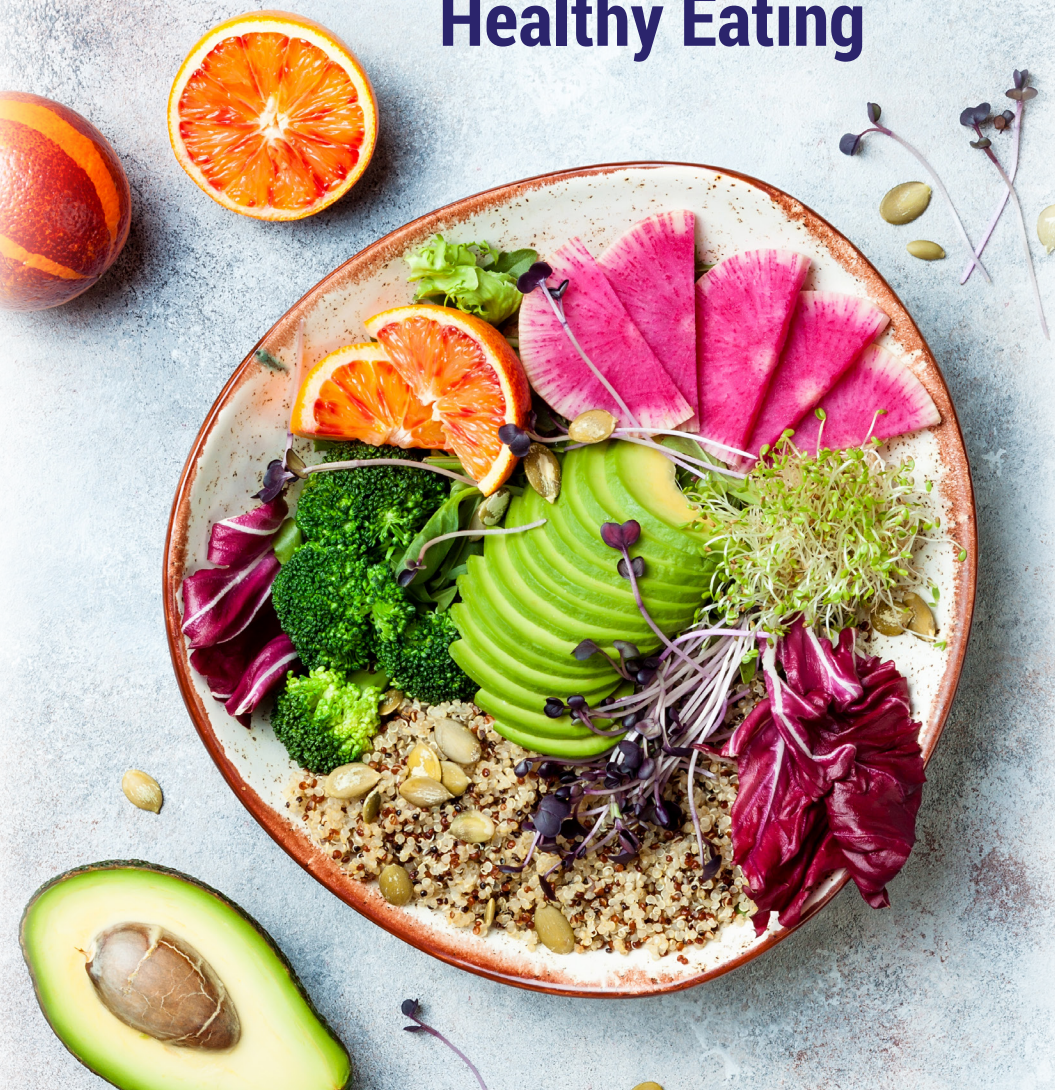


At the Heart of Healthy Eating



Creating a world without heart and vascular disease

PREVENTION
Nolan Family Center
for Cardiovascular Health

For more than 40 years, The Minneapolis Heart Institute Foundation® (MHIF) has been a leader in researching the most effective ways to prevent and treat heart disease. In 2020, MHIF established the Nolan Family Center for Cardiovascular Health, with a vision “to change the paradigm from disease to optimal health as a world-class leader in cardiovascular disease prevention.”

The center conducts industry-leading research on cardiovascular risk prediction and optimal preventive therapies, and provides education to patients and health care providers to ensure the best patient care. We’re committed to helping you learn more about how you and your loved ones can prevent or manage heart and vascular disease.

For more information about MHIF’s
Nolan Family Center for Cardiovascular Health,
please visit **mplsheart.org/prevention**

The Nolan Family Center for Cardiovascular Health at the Minneapolis Heart Institute Foundation created this booklet to identify essential aspects of a heart-healthy eating pattern. Importantly, these recommendations are based on the latest evidence-based research.

Eating nutritious foods is fundamental to heart and vascular health, but what exactly is heart healthy?

There are multiple factors that influence what we eat, so rather than providing strict, detailed rules about what you *can* and *can't* eat, this booklet outlines broad principles that can be applied to a range of personal and cultural preferences.

Keep in mind that good health goes beyond the foods we eat. A heart-healthy way of life also includes:

- Getting plenty of physical activity each week
- Living tobacco-free
- Practicing positive actions to manage stress
- Getting quality sleep
- Monitoring and controlling blood pressure, blood glucose and cholesterol levels
- Maintaining a strong social network of family and friends

We hope this booklet will help you understand the most important principles of eating heart smart. Enjoy!

1

Focus on eating whole foods

Whole, fresh foods — think fruits, vegetables and whole grains — contain more nutrients and vitamins than their processed counterparts. Processed foods, on the other hand, frequently contain large amounts of salt and/or sugar in order to extend their shelf life or make their flavor more appealing.

Limit the foods you eat with an ingredient list.

Eat single-ingredient foods like salmon, spinach, carrots, milk, apples, etc.



DID YOU KNOW: Some of the most commonly eaten processed foods are: salad dressing, breakfast cereals, canned soup, pasta sauce, artificially flavored yogurt, processed meats (bacon, hot dogs, sausage and lunch meat) and store-bought sweets (cakes, cookies and candy).

TIPS

- Try cooking more meals at home or making your own healthy dips and dressings.
- Eat more vegetables and fruits as snacks and as part of meals.
- If you choose red meat, limit consumption to lean cuts and eat no more than two servings per week.
- Create a plan to add one to two new recipes each month that feature whole foods and use the basics – poultry, lean meat, plant-based protein, whole grains and healthy fats.





2 Embrace vegetables and fruits

Some nutrition research is inconsistent when it comes to what is heart-healthy — but not when it comes to vegetables and fruits. An eating pattern high in vegetables and fruits is clearly associated with a lower risk of heart attack and stroke, as well as a lower risk of premature death.

Eat at least five servings of vegetables and fruits a day.

Vegetables and fruits are nature's nutritional powerhouses. They are excellent sources of vitamins, minerals and fiber, and they are low in sodium and calories. The more vegetables and fruits you eat, the fewer higher-fat, higher-calorie foods you are likely to eat.

TIPS

- Cover half your plate with vegetables and fruit at each meal. Count the colors in your meals and add more! Colors count when they come from nature (artificial colors do not). Behind the bright colors are vitamins, minerals and antioxidants that support heart health.
- Prepare ahead of time to make it easier to get your five a day. For example, keep a basket of fresh, washed fruits handy on your kitchen table for snacks.
- Move vegetables and fruits to the top drawers of your refrigerator for easier visibility. Wash and cut up fruits and vegetables in advance for easy additions to meals.

WHAT COUNTS AS A SERVING?

- 1 cup of raw vegetables
- ½ cup 100% vegetable juice
- ½ cup cooked vegetables
- 1 cup melon or berries
- ½ cup canned fruit in natural juices
- 1 medium fruit
- ½ cup 100% fruit juice
- ¼ cup of dried fruit



DID YOU KNOW: A study from the Minneapolis Heart Institute Foundation found that a higher intake of vegetables and fruits during young adulthood was associated with a lower risk of heart disease later in life.

3

Power up with whole grains

Whole-grain foods contain fiber and essential minerals and have been associated with improved cholesterol and a lower risk of heart disease.

Eat at least three servings of whole grains each day.

Whole grains can also keep you feeling satisfied between meals, which may help with weight management. A whole grain contains all three parts of the grain — including the bran, germ and the endosperm. Think wild rice, millet, oatmeal, quinoa, buckwheat and popcorn.



DID YOU KNOW: Over-processing of grains removes the majority of fiber in foods and decreases their overall nutrition. Processed grains are clearly associated with weight gain, diabetes and an increase in heart disease.





TIPS

- Recognize whole grains. The first ingredient should include the word “whole,” such as “whole wheat,” “whole oat” or “whole rye.” Be cautious of words like “multi-grain,” “12-grain” and “stone-ground.” This only tells you that more than one grain exists within the product. It does not tell you whether those grains are whole.
- Eat whole-grain foods such as oatmeal or whole-grain cereal for a quick and easy way to start your day, or add whole-grain cereal to your yogurt for a hearty snack.
- Limit processed carbohydrates such as white bread, white pasta and white rice.

WHAT COUNTS AS A SERVING?

- 1 slice whole-grain bread
- ½ whole-wheat English muffin
- ½ cup cooked brown rice, wild rice or quinoa
- 3 cups popcorn
- ½ cup cooked whole-wheat pasta
- ½ cup hot cereal such as oatmeal



4 Don't fear fat

Healthy fat is an essential part of a heart-healthy eating pattern and overall health. Olive oil, nuts and seeds have high fat content, but have been shown to lower your risk of developing heart disease and stroke. All fats are equal in terms of calories, but some types of fat are healthier than others.

Choose foods with **unsaturated fats**, **limit foods high in saturated fat** and **avoid trans fat**.



DID YOU KNOW: Years ago, low-fat foods were recommended, but we've now learned through research that low-fat or fat-free foods may not benefit health. This is because food manufacturers often replace fat from foods with added sugar or refined grains.

TIPS

- Use olive, canola or other vegetable and nut/seed oils as a replacement for butter in cooking or baking.
- Include avocados, nuts and seeds in your meals and snacks.
- Use moderation with red meat, butter and cheese.

Healthy Fats



MONOUNSATURATED FATS

Impact on the heart: a major part of a Mediterranean-style eating pattern and demonstrated to lower risk for heart attack and stroke.

Food sources: avocados, nuts and seeds, olive oil, canola oil, peanut oil and peanut butter



POLYUNSATURATED FATS

Impact on the heart: Recent studies have found many benefits to heart health, especially when they replace saturated fats. A specific type of polyunsaturated fat, called omega-3, has been associated with lower triglycerides, decreased blood clotting and is also associated with a reduced risk for sudden heart attack.

Food sources: soybean oil, corn oil, safflower oil, walnuts and sunflower seeds; flaxseed oil, fatty or oily fish such as salmon, mackerel, albacore tuna, sardines and herring

In Moderation



SATURATED FATS

Impact on the heart: not as beneficial as unsaturated fats, but appear to be safe when eaten in moderation. These fats increase “bad” LDL cholesterol, but also increase “good” HDL cholesterol.

Food sources: butter, high fat cuts of meat, coconut oil, poultry with skin, high-fat dairy products (such as whole or 2% milk, cream, ice cream, cheese)

Fats to Avoid



TRANS FATS

Impact on the heart: These fats increase “bad” LDL cholesterol and decrease “good” HDL cholesterol. There is solid evidence that trans fats increase risk for heart disease, stroke and Type 2 diabetes.

Food sources: crackers, cookies, pastries, doughnuts, chips, stick margarine, french fries

Replacing margarine, butter, mayonnaise and dairy fat with olive oil and other unsaturated vegetable oils improves overall health and longevity. Having ½ tablespoon or more of olive oil a day has been shown to lower risk of death from heart disease, cancer, brain disorders and lung disease.

Enjoy fish

The American Heart Association recommends eating fish twice a week (a single serving is 3.5 ounces cooked). Fatty fish, such as salmon, mackerel, albacore tuna, sardines and herring, are excellent sources of protein and omega-3 fatty acids, which have been shown to reduce plaque buildup in the arteries, decrease triglyceride levels and prevent heart attacks.

TIPS

- Grill, bake or broil fish rather than frying or breading.
- Prepare fish using low-sodium seasonings, such as lemon, spices and herbs.
- Substitute fish for red meat once or twice a week. This will help you limit red meat to a couple times a week.





Go nuts!

Eating just a handful (1 ounce) of nuts a day — such as almonds, walnuts, hazelnuts, peanuts, pecans or pistachio nuts — can help prevent heart attacks and strokes. Nuts contain healthy fats, protein and fiber, but be cautious not to overdo it.

One ounce of most nuts contains 160–185 calories, so make sure you swap out a less-healthy snack if you add a serving of nuts into your day.



DID YOU KNOW: Nutrition research finds that people who regularly eat nuts have a lower risk of heart attack and death from heart attack.

TIPS

- Sprinkle your salad with nuts instead of cheese; top roasted vegetables with toasted walnuts or pine nuts.
- Take a snack-sized bag of almonds with you when running errands and have a handful to tide you over to your next meal.
- Avoid candied, honey-roasted or heavily salted nuts and seeds, as these add unnecessary sugar and sodium.

5

Make plants plate central

Following a plant-based eating pattern means choosing whole foods mostly from plant sources.

It primarily includes fruits, vegetables, whole grains, nuts, seeds, legumes and beans and limits processed foods. It may include small amounts of animal products, such as meat, fish and seafood, eggs and dairy.

Start by eating at least one to two meatless meals a week — try Meatless Mondays!

Limiting animal protein and replacing with plant protein (think beans, nuts and whole grains) can help improve cardiovascular risk factors, such as blood pressure and cholesterol and may even help with weight management.



DID YOU KNOW: A variety of plant-based burgers have emerged in recent years as a plant-based eating pattern is gaining momentum. Although these meat alternatives are often touted as “health foods,” they are not actually nutritionally superior. In fact, the most popular brands contain highly processed ingredients and LONG ingredient lists. Buyer beware.



TIPS

- Explore lentils, beans and peas as a side dish or in soups, salads, or burritos.
- Enjoy a small handful of nuts or seeds most days. Top oatmeal or salad with them.
- Choose nut butter (peanut, almond, cashew) to top whole grain crackers or bread.
- Use tofu, soy crumbles or tempeh in place of meat in stir fry, rice bowls and sandwiches.

Plant-based foods can also be good sources of protein. One ounce of meat contains 7 grams of protein. The table below lists the protein amount of various plant-based foods.

Protein	Grams
Beans - ½ cup cooked	8
Quinoa - 1 cup cooked	8
Tofu (firm) - 3 ounces	8
Mixed nuts - ¼ cup	7
Peanut butter - 2 Tbsp.	7
Potato with skin - medium	6
Green peas - ½ cup	4
Avocado - half	2



6 Get the scoop on dairy

Dairy contains calcium, protein, vitamin D, potassium and other nutrients that are essential to a balanced diet and bone strength. The consumption of dairy, including milk, cheese and yogurt, has been associated with reduced blood pressure and risk of heart disease.

Eat three servings of dairy a day to reduce your blood pressure and improve overall heart health.



DID YOU KNOW: Alternative nut milks, like almond or cashew, may be found in the milk aisle, but they are nutritionally different than cow's milk. While a glass of cow's milk provides 8 grams of protein, a glass of nut milk has just 1 gram.

TIPS

- Try to avoid sweetened milk products, such as flavored milk and fruit-flavored yogurt, as they often have extra sugar.
- For those who are lactose-intolerant:
 - Try smaller portions (such as 4 fluid ounces of milk); they may be well tolerated.
 - Try lactose-free or lower-lactose products, such as lactose-reduced or lactose-free milk, yogurt, cheese and calcium-fortified soy milk. You can also try adding enzyme preparations to milk to lower the lactose content.

WHAT COUNTS AS A SERVING?

- 1 cup milk
- 1 cup yogurt
- 1 cup of calcium-fortified soy milk
- 1½ ounces of natural cheese

Eggs are nutritious and an excellent source of high-quality protein at 7g per egg.

Despite their high cholesterol content, one whole egg may be consumed daily as part of a heart-healthy diet.



7

Learn the not-so-sweet news about added sugars

The relationship between excess sugar and heart disease is big news these days. Why? In addition to contributing to an obesity epidemic, research connects added sugars with heart disease risk factors such as high blood pressure and triglycerides.

Natural sugars are found in foods such as fruits, vegetables, whole grains and milk. These foods do not negatively impact our health like sugars added to foods and beverages.

Added sugars are those added to food during processing or preparation. They add calories to food, but provide no nutritional value.

The American Heart Association recommends limiting **added sugar** to:

Women:

No more than 6 teaspoons or 24g of added sugar (~100 calories a day)

Men:

No more than 9 teaspoons or 36g of added sugar (~150 calories a day)



DID YOU KNOW: The average American consumes about 17 teaspoons of added sugar — or an extra 270 calories — each day.

Read the Nutrition Facts on food labels to learn how much sugar packaged foods contain. The “total sugars” line includes both naturally occurring and added sugars in the food product. The amount of added sugar is now listed beneath “total sugars” on food labels.

Every 4 grams of sugar equals 1 teaspoon.

TIPS

- Look for added sugars on food ingredient lists. Some names for added sugars include sucrose, glucose, high-fructose corn syrup, corn syrup and fructose.
- Avoid or limit foods when sugar is one of the top three ingredients (ingredients in foods are listed in order of their amount, so the largest amount is listed first). Aim to eat more sources of whole foods, such as fruits, vegetables, beans and nuts.
- Cut back on desserts or candy.

Nutrition Facts	
8 servings per container	
Serving size	2/3 cup (55g)
Amount per serving	
Calories	230
% Daily Value*	
Total Fat 8g	10%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 160mg	7%
Total Carbohydrate 37g	13%
Dietary Fiber 4g	14%
Total Sugars 12g	
Includes 10g Added Sugars	20%
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 240mg	6%
* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	



8

Rethink your drink

Sugar-sweetened beverages

The number one source of added sugar comes from sugar-sweetened beverages such as soda, fruit drinks, energy drinks, alcoholic mixers and coffee/tea drinks. Sugar-sweetened beverages do nothing to make you feel fuller, so often people end up eating more calories throughout the day.

Simplify. Drink water, milk and 100% fruit juice (be sure to limit juice to one serving or ½ cup).



DID YOU KNOW: An average 12-ounce can of regular soda has about 150 calories from sugar (36 grams), which is equivalent to about 9 teaspoons!

TIPS

- Kick the can. Drinking even one can of a sugar-sweetened soft drink a day significantly increases your risk of being overweight and developing diabetes.
- Gradually cut back on added sugars. If you normally add two packets of sugar to your morning coffee or tea, switch to one and gradually work your way down to less sugar.



Alcohol

Moderate alcohol has been associated with a reduced risk for heart disease in several studies.

That said, if you don't drink, don't start in an attempt to prevent a heart attack! Alcohol can be addictive, and excessive amounts may raise your blood pressure.

Alcohol also adds extra calories, which can contribute to weight gain.

WHAT COUNTS AS A DRINK?

- A 12-ounce beer
- A 5-ounce glass of wine
- A 1.5-ounce shot of spirits

If you choose to drink alcohol, limit your consumption as follows:

Women:

One drink a day

Men:

Two drinks a day

9

Give sodium a shakedown

Many people don't know that salt is actually an acquired taste. We're not born craving foods with salt, but our tastes adjust to it after years of eating salty foods.

Try to eat
2,300 mg or less
a day of sodium
or about 600 to
700 mg per meal
(with room for
snacks).

Most of the salt we eat comes from canned or processed foods, so eating more fresh foods (such as fruits and vegetables) and switching to lower-sodium versions of packaged foods are good places to start. Gradually making changes to the foods you eat will allow you to start enjoying the natural taste of foods.



DID YOU KNOW: The average American eats more than 3,400 mg of sodium per day — nearly 1½ times the recommended amount.



TIPS

- Choose fresh poultry, meat or fish over processed or cured meats such as deli meat, hot dogs, bacon and ham.
- Use herbs and spices to add flavor to your meals rather than salt.
- Choose low-sodium, reduced-sodium, or no-salt-added versions of products such as crackers, frozen entrées and canned soups and vegetables when available.
- Use the Nutrition Facts label on packaged foods to compare sodium content and choose the product with lower sodium.
- As a general guide, **5% Daily Value or less** is a **low** source of sodium and **20% Daily Value or more** is a **high** source of sodium.

Nutrition Facts

6 servings per container
Serving size 1 serving (230g)

Amount per serving

Calories 330

% Daily Value*

Total Fat 10g 13%

Saturated Fat 1g 5%

Trans Fat 0g

Cholesterol 20mg 7%

Sodium 700mg 30%

Total Carbohydrate 44g 16%

Dietary Fiber 2g 7%

Total Sugars 5g

Includes 0g Added Sugars 0%

Protein 15g

Vitamin D 1mcg 6%

Calcium 267mg 20%

Iron 2mg 10%

Potassium 169mg 4%

*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.



10

Be smart about supplements

More than half of adults in the U.S. report taking at least one dietary supplement daily. But popularity does not translate to necessity or safety.

The U.S. Food and Drug Administration does *not* consider supplements to be drugs, and thus does not evaluate them with the same strict safety and effectiveness requirements as it does for prescription drugs.

There is little government oversight to make sure that supplements contain what they claim to, improve health as advertised and are safe.

It is always best to get your nutrients from the food you eat if you can.

Supplements cannot replace eating a variety of foods that are important for a heart-healthy eating pattern.



DID YOU KNOW: Keep in mind that manufacturers add some of the vitamins and minerals found in dietary supplements to a growing number of foods, including breakfast cereals and beverages. As a result, you may be getting more of these nutrients than you think, and more might not be better.

TIPS

- Always talk with your provider about any over-the-counter supplements or herbals that you are taking.
 - Many supplements contain active ingredients that can have strong effects and interact with prescription drugs in ways that might cause problems.
 - There may be special circumstances where a supplement is necessary, such as for people who are on a very low-calorie diet or are strict vegetarians. Health care providers might recommend supplements to individuals with certain medical conditions.

11

Create a positive food environment

Recent research has demonstrated that multiple aspects of our food environment play a significant role in what type of and how much food we eat on a given day. The size of your plate, what's in your pantry, who buys your groceries and multiple other environmental factors greatly influence what you eat.

Practice mindful eating. Eat slowly and pay attention to the taste and textures of your food, leaving the fork on the table from time to time to savor each bite.



DID YOU KNOW: Research has found that the more types of food you have to choose from, the more calories you will eat. At a party or a buffet, rather than trying a little bit of everything, stick to two or three foods that you really like.

TIPS

- Try using smaller plates, bowls or serving dishes.
- Keep your fridge and pantry stocked with fresh fruits and vegetables and other healthy options.
- When eating out, share meals when possible.
- Discuss your nutrition goals with others who can support your healthy eating efforts.





Take action to help your heart

Heart disease is the leading cause of death in America for both men and women. That's why we created the Allina Health Minneapolis Heart Institute® Cardiovascular Prevention Clinic, which focuses on adults who are *at risk* for heart attack, stroke and other cardiovascular diseases — as well as people with heart disease.

- We care for patients with a family history of heart disease, elevated cholesterol or triglycerides, high blood pressure, intolerance or side effects to statin medication, and familial hypercholesterolemia (a hereditary condition of very high LDL cholesterol).
- Our staff includes physicians, advanced care providers, research nurses and a dietitian who tailor their efforts to address your unique needs. We are proud of our program and the difference we believe it will make in your health.
- Clinics are located throughout the Minneapolis-St. Paul area and include offices in Minneapolis, Chaska, Eden Prairie, Edina, Plymouth and Waconia.

Call **612-863-3900** for more information or to schedule an appointment at one of our convenient locations.



**MINNEAPOLIS
HEART INSTITUTE**

ABOUT THE MINNEAPOLIS HEART INSTITUTE FOUNDATION

The Minneapolis Heart Institute Foundation was formed more than 40 years ago by a group of cardiologists from the Minneapolis Heart Institute® at Abbott Northwestern Hospital (MHI®) who recognized that maintaining the finest patient care required an enduring commitment to cardiovascular research and education. In mid-2020, United Hospital's cardiology group joined, allowing MHIF to expand its reach and treat even more patients.

Today, the Minneapolis Heart Institute Foundation is one of the leading nonprofit cardiovascular and population health research centers in the country.

Our vision is to create a world without heart and vascular disease. Through collaboration with research colleagues, government and pharmaceutical and device companies, our clinical research studies test new drugs, devices and medical procedures to improve diagnosis, care and treatment for future generations across the world.

For more information please visit
mplsheart.org



Notes:

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At the Minneapolis Heart Institute Foundation,
we facilitate and provide:

- Hope for patients improving their well-being and life expectancy
- Hope for their children, siblings, parents and families
- Hope for new treatment options
- Hope for a world without heart and vascular disease

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