

# Cardiovascular Risk Factors

Cardiovascular Disease (CVD)

Adapted from HeartOnline

[Cardiovascular Risk Factors | Heart Online](#)

Risk Factor Management

Identify risk factors

Identify the risks that can be modified

- Behaviors

- Education

Develop a plan to cut down cardiac risk

- 610,000 deaths per year in the U. S. (from the CDC)

- 1 in 4 deaths are due to heart disease

  - More than cancer

  - Cost is \$229,000,000.000.00

Section 1

Non-modifiable risk factors

- Age

- Gender

Family history

Symptoms of Heart Attack

Primary

- Chest pain

- Shortness of breath

- Fatigue

- Loss of consciousness

- Diaphoresis

- Pain in a limb, shoulder, or neck

Non-modifiable risks

Age

- Average age of CVD is 80 in the developed countries

- Cardiovascular disease starts at about 18 years old

Effects

  - Cardiac output is decreased

  - Work capacity is diminished

  - Exercise raises heart rate and blood pressure more

Gender

- Occurs about 10 years earlier in men than women

Non-modifiable risks

Family History

- Ask about – coronary artery disease, heart attack, high cholesterol, angina, arrhythmias, cardiomyopathy, congenital/birth heart problems, heart failure

- Associated diseases – aneurism, stroke, diabetes, high blood pressure, pacemakers

Prevention

- Choose healthy habits

- Follow your health care provider's advice and treatments

## Section 2

### Modifiable risk factors

- Weight
- Nutrition
- Alcohol
- Smoking
- Physical Activity
- Lipids (cholesterol components)
- Blood pressure
- Diabetes
- Psychosocial Distress

### Modifiable risks

#### Weight

Overweight/obesity is a major risk factor for CVD  
Increased weight increases CVD risk by 15% in men and 22% in women  
Optimum Body Mass Index (BMI) is 22.6 for men and 21.1 for women  
BMI calculators are online and on phone apps –  
$$\text{BMI} = (\text{Weight in Pounds} / (\text{Height in inches} \times \text{Height in inches})) \times 703$$

Weight loss resulted in a reduction of:

- Overall blood pressure
- Total and bad (LDL) cholesterol
- Decreased blood sugar and insulin use

### Modifiable risks

#### Nutrition

##### Quick tips

- Balance food and calorie intake with physical activity for a healthy weight
- Eat a variety and include fruits and vegetables (instead of pills)
- Choose whole grains and whole grain foods

A few websites:

[Heart Health | Nutrition.gov](#)

Tips for a healthy diet

[Calculator.net: Free Online Calculators - Math, Fitness, Finance, Science](#)

Calculate BMI, calorie level based on activity, body fat, plus help with math

### Modifiable risks

#### Alcohol

- Toxic to the heart muscle
- Low to moderate alcohol use may not be as harmful as heavy or long term use  
<15 to 20 g/day, 1 to 2 standard drinks = low to moderate
- Binge drinking is rapid high volume drinking
- High blood pressure was 2X more in people who drank more than 6/day
- Moderate drinking had an affect on blood pressure

##### Modifiable risks

#### Smoking

- Risks – causes inflammation in arteries, damages blood vessel walls
- Heart – disturbs heart rhythms, increases blood pressure
- Blood – lowers good (HDL) cholesterol and raises bad (LDL) cholesterol, thickens blood so it carries less oxygen
- Increases risk of heart failure and heart attack

Combination of conditions that are dangerous

- High cholesterol levels

- High blood pressure

- Overweight or obese

To quit: start with Tobacco Free Florida website

Modifiable risks

Physical activity – ALWAYS with the consent and supervision of your health care provider

- Take an activity inventory – i.e. what types of activities do you do

  - Exercise, gardening, walking, weight lifting, swimming, etc.

- Account for any other health conditions

- What are your barriers and holdups to exercise?

Goal – try for 30 minutes of moderate exercise on most days

- Start slow if you need to

- Work up to 150 minutes/week

With your health care providers guidance – reduce this amount if you need to

Modifiable risks

Lipids – should be done periodically and before any heart attack

- Most of your lipid profile comes from genetic traits

- Know what good (HDL) and bad (LDL) cholesterol does in your body

- Try to meet lipid goals to help prevent arteries being blocked

Levels

- Total cholesterol – under 200 mg/dl

- LDL (bad) cholesterol – under 100 mg/dl

- HDL (good) cholesterol – over 60 mg/dl

- Triglycerides – under 150 mg/dl

Lipids are controlled by (1) exercise and diet and (2) medication

Modifiable risks

Cholesterol and diabetes

- For LDL (bad) cholesterol the level should be less than 70 mg/dl

People under 19 years old should have lipid levels of:

- Total cholesterol – under 170 mg/dl

- LDL (bad) cholesterol – under 110 mg/dl

- HDL (good) cholesterol – over 75 mg/dl

- Triglycerides – under 90 mg/dl

Unhealthy levels:

- Total cholesterol – over 240 mg/dl

- LDL (bad) cholesterol – over 160 to 189 mg/dl

- HDL (good) cholesterol – under 40 mg/dl for men, under 50 mg/dl for women

- Triglycerides – over 500 mg/dl

Modifiable risks

Blood pressure

- Control is most important to prevent strokes and further cardiovascular damage

Levels

- Normal: below 120/80 mmHg

- Elevated: from 120 – 129/80 mmHg

- Stage 1 high: from 130 – 139/80 – 89 mmHg

- Stage 2 high: 140/90 or higher

## Prevention

- Health diet and exercise

- Blood pressure medication from your health care provider

## Modifiable Risks

### Blood Pressure

- Stroke is the greatest danger of untreated high blood pressure

- It may take as many as 3 medications to fully treat high blood pressure

- There are no warning signs of high blood pressure, such as headache, tingling, chest pain, blurred vision

Diabetics should have blood pressure controlled well to prevent heart attack

- Diabetes puts people at greater risk

- Modifiable risks

### Diabetes

- Diabetes gives anyone the same risk as someone who has already had a cardiovascular event – heart attack, stroke, etc.

The best treatment for type 2 diabetes is maintaining an optimum weight and exercising.

- Muscle is the best utilizer of blood sugar

Take all the prescribed medicine, and get active.

Check your blood sugar like you are supposed to do

If your hemoglobin A1C is over 7.0, then your risk is high

- However Sickle Cell anemia makes A1C unreliable, another test must be used

### Modifiable risks

#### Psychosocial distress

Stress, depression, anxiety, tension, feeling overwhelmed, constant fatigue, poor sleep, social or job pressure all contribute to poorer cardiovascular health and greater risk of stroke or heart attack

Getting help is a good way to begin to decrease these risk factors

Treatment can be simple:

- Talking it out, getting counseling, asking a friend, community services, psychologic help, group therapy, medications

- Any or all of these might be helpful and needed

You don't have to do it alone

### Modifiable risks

#### Illicit drug use

- Almost 1 in 5 cardiac sudden deaths are caused by drug overdoses

Drugs that may cause cardiac problems:

- Cocaine

- Marijuana

- Heroin

- Opioids

- Methamphetamines

- As we discussed, alcohol

## Summary

Cardiovascular health should be everyone's concern.

- Not only the one with the heart, but everyone who cares about them

- These events affect everyone in that person's circle of acquaintance, love, and friendship.

It's not just over after the event. There's a lot of healing to do

- Post surgery, rehabilitation, lifestyle changes, mobility and activity modifications, and realizing that we are mortal.

Everyone can affect, in a positive way, their cardiovascular health

Learn your risks

Get a plan

Consult with health care and counselors

Go out, get healthy and live a long and active life.

#### References

[National Heart Foundation of Australia and the Cardiac Society of Australia and New Zealand. Reducing risk in heart disease: an expert guide to clinical practice for secondary prevention of coronary heart disease. Melbourne: National Heart Foundation of Australia, 2012.](#)

[National Heart Foundation of Australia. Position statement. Dietary fats and dietary sterols for cardiovascular health. 2009](#)

[Cardiac Society of Australia and New Zealand guidelines for the diagnosis and management of familial hypercholesterolemia. 2013.](#)

#### References

Crisis Center of Tampa Bay – Emergency; Dial 911

<https://crisiscenter.com>

[Crisis Center of Tampa Bay | Compassionate Services that Offer Help, Hope & Healing](#)

Substance Abuse and Mental Health Services Administration

Call 1-800-662-4357 (HELP)

[SAMHSA's National Helpline | SAMHSA](#)