



# STAY HEALTHY ONBOARD GUIDE

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## Cardiovascular Disease (CVD)

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## Contact Us

For further information contact our Health & Wellbeing Department at:

Limassol Office: +357 25 848 500

[wellbeing@oceanic-services.com](mailto:wellbeing@oceanic-services.com) | [www.oceanic-services.com](http://www.oceanic-services.com)

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## Key Facts

- CVD is the **leading cause of death** globally.
- Amongst seafarers, **CVD is the main cause of morbidity and mortality**.
- In a period of 9 years (2010-2018), there were **1,377 contacts** to the International Radio Medical Centre medical services due to CVD.
- An estimation of **19.1 million people died from CVD in 2020** globally whereas 244.1 million people were living with Ischaemic Heart Disease and 89.1 people had stroke.
- CVD key risk factors include **tobacco use, harmful use of alcohol, unhealthy diet and physical inactivity**.
- CVD intermediate risk factors include **high blood pressure, high cholesterol, diabetes and obesity**.
- **Early diagnosis of CVD** is crucial to avoid premature death and receive appropriate treatment and counselling.

## What is CVD?

CVD is a group of disorders that affect heart and blood vessels. All disorders refer to different blood vessels which supply certain organs and tissues, as mentioned below:

CVD Types	Organs or Tissues Affected
Coronary Heart Disease	Heart muscle
Cerebrovascular Disease	Brain
Peripheral Arterial Disease	Arms and Legs
Rheumatic Heart Disease	Heart muscle and valves (from rheumatic fever)
Congenital Heart Disease	Abnormal heart development and functioning
Deep vein Thrombosis & Pulmonary Embolism	Legs (blood clots)
Heart Attacks	Heart (acute event of blood vessels blockage that prevents blood flow to heart)
Strokes	Brain (blood vessels bleeding or clotting)



# What are the risk factors of CVD?

## Key Risk Factors

- **Diet high in salt, saturated & trans fats**

Following a diet high in salt can increase blood pressure, an intermediate risk factor for CVD. Additionally, a diet high in saturated fat (SF), trans fat (TF) and cholesterol can double the risk of heart disease.

### Salt Food Sources

Cured meat  
Smoked meat  
Stock cubes  
Canned meat or fish or legumes  
Frozen meals  
Prepacked food  
Salted nuts  
Processed cheese  
Processed sauces or dressings  
Canned or dehydrated soups

### SF Food Sources

Butter, ghee, suet, lard  
Coconut & palm oil  
Cured meat  
Sausage  
Bacon  
Red meat (all meat except chicken and fish)  
Milk and dairy products (full-fat cheese, yogurt, ice cream)

### TF Food Sources

Fried food (chicken, crisps etc.)  
Sweets & cakes  
Buttered fish

- **Smoking**

Tobacco use causes 1 in every 4 deaths from heart disease and stroke by:

- Increasing triglycerides and decreasing the 'good' cholesterol HDL
- Increasing blood clotting risk
- Thickening and shrinking blood vessels
- Damaging cells which line blood vessels

Second-hand smoking exposure increases the risk of coronary heart disease by 25-30%.

- **Alcohol**

Excessive alcohol consumption increases cholesterol levels, blood pressure and causes weight gain contributing to a higher risk of CVD.

- **Physical inactivity**

Physical inactivity can increase the risk of heart disease and other risk factors such as high blood pressure, obesity, high cholesterol and diabetes. Additionally, it can affect mental health and lead to stress or depression. A study conducted in Norway on 577 seafarers, indicated that only 39% of them exercised on board.

### *Intermediate Risk Factors*

- **Diabetes**

Having diabetes doubles the risk of heart disease or stroke. The increased blood sugar damages the heart blood vessels, causing brain's blood vessels to block.

- **Obesity**

Being overweight or obese can increase the risk of heart disease and stroke. A study conducted in 2019 on 1,155 seafarers, indicated that 40% of them were overweight while more than 10% were obese.



### *Other CVD Risk Factors:*

- **Family history** of CVD increases someone's risk of CVD.
  - Father or brother diagnosed with CVD before the age of 55
  - Mother or sister diagnosed with CVD before the age of 65
- Certain **ethnic backgrounds** such as South Asian, Black African and African Caribbean increase the risk of CVD due to the increase risk of developing high blood pressure and/or diabetes.
- **Age** affects the risk of CVD
  - Being older than 50 years old
  - CVD risk increases with age
- **Gender** does not affect the risk of CVD but men are at a greater risk of developing CVD earlier in life.

Specifically, the risk factors of CVD amongst seafarers include work-related stress, physical inactivity and high fat diet. Stress can impact health by increasing blood pressure and decreasing HDL cholesterol.

## What are the common symptoms of CVD?

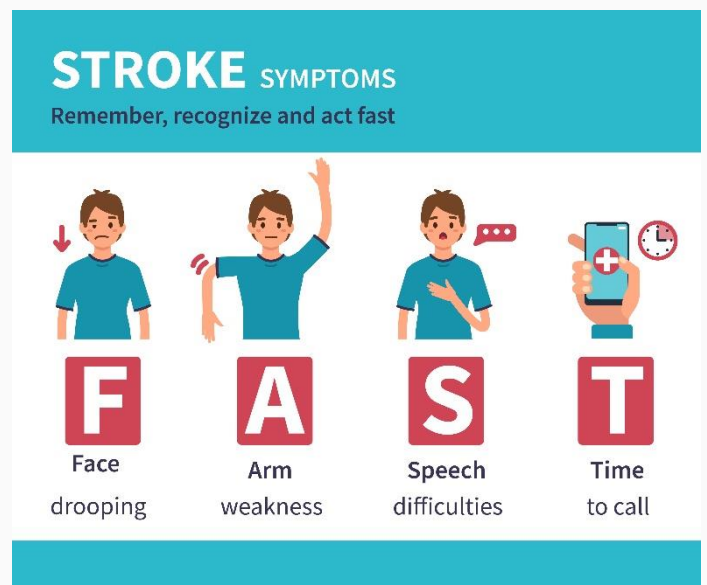
There are no obvious CVD symptoms. However, heart attack or stroke may be the first indications.

The **common symptoms of a heart attack** are:

- Pain or discomfort in the centre of the chest and/or the arms, left shoulder, elbows, jaw or back
- Difficulty in breathing or shortness of breath
- Nausea or vomiting
- Light-headedness or faintness
- Cold sweat
- Pale colour

The **common symptoms of a stroke** are:

- Sudden weakness of the face, arm, or leg
- Confusion, difficulty speaking or understanding
- Difficulty seeing
- Dizziness and/or loss of balance or coordination
- Severe headache
- Fainting or unconsciousness



The **common symptoms of rheumatic heart disease** are:

- Shortness of breath
- Fatigue
- Irregular heartbeats
- Chest pain
- Fainting

The **common symptoms of rheumatic fever** are fever, pain, joints swelling, nausea, vomiting and stomach cramps.

**Seek medical care immediately when experiencing such symptoms.**

## Steps for Managing Prevention of CVD

### 1. Quit smoking!

Smoking affects almost every organ in the human body. It kills more than 8 million people each year, whereas more than 7 million deaths are of directed smoking and 1.2 million of non-smokers being exposed to second-hand smoking.



Save your heart, avoid the smoke!

Find out more helpful resources for quitting smoking on [smokefree.gov](https://www.smokefree.gov).

### 2. Keep a healthy body weight!

People that are overweight or obese are at a greater risk of heart disease. A population-based study conducted on individuals free of clinical CVD in 2018, indicated that overweight or obese participants had higher risk of CVD. The higher the Basal Metabolic Index (BMI), the greater the risk of heart failure.

BMI is calculated by dividing body weight (kg) with height (m) square, as shown below:

$$\text{BMI} = \text{body weight (kg)} / \text{height (m)}^2$$

BMI	Body Weight Status
Lower than 18.5	Underweight
18.5-24.9	Healthy Weight
25.0-29.9	Overweight
Greater than 30	Obese



### 3. Exercise!

CDC recommends 150 minutes of moderate-intensity physical activity per week and 2 days of muscle strength activity. The International Seafarer’s Welfare and Assistance Network (ISWAN) provides helpful material regarding staying fit onboard; examples of onboard exercises, how to measure your heart rate, step test and much more.

Find more information on ISWAN website [www.seafarerswelfare.org](http://www.seafarerswelfare.org).

### 4. Be stress-free!

Stress is body’s response to something that requires attention and action. You cannot demand from your body not to stress, but you can do things to help you. Stress can increase body’s inflammation and hence elevate blood pressure and lower HDL cholesterol.

Oceanic provides the **Seafarer Assistance Program (SAP)** which is a network of services that aims to help seafarers with issues such as family problems, stress, anxiety, depression and much more.

Find more information by contacting [medical@seamed24.com](mailto:medical@seamed24.com)

### 5. Eat a healthy diet!

Diet plays a vital role in lowering CVD risk. A diet rich in fruits and vegetables, whole grains, nuts, fish, poultry and vegetable oils is beneficial for the prevention of CVD. A study conducted in 2021, indicated that the Mediterranean diet decreases atherosclerosis progression amongst patients with CVD over a period of 4.8 years, while a low-fat diet does not.

The Mediterranean diet eating pattern is as followed:

High Intake	Moderate Intake	Low Intake
Olive oil	Fish	Dairy products
Nuts	Poultry	Red meat
Fruits and vegetables		Processed meat
Cereals		Sweets

Wine consumption in moderation.

Additionally, a low-salt and high-potassium diet decreases CVD risk. Both salt and potassium, play a key role in regulating blood pressure. Potassium rich foods are fruits, vegetables, legumes and low-fat dairy products.



### **Oceanic's Suggestions:**

- ✓ Don't smoke
- ✓ Maintain a healthy body weight
- ✓ Exercise
- ✓ Manage stress
- ✓ Follow a healthy diet

Make your meals healthier and balanced by using the Healthy Eating Plate Guide below.

## HEALTHY EATING PLATE

Use healthy oils (like olive and canola oil) for cooking, on salad, and at the table. Limit butter. Avoid trans fat.



The more veggies – and the greater the variety – the better. Potatoes and French fries don't count.

Eat plenty of fruits of all colors.



**STAY ACTIVE!**

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Harvard T.H. Chan School of Public Health  
The Nutrition Source  
[www.hsph.harvard.edu/nutritionsource](http://www.hsph.harvard.edu/nutritionsource)



Drink water, tea, or coffee (with little or no sugar). Limit milk/dairy (1-2 servings/day) and juice (1 small glass/day). Avoid sugary drinks.

Eat a variety of whole grains (like whole-wheat bread, whole-grain pasta, and brown rice). Limit refined grains (like white rice and white bread).

Choose fish, poultry, beans, and nuts; limit red meat and cheese; avoid bacon, cold cuts, and other processed meats.

Harvard Medical School  
Harvard Health Publications  
[www.health.harvard.edu](http://www.health.harvard.edu)



## Heart – Healthy Recipe

*Salmon steak served with quinoa or brown rice, tomato caper salsa and grilled vegetables*

### Salmon steak (10 servings)

Ingredients:

2kg salmon

A dash of black pepper

A dash of salt

200g lemon juice

Method:

1. Slice the salmon in desired portion size steaks.
2. Season the salmon steaks with salt and pepper.
3. Grill the salmon at a cooking temperature of 145°F (63°C) for 15 seconds.
4. Marinate with parsley, thyme, dill and fresh garlic if desired.

### Quinoa (10 servings)

Ingredients:

300g quinoa seeds

Method:

1. Add 2 portions of water for every quinoa portion.
2. Boil for approximately 15-20 minutes or until all water is absorbed.
3. Season with a dash of salt and pepper.

### **or** Brown rice (10 servings)

Ingredients:

300g brown rice

Method:

1. Wash the rice with clean water.
2. Add 2 portions of water for every brown rice portion.
3. Boil or steam the rice for approximately 20 minutes or until ready.

### Tomato caper Salsa (10 servings)

#### Ingredients:

100g capers

100g basil

500g half ripe tomatoes

200g red onions

A dash of ground black pepper

A dash of salt

200g lemon juice

50ml olive oil

50g chopped fresh parsley

1g brown sugar

#### Method:

1. Combine all the ingredients in a small bowl and serve.

### Grilled vegetables (10 servings)

#### Ingredients:

200g sliced green bell peppers

200g sliced red onions

200g sliced eggplants

200g sliced zucchini

10g oregano

A dash of salt

A dash of ground black pepper

#### Method:

1. Marinate all the sliced vegetables with oregano, salt and pepper.
2. Grill from both sides.

If a certain food is not available at your vessel, you might order.



Your vessel, our responsibility

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