## Our Heart

# The heart is a muscular organ about the size of a closed fist in the shape of a that functions as the body's circulatory pump and weights about 300g.

It takes in deoxygenated blood through the veins and delivers it to the lungs for oxygenation before pumping it into the various arteries (which provide oxygen and nutrients to body tissues by transporting the blood throughout the body). The heart is located in the thoracic cavity medial to the lungs and posterior to the sternum.

On its superior end, the base of the heart is attached to the aorta, pulmonary arteries and veins, and the vena cava. The inferior tip of the heart, known as the apex, rests just superior to the diaphragm. The base of the heart is located along the body's midline with the apex pointing toward the left side. Because the heart points to the left, about 2/3 of the heart's mass is found on the left side of the body and the other 1/3 is on the right. The adult heart pumps about 5 quarts of blood each minute – approximately 2,000 gallons of blood each day – throughout the body.

With a stethoscope, the doctor listens to the "heartbeat", which is the sound the valves make as the blood is pushed out and the valves close.

#### Heart beat

A normal resting heart rate for adults ranges from 60 to 100 beats a minute. Generally, a lower heart rate at rest implies more efficient heart function and better cardiovascular fitness. For example, a well-trained athlete might have a normal resting heart rate closer to 40 beats a minute. Small mice's heart beat 600 / min while a big whale's heart beat only 3 times per minute!

#### Gas exchange

Both oxygen and carbon dioxide are transported around the body in the blood through arteries, veins and capillaries. The main respiratory surface in humans is the alveoli, which are small air sacs branching off from the bronchioles in the lungs. They are one cell thick and provide a moist and extremely large surface area for gas exchange to occur. Capillaries carrying deoxygenated

blood from the pulmonary artery run across the alveoli. They are also extremely thin, so the total distance gases must diffuse across is only around 2 cells thick. An adult male has about 300 million alveoli.

#### The heart is a muscle mass

The heart is made up of muscle, called the myocardium. Since the heart muscle is very strong, it does not get easily tired. Because it can also work on their own without any instructions from the brain, it continues to run even if there is no consciousness or while we are sleeping.

#### Did you know?

Macrophages (a type of white blood cell) responsible for immunity are activated when the body temperature rises to 38.5°C, and it is said that

immunity increases several times with each 1°C rise. On the other hand, it is said that cancer cells proliferate most when the temperature is as low as around 35°C, stop growing when the temperature rises above 39°C, and die when the temperature exceeds 42°C. In general, cancer cells are considered to be vulnerable to heat because they tend to be acidic due to the influence of lactic acid and have a low pH. The temperature inside the heart is the highest in the human body, reaching nearly 40°C, and it is said that tumor cells cannot withstand the heat of the heart and die. It is also said that cancer and sarcoma do not occur because the striated muscle of the heart does not undergo cell division.

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#### Keeping the heart young !

The anti-aging lifestyle holds the tenets for heart health and thus is an excellent starting point: prevent, treat, and control high blood pressure and/or high blood cholesterol, avoid tobacco, prevent and manage diabetes, maintain adequate physical activity, enjoy a healthy diet, and achieve a healthy weight.

Like the natural stiffening of joints with age, also the muscles lose elasticity as we get older. Minerals as calcium, magnesium and potassium are essential for our heart health.

Magnesium is necessary for the expansion of heart muscles while calcium aids in the contraction.

CoQ10 is the most important nutrient that provides energy for the incessant beat of our heart! COQ10 is a coenzyme involved in energy production in the body, and is involved in all energy production in cells.

参考資料:https://site.ngk.co.jp/lab/no195/ https://www.yokohamagreen.jp/supplement https://www.kyowahakko-bio-healthcare.jp/ healthcare/conzymeq10/effect02.html https://www.jotnw.or.jp/kids/basic/brain\_heart01. https://gan-chiryou-clinic.com/cancer-knowledge/ cancer-shinzou-gan/

#### For your Heart!

### Gingko CoQ10 Max

\$84(S.R,P) 90caps. \$58.80(Member price)



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