

Difference Between Visceral and Parietal Pericardium

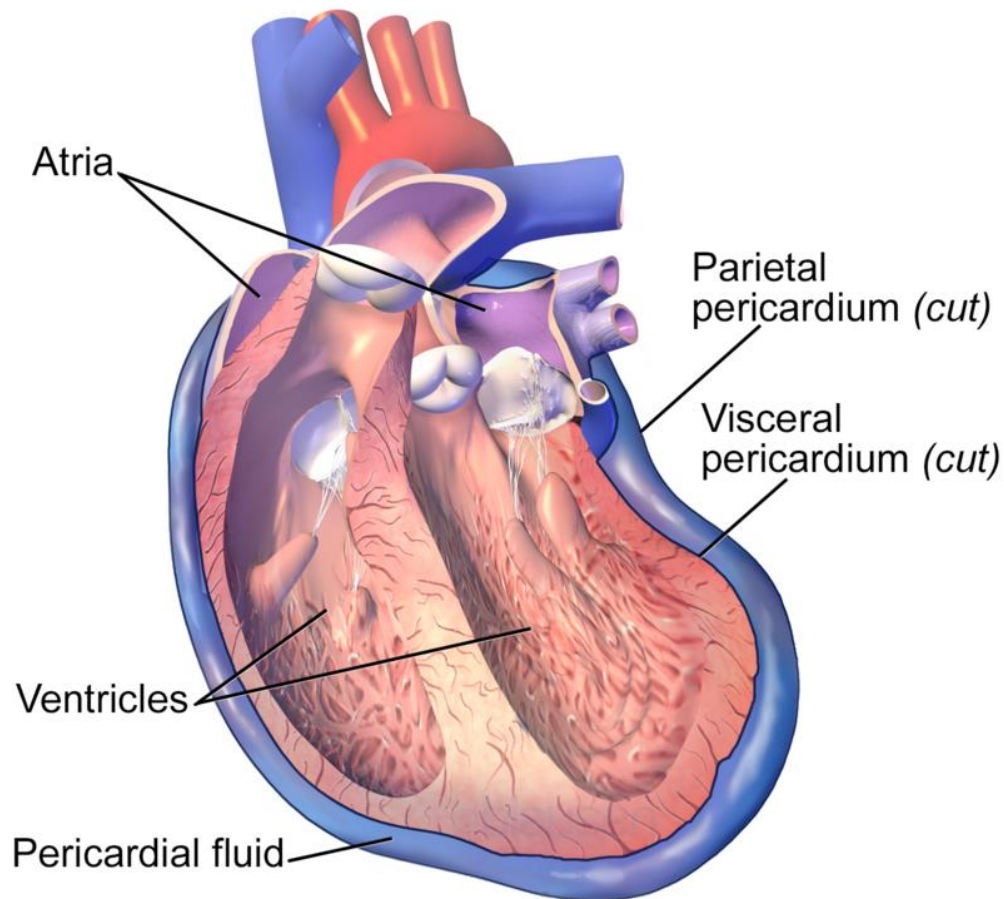
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Key Difference - Visceral vs Parietal Pericardium

The [pericardium](#) which is also known as “pericardial sac” is the [connective tissue](#) layer that encompasses the entire heart including the root of the great vessels like the aorta, [vena cava](#), and [pulmonary artery](#). The pericardium is a fluid-filled sac that protects the heart. It consists of an outer fibrous layer (fibrous pericardium) and an inner double layer of [serous](#) membrane (serous pericardium). The fibrous pericardium is made up of tough connective tissue and non-distensible in nature. It is continuous with the central tendon of the [diaphragm](#). The rigidity of this kind is preventing the rapid overfilling of the heart. Pericardium performs several important functions such as protection against infection, lubrication function, prevention from overfilling of heart and fixing the heart by connecting to diaphragm etc. The serous pericardium is enclosing within the fibrous pericardium. The serous pericardium is double layered; outer layer called as “parietal pericardium” and an inner layer called as “visceral pericardium”. The **key difference** between visceral pericardium and parietal pericardium is, the **visceral pericardium is the inner layer of the serous pericardium that outlines the outer layer of the heart’s epicardium while the parietal pericardium is the outer layer of the serous pericardium that outlines internal surface of the fibrous pericardium.**

What is Visceral Pericardium?

This is the inner layer of the serous pericardium. It also forms the epicardium or outer layer of the wall of the heart. Thus, the visceral pericardium is the inner layer of the serous pericardium that lines the outer layer of the heart’s epicardium. The main function of the visceral pericardium is to protect the inner heart layers. And it is also assisting the production of serous fluid known as “pericardial fluid”. The visceral layer is extending to the root of the great vessels later uniting with the parietal layer of the serous pericardium. This process happens in two areas where the aorta and pulmonary trunk leave the heart and where the [superior vena cava](#), [inferior vena cava](#), and [pulmonary veins](#) enter the heart.



Pericardial Sac

Figure 01: The Visceral Pericardium

Between the visceral pericardium and the parietal pericardium, there is a potential space called as “pericardial cavity”. It contains a supply of serous fluid (pericardial fluid). The pericardial fluid functions as a shock absorber. This reduces the friction that takes place between the pericardial membranes. There are two pericardial sinuses that run through the pericardial cavity. Sinus is a passageway or called as a channel. The transverse pericardial sinus is positioned above the left atrium, anterior to the superior vena cava, posterior to the pulmonary trunk and ascending aorta. On the other hand, the oblique pericardial sinus is located posterior to the heart and is bounded by the inferior vena cava and pulmonary veins.

What is Parietal Pericardium?

The parietal pericardium is the outer layer of the serous pericardium that lines internal surface of the fibrous pericardium. It is sometimes called as the layer between the fibrous pericardium and the visceral pericardium. It continues with the fibrous pericardium which provides an additional layer of insulation for the heart.

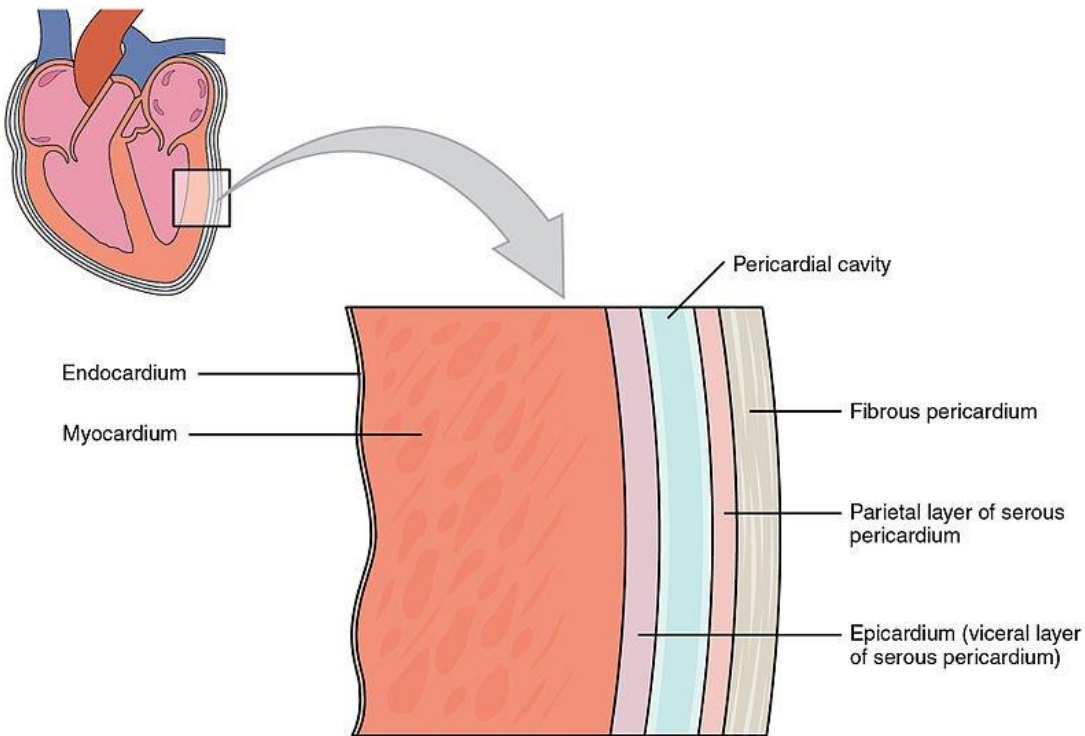


Figure 02: Parietal Pericardium

There are a number of pericardial disorders that affect the normal function of the parietal pericardium such as [pericarditis](#), pericardial effusion, and cardiac tamponade. The parietal pericardium is also protecting the heart by reducing the friction.

What are the Similarities Between Visceral and Parietal Pericardium?

- Both are made up of the same serous membrane.
- Both are part of the serous pericardium.
- Both are protecting the heart.
- Both are reducing the heart's friction.
- They are made up of the same single sheet of [epithelial cells](#) known as "mesothelium".

What is the Difference Between Visceral and Parietal Pericardium?

Visceral Pericardium vs Parietal Pericardium	
Visceral pericardium is the inner layer of the	Parietal pericardium is the outer layer of

serous pericardium.	serous pericardium.
Location	
Visceral pericardium lines the outer layer of the heart's epicardium.	Parietal pericardium lines the internal surface of the fibrous pericardium.
Connection to the Epicardium of the Heart	
Visceral pericardium is connected to the outer layer of the epicardium of the heart.	Parietal pericardium is not connected to the outer layer of the epicardium of the heart.
Connection to the Fibrous Pericardium of the Heart	
Visceral pericardium is not connected to the internal surface of the fibrous pericardium.	Parietal pericardium is connected to the internal surface of the fibrous pericardium.
Structural Organization	
Visceral pericardium outlines the heart.	Parietal pericardium outlines the visceral pericardium.

Summary - Visceral vs Parietal Pericardium

The pericardium is the fluid-filled sac that surrounds the heart and the proximal end of the aorta, vena cava, and pulmonary artery. The heart and the [circulatory system](#) form the cardiovascular system together. The main function of the heart is to circulate [blood](#) to [tissues](#) and body's organs. The outer membrane of the heart is called as pericardium that functions as a protective coat. The wall of the heart has three layers; Epicardium (external layer), [myocardium](#) (middle layer or heart muscle tissue), endocardium (inner layer). The pericardium is further divided into the fibrous pericardium and the serous pericardium. The serous pericardium is composed of the outer layer called as "parietal pericardium" and the inner layer called as "visceral pericardium". This is the difference between visceral and parietal pericardium.

Reference:

1. "Heart Structure - Anatomy & Physiology." Heart Structure - Anatomy & Physiology - WikiVet English. [Available here](#)
2. Bailey, Regina. "What Is the Pericardium?" ThoughtCo. [Available here](#)
3. "The Pericardium." TeachMeAnatomy, 18 Aug. 2016. [Available here](#)

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2. '2004 Heart Wall' By OpenStax College - Anatomy & Physiology, [Connexions Web site](#), Jun 19, 2013. [\(CC BY 3.0\)](#) via [Commons Wikimedia](#)

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