

# THE VALUE OF REGULAR MONITORING OF YOUR VITAL SIGNS – A QUICK READ

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## Introduction

Vital signs are important **biological, biochemical, physiological** and **hormonal** indicators of a person's general health status. They are the objective measurements of the body's most basic operations. Their processes perform essential functions for the living body. They are "vital" because they are urgently needed; absolutely necessary; a manifestation and sign of life. Even in triaging patients i.e., assessing or sorting patients according to importance or urgency of clinical presentation, the first set of clinical examinations is an evaluation of the vital signs of the patient.

Traditionally, vital signs include the body's **temperature, blood pressure, pulse rate, respiratory rate** and **oxygen saturation**. Generally, vital signs provide a snapshot of what is going on in the body, if the values are outside the normal range, they may point to a dysfunction in the body.

Below are brief descriptions of the vital signs and the dysfunctions they may point to.

## Body temperature

The normal internal body temperature ranges from **36.5 to 37.2 degrees Celsius** (*Check to verify if you are in this range*). Usually, **fluctuations in this value indicate there has been a microbial exposure and the body is fighting an infection**. When there is a microbial exposure in the body, the immune system sends signals to the hypothalamus to increase the body's temperature. This process in turn weakens the invading microorganisms and allows the specific body's immune cells to respond appropriately, halting the pathogenesis of the microorganism. Upon successful victory by the immune

cells, the body temperature will return to normal. However, prolonged elevated body temperature needs a medical attention.

### **Blood pressure**

The blood pressure is the pressure of the circulating blood against the walls of the blood vessels. Two numbers i.e., a numerator and a denominator are recorded when measuring blood pressure. The numerator (the systolic pressure/higher value) displays the pressure inside the artery when the heart pumps blood to the body. The denominator (the diastolic pressure/lower value) represents artery pressure when the heart is at rest. The blood pressure is considered normal at **120/80 mmHg** (millimeters of mercury) *(Check to verify if you have this value)*. **Usually, fluctuations in this value indicate a concern for the health of the heart and brain and its associated blood vessels. E.g., coronary heart disease (heart attack), hypertension or stroke (brain attack).**

### **Pulse rate**

The pulse rate is the number of times the heart beats in a minute. It ranges from **60 to 100 beats per minute (bpm)** *(Check to verify if you are in this range)*. **Usually, fluctuations in this value indicate a concern for the health of the heart and its associated blood vessels.**

### **Respiratory rate**

The respiratory rate is the number of times anyone breathes in a minute. It ranges from **12 to 20 breaths per minute (bpm)**. *(Check to verify if you are in this range)*. **Usually, fluctuations in this value indicate signs of respiratory illness, signs of a respiratory allergic exposure, respiratory poisoning, heart disease, lung infections, signs of a general infection and emotional changes.**

### **Oxygen saturation**

Hemoglobin is a hemoprotein (blood protein) composed of “*globin*” (colourless protein obtained by removing heme from hemoglobin) and “*heme*” (the oxygen carrying compound in red blood cells that gives red blood cells their characteristic colour) which functions primarily to transport oxygen from the

lungs to body tissues. Oxygen saturation means the amount of oxygen absorbed by the hemoglobin relative to the total hemoglobin in the blood. It ranges from **95 to 100%**. *(Check to verify if you are in this range)*. **Usually, fluctuations in this value indicate the lack of adequate oxygen rich-hemoglobin reaching the organs of the body. This can compromise various organ functions.**

Take note however, that, many sources of internal and external variables affect the scores of these vital signs. E.g., age, external temperature, physical activity, pregnancy etc. Nonetheless, vital signs monitoring is the critical first step for a healthy and long life. Be intentional about monitoring your vital signs and you will save yourself.

Are you ready to monitor your vital signs but do not have the equipment and skill? Visit us at the **Department of Nursing and Midwifery, Pentecost University** and we will be happy to help.

Thank you.