Observations and Vital Signs

22/03/2010

Author

Lea-Ellen Schneller B Pharm FACPP

Who is this for?

This information sheet summarises previous research and presents the best available evidence on observations (vital signs). Observations are monitoring tools that are used to assess a person's condition. If you are in a hospital or care facility, nursing staff will come to check your condition. They will want to know how you are feeling, so this is a good time to mention if you have pain, feel sick or are uncomfortable. The nurse will measure your vital signs to check your physical condition, and will take your temperature and check your pulse rate. Observe your breathing rate, measure your blood pressure and make any other observations that you require.

What We Know

When you are in a hospital or a care facility observations of your vital signs give nursing staff a quick indication of how healthy you are. Your vital signs will be checked more or less frequently, depending on your physical condition. The nurse's observations will be recorded in your written records, and any changes will be noticed and watched. The doctor will be informed if there is cause for concern. Changes in your vital signs can provide the nursing staff with useful information. Sometimes initial observations indicate that you may need more constant monitoring of your heart rate, blood flow, signs of fever, or breathing problems. In this situation, electronic equipment is used.

Taking your temperature: There are many different types of thermometer, each with advantages and disadvantages. One of the most accurate, fastest and safest ways to take your temperature is with an ear thermometer. The person using this will need to pull your outer ear up and back a little, to straighten your ear canal before inserting the thermometer. This will help ensure an accurate reading. Mercury and other thermometers placed in the mouth and underarm are still widely used, but need to be left in place for several minutes to be sufficiently accurate. Normal temperature is between 36.2 and 37.2 degrees C.

Checking your pulse: Your pulse rate should be counted for 30 to 60 seconds with gentle pressure to your wrist. If your pulse rate is high, or with certain heart conditions, a stethoscope is used to avoid errors in counting. In adults a normal pulse rate when resting is between 60 and 90 beats a minute. People who are very fit may have a much lower pulse rate.

Observing your breathing rate: Your breathing rate is one of a number of observations made about your physical state. The most accurate way to measure a fast breathing rate is
with a stethoscope held against your chest. Your breathing rate is then counted for a full minute. In adults a normal breathing rate is around 14 to 20 breaths a minute.

**Measuring your blood pressure:** Allow yourself to relax, as being anxious can raise your blood pressure. Do not smoke or drink anything containing caffeine for 30 minutes before having your blood pressure taken. You should be seated and have rested for between 1 and 5 minutes. Your arm should be at heart level; the nurse will help you. The inflatable part of the blood pressure cuff should almost or completely encircle your arm. Two or more readings may need to be done. The nurse will be listening for sounds starting, getting louder, fading and disappearing as the blood pressure cuff deflates. Your blood pressure is written as two sets of numbers. Your systolic blood pressure is the higher number as your heart beats and your diastolic blood pressure is the lower number between beats. Normal blood pressure is between 90/60 and 120/90. If other observations are needed for your condition the nurse will check these as well.

**The Evidence Suggests...**

Observations of how a person is feeling, and measures of breathing and pulse rates, temperature and blood pressure should be taken as often as their condition requires.

**Taking the temperature**

Ear or ‘tympanic’ thermometers are recommended because they are faster, more accurate and safer than mercury thermometers. A gentle ear tug to straighten the ear canal, while ensuring the canal is clear of wax is recommended for temperature taking. Changes in the blood supply and environmental factors, such as heating, can influence temperature readings.

**Checking the pulse rate**

Pulse rate should be counted for either thirty or sixty seconds, using gentle pressure to the wrist, or a stethoscope if required for accuracy.

**Observing the respiratory (breathing) rate**

Breathing rate should be counted for one minute while the person is resting, using a stethoscope against the chest to count all breaths. An abnormal respiratory rate alone should not be used as an indicator of worsening body function.

**Measuring the blood pressure**

Potential environmental, physical, social or other factors, such as fear or embarrassment, which can influence blood pressure, need to be considered when measuring blood pressure. The blood pressure cuff width should be at least 80% of the circumference of the patient’s arm. Maintaining the arm at heart level and waiting between one and five minutes before taking a blood pressure reading following exertion or position change is recommended.

**Evidence Reliability**

The evidence related to the topic of each consumer publication produced by the Joanna Briggs Institute.
Briggs Institute is assessed for reliability and quality. We do not rate a procedure or treatment, but the evidence (or research) that is available to support it. Evidence can play a critical role in any investigation and it is important for detectives to recognise evidence that will provide ‘reliable’ information to aid in the investigation.

This is also the case when assessing health information, as some types of evidence are more reliable than others. For Joanna Briggs Institute evidence based information for consumers, you can be assured that the best available evidence is utilised. If you would like more information about research and levels of evidence, please contact the Joanna Briggs Institute or visit the research page of our consumer web site.

Disclaimer

“The procedures described in this pamphlet must only be used by people who have appropriate expertise in the field to which the procedure relates. The applicability of any information must be established before relying on it. While care has been taken to ensure that this pamphlet summarises available research and expert consensus, any loss, damage, cost, expense or liability suffered or incurred as a result of reliance on these procedures (whether arising in contract, negligence or otherwise) is, to the extent permitted by law, excluded”.

What is Evidence Based Health Information?

Just as a detective searches for evidence to solve a crime, so too do health professionals look for evidence to guide their practice. The detective must have evidence to support their case. In a similar fashion, the health care professional must have evidence to support their proposed course of treatment. They search for information that will help them to provide the most effective or beneficial form of care to their patients. Due to the wealth of information available to them, the process of discovering which information is the best can be difficult and time consuming. It would take an enormous amount of time for your doctor to sift through the large amounts of research and information available to them on a particular topic. This is where the Joanna Briggs Institute comes into play. We conduct the ‘detective’ work, providing them (and you) with the best available evidence.

What does this mean for consumers?

As consumers of health care it is important to know that your treatment is being based on the best available evidence. It is also important that you are provided with all of the information in order to have greater independence in relation to your own health care decisions and to be involved in the decision making process.

Further Information

The Joanna Briggs Institute Consumer Information Program provides up to date literature reviews to ensure your information is based on the best available evidence. The Institute also produces systematic reviews and Best Practice Information sheets aimed at clinicians and health professionals. This means you are provided with the same high standard of publications based on the same information as those working directly in the field.
References