

Syncope (fainting/passing out)

Definition

A loss of consciousness caused by a temporary insufficient blood supply to the brain.

When a casualty faints, the blood vessels in the lower body dilate and the heart rate decreases, resulting in a drop in blood pressure. A faint is also known as syncope, vasovagal syncope or vasovagal attack. The word syncope means 'a sudden loss of consciousness' and vasovagal is referring to the action of the vagus nerve in causing a faint. An increase in vagal activity causes a drop in heart rate and blood pressure.

There is also a reduction in the sympathetic nervous system activity which causes a dilation of the blood vessels, leading to a 'pooling' of the blood volume in the limbs. This means that there is now less blood flowing to the brain, and this lack of oxygenated blood leads to unconsciousness.

Faints are common, 50 percent of the population will experience a faint at least once in their lifetime.

A faint is usually caused by a trigger and some of these are listed below. The most common triggers in the dental surgery are stress, anxiety and pain. Most people will experience some or all of the signs and symptoms which are also listed below.

Faints can sometimes be avoided if action is taken early enough.

Typical causes of fainting include:

- Pain and/or fright
- Lack of food/fluid
- Emotional stress
- Long periods of inactivity (such as sitting or standing)
- Prolonged exposure to heat

Possible signs and symptoms

- Feeling hot and sweaty
- Pale, clammy skin
- Auditory and/or visual disturbances
- Feeling light-headed and dizzy
- Slow pulse (bradycardia)
- Temporary loss of consciousness

The symptoms vary between individuals, but usually include a feeling of becoming very warm and light-headed. The person will look quite pale and sweaty, and may mention that any sounds seem 'very far away'. The pulse rate will be slow (an average pulse rate in a healthy adult at rest is 60 – 90 beats per minute) which is a useful diagnostic tool. After a few seconds the person will lose consciousness.

As soon as the blood flow to the brain is restored they will begin to make a recovery, although they will continue to feel unwell for a time afterwards.

Management

When a person shows any of the signs mentioned above they should immediately be placed flat with the legs elevated to a position above the level of the heart (laid on the floor with feet resting on a chair/ dental chair laid flat with headrest lowered and legs elevated). This should encourage the blood flow towards the vital organs. It is very rare for someone to faint when lying down because it is impossible for blood to pool in the limbs. High – flow oxygen should be quickly administered using the non re-breathing facemask. This will help to restore the cerebral oxygen concentration quickly. A person who is pregnant needs to be placed onto their side, otherwise the weight of the baby will push down and prevent the blood flow returning effectively, and may also hinder breathing. As the person begins to recover, leave them in this position for a few minutes and then allow them to return to a sitting position. This should be done slowly, especially if the person is elderly or pregnant. Reassure them as they are likely to feel embarrassed, and encourage them to continue receiving the oxygen until they are feeling 'back to normal'.

It is helpful to monitor the pulse rate because there will be an increase in the rate as the person recovers – after a minute it may become rapid but will return to normal quickly after that.

If the casualty loses consciousness at any time **open the airway** using the head tilt/chin lift manoeuvre and quickly **check for breathing** taking no longer than 10 seconds to do this. **If the casualty is breathing normally** place them into the recovery position and telephone for an ambulance. Continue to administer high-flow oxygen. **If the casualty is not breathing, or is not breathing normally** then send someone to ring for an ambulance and quickly start CPR.

Prevention

It is always better to avoid an incident altogether, than have to deal with one when it arises, so it is always useful to know what the triggers are if someone has a history of fainting. Ensuring that the patient is adequately hydrated and has eaten recently can help to minimise the likelihood of a faint. If it is a hot day, then make sure that the air-conditioning is on, or the windows are open and a fan is available to use in the surgery.

Do remember to reassure the patient and explain what treatment you are about to do to try to keep their stress levels to a minimum.

As soon as the patient complains of feeling hot and/or dizzy, stop any dental treatment immediately, alter the chair position as mentioned earlier, and give high – flow oxygen.

When stress and anxiety is associated with dental treatment then the value of using sedation may have to be considered.