

Assessing physical condition and vital signs

It is important to know what is normal when assessing an animal's health, to be able to recognise abnormalities. Making daily observations of a range of normal animals will help you to become more competent at identifying abnormal behaviour. This will enable you to pick up the, sometimes subtle, differences more readily.

Signs of pain and distress

There are a range of visible signs that may indicate that an animal is unwell.

Signs that an animal is unwell

Animal behaviour	Movement
abnormal vocalisation	limping
silence	restlessness
Self-mutilation	reduced activity
hyper-excitability	immobility
anorexia (not eating)	prolonged recumbency
absence of grooming in cats	circling
abnormal aggressiveness	head tilt
	unusual posture or positions

Clinical signs that may indicate pain

Respiratory system	Circulatory system	GIT (gastrointestinal tract)	Other signs
rapid breathing	pale pink or white gums	continual vomiting or diarrhoea	excess salivation
noisy breathing	increased heart rate, +/- irregular rhythm	abdominal pain on palpation	muscle twitching
shallow breathing	haemorrhage	reduced gut sounds	stupor, coma or unconsciousness
struggling to breath	shock		increased or decreased temperature
panting	increased blood pressure		prolonged whelping or parturition
slow, laboured breathing			large wounds
blue or purple gums			sweating

TPR

Taking the **T**emperature, **P**ulse and **R**espiration rate of an animal gives a good indication of its state of health. It is important you become familiar with the range of normal values of different species.

Temperature

The temperature of an animal is usually taken rectally, using a thermometer. However, once you are experienced you can judge whether an animal's temperature is very high or low by feeling their extremities (ears, paws etc). When taking a rectal temperature, the animal often shows resistance, so it must be restrained and held firmly. Ensure that the thermometer indicates the bottom of the scale before you commence:

1. Lubricate the bulb of the thermometer (ie with KY jelly or other lubricant).
2. Gently insert the thermometer into the rectum, slightly rotating it as you go. Do not force entry.
3. Retain in the rectum for a minimum of sixty seconds. For large animals, ensure the thermometer stays in contact with the wall of the rectum for a correct reading.
4. Gently remove and wipe faeces from the end.
5. Read immediately and record finding.

Pulse rate

The pulse can be taken at any point on the body where a major artery runs close to the body surface. Each pulsation corresponds with a contraction of the heart.

How to take the pulse rate:

1. With the aid of an assistant, restrain the patient.
2. Ensure that the patient is relaxed and still.
3. Using the tips of your fingers, apply them directly on the artery.
4. Count the rate of pumps over a minute.
5. Record this information.

Respiration rate

The best way to check respiration is to count the number of expirations for a period of 60 seconds and make a note of this result. Alternatively, you can count expirations for 15 seconds and multiply by four.

As well as this observation, there are several other factors that need to be considered:

- Is the animal struggling to breathe?
- Are its gums a healthy pink colour or looking blue (indicating lack of oxygen)?
- Is it making abnormal sounds while breathing (whistling, gasping or choking)?
- Are its breaths strong or shallow?
- Consider the history of the previous few hours. Is the animal pregnant, excited, overheated or poisoned?

Normal values for adults of different species

Species	Rectal temperature in °C	Pulse rate (beats per minute)	Respiration (breaths per minute)
Dog	37.8–39.2	60–180	10–30
Cat	38–39.2	110–180	20–30
Cow	38.0–39.0	60–70	25–30
Horse	37.5–38.5	23–70	12
Sheep	38.5–39.5	60–120	20–25
Pig	38.5–39.5	58–86	30–40
Rabbit	38.8–39.8	123–304	30

Deviations from the norm

Physiological and environmental factors will affect an animal's TPR. Very young animals often have increased TPR values.

Where possible, TPR should be assessed again after environmental effects have diminished. Some reasons for deviations from the normal physiological findings are:

- stress–fear of unfamiliar environment, smells or sounds will increase cardinal signs
- heat–exercise and being tied up in the sun or just a hot day will increase cardinal signs
- exercise–activity in any weather conditions will increase TPR
- female animals on season agitate male animals, increasing TPR values
- inability to urinate or defecate–house trained dogs locked in a cage
- sleep–this will decrease an animal's TPR values.

Normal physiological findings vary from species to species and with individual animals. Therefore, it is important to be able to recognise the normal values for each species and take into account environmental factors, as possible reasons for deviations from the normal.

TPR, then what?

It is important to assess how frightened and stressed the animal is before conducting further examination and then treatment. An important part of your job when offering immediate care to injured animals will be to comfort and reassure them. An animal if further stressed by human handling, may react to fear by deteriorating in their condition.

When assessing an animal's health, the examination generally has three parts to it. However, depending on your situation, not all of the examination may be able to be carried out.

Distant examination

The animal should be examined from a distance, preferably without it being aware of your presence. Things to look for include:

- Is it behaving normally for this species?
- Are there any obvious injuries?
- Is it moving freely, without lameness or abnormal posture?
- How does its general body condition and coat look?
- Is there any evidence of discharges?
- Can you hear any abnormal sounds?
- Can you smell any abnormal smells?
- Has the animal eaten its food?
- Has the water been drunk?
- Is the animal urinating and defecating normally?



Close examination

After conducting an initial distant examination, a closer examination may be conducted if it is safe for you to do so.

When carrying out a close examination:

- look, listen and smell again

-
- examine the head, ears, eyes, mouth and mucus membranes
 - run your hands over the neck, chest and limbs
 - feel for swellings and discomfort
 - check skin and hair all over the body
 - examine obvious injuries more closely.

Tests

Tests may then be conducted by the veterinarian. Depending on the findings of the examination, tests may be run on blood, faeces, urine or skin to confirm the suspected diagnosis.