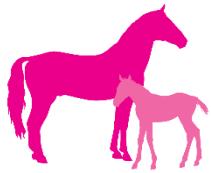


Vital Sign	Normal	How to assess	When to be concerned
Heart Rate or pulse rate	30-40 beats per minute (resting) (lub dub=1 beat)	Stethoscope under point of shoulder on ribs or where the facial artery passes under the lower jaw (pink arrow in diagram). Using two fingers, locate the artery, count number of pulses for 15 seconds and multiply by four to get pulse rate	Pulse rate over 40 BPM in resting horse
Respiratory Rate	20 – 30 breaths per minute	Watch the flank area for rising and falling. 1 rise and fall = 1 breath. Also check nostrils- if they are flared the horse is struggling to breath.	Nostrils flared in resting horse or more than 40 breaths per minute
Temperature	37.5 – 38.5°C	Lubricate equine thermometer and partially insert into rectum (approx 5cm), tilted slightly and wait for beep, then read display	Anything above or below the normal range.
Mucous membranes	Pale pink and moist	Observation by curling lip up	Colour change to bright red, white or bluish purple and tacky/dry
Capillary Refill time (CRT)	Less than 2 seconds	Briefly press thumb against horses gums. Gums should turn white and then go back to pink in no more than 2 seconds.	Over 3 seconds refill time
Hydration	After "pinch test", skin flattens immediately	Pinch horses neck just in front of scapular line or point of shoulder and pull up. Skin should flatten immediately	If the skin stays tented, the horse may be dehydrated
Gut sounds	You should hear a lot of gurgle noises on both left and right sides	Listen in area behind rib cage and in depression between flank and point of hip on both left and right sides. A stethoscope makes this easier.	If you hear nothing or less than 3 sounds/ min on left and less than 1 sound / 3mins on right
Faeces	Small, firm faecal balls	Watch for fresh manure passing. Look at consistency ie hard/dry/ diarrhoea etc	No faeces. Dry hard faeces or profuse diarrhoea.



Injection sites for intramuscular injections

There are several sites for intramuscular injections- the two preferred sites are into the rump or into the neck. With volumes over 10mls the rump is better as there is a greater muscle mass to absorb drugs and less chance of abscesses forming.

Landmarks for intramuscular neck injections are (refer to diagram over page):-

- The nuchal ligament which runs up the crest of the neck from the withers to the poll
- The border of the scapula
- The cervical vertebrae

The borders of these three landmarks form a triangle. It is safe to inject anywhere within this triangle, but **always** remember to draw back the needle in case you have hit one of a few blood vessels in this area as some drugs must never go into blood vessels. The needle should be placed in at a 90° angle to the neck all the way to the hub of the needle.

Landmarks for intramuscular rump injections are (refer to diagram over page):-

- Point of tail
- Point of hip

Draw a line from these two points and place your palm in the middle of this line. The circle your palm makes is the area best to inject in the rump. As above, **always** place needle directly into muscle to hub of needle and **always** draw back before injecting drugs into the area in case the needle has hit a blood vessel. If the horse moves at any stage, stop injecting and draw back slightly to see if any blood enters syringe. Another thing to watch is your position at the back of the horse. Don't place yourself in line for the horse to kick you- always stand toward the shoulder of the horse.

In case of emergency or any concerns please contact us ASAP
Any time
0488 989 836