Behaviour patterns in Camel

1- Locomotion

The foot of camel is designed to cope with the loose sandy soil of the desert.

It has been described as a type but filled with fat instead of air.

The cushion is made up of a number of fatty pads which are soft, semi fluid and of lighter color than the rest of the body tissue. It is separated by a cartilage and surrounded by a sheath of collagen. Camel is peculiar among domestic animals in that both legs on one side of the body move in unison and not in opposition.

1- Walk stride

In which the whole weight of the body is supported for a considerable part of time on either the two right or the two left legs. The sequence of the leg movement is as follows: -

Right fore, right hind, left fore, left hind and then right fore again.



Bactrian Carnel

2- Pacing gait (trot)

This gait is well known to horsemen and not common in camels as it is unstable gait and suitable only for flat terrain.



3- Fast run or gallop

t is not a normal gait for camel. It is shown only during exhibitions or races and is noticed in camels chased away from watering points.



Raising and couching (kneeling)

When rising, the camel thrusts its head with a jerk, rises on its knees and then rises the hind quarters to a full extent.





When couching, one knee is lowered on the ground followed by the other.

The hind legs then bent until the stifle pads touch the ground. The fore limbs are settled and finally the bulk of weight is taken on the chest pad.



2- Rest and sleep

Most camels sleep while kneeling like cows with their legs folded under their bodies. Some camels show sprawl side ways (full stretched position) with their long neck and head flat on the sand.



The area of the camel's body which subjected to contact with the ground are protected by out growths of horny structure (callous pads).

The largest and the thickest being on the chest (breast pads) with one on each elbow and knee and two on each hock.



3-Ingestive behaviour

a- feeding and grazing behaviour

When camels are fed on a low quality high fiber diet, they are able to retain food particles in their fore stomach for long periods. The mean retention time for large particles of food in the fore stomach of camels is 74 hours.



In contrast to most ruminant species, camels are not restricted to one feeding strategy.

They can, if necessary use low quality fiber rich diets but if they presented with a choice, they select the most nutritive parts of the plant.

So, they classified as bulk and roughage eater when only low quality fiber rich diets are available while they classified as selective browsers on pastures.



The main food for camels is a variety of herbs, grasses and flowers.

During long journey or during summer months, they are fed barley, sorghum.

Camels are fond of dates which can be given to them mixed with milk when they faces a hard work, long journey or when they are sick.



b- Rumination

Camel has a multiple stomach compartment enabling it to feed quickly and regurgitate its meal later to complete its mastication and digestion.



As in ruminants, rumination starts with deep inspiration during which the glottis remains closed resulting in a negative intra-thoracic pressure.

- With the increased intra-abdominal pressure, the contents are sucked into the esophagus followed by
- Anti peristaltic waves towards the mouth cavity



As most ruminants, camels usually ruminate while lying down and rarely during standing.

Rumination activity reaches its peak in the early morning as in contrast to other ruminants, rumination activity in camel occurs independently of feeding times



<u>c- Drinking behaviour</u>

- Camel is able to maintain its life and to work on a limited water supply for a longer time than any other transport animal.
- The degree of endurance to thirst varies with the breed of the camel, the season of the year and the kind of the work the camel does.
- Desert bred camel camels have the greatest power for that.

Camel at work can subsist without drinking for periods up to 2 months specially during spring time where the lushly pasture is available as the camel can withdraw the water from the fresh vegetation.



In winter when they feed on dry grasses, they can work without drinking for one or two weeks without discomfort.

During summer, they definitely need water every other day.



Why camel resist thirst for a long period

There are some physiological peculiarities of camel in his water requirements. The chief one is the loss of water from the body is very much less due to: -

1) The well insulating wooly coat.

2) The normal day variation of the body temperature which reduces the necessity of adjustment by evaporation



3) Camels can withstand an exceptional degree of dehydration of the body (40% of its body water) without any harmful effect.





4) When camel drinks, he drinks a large amount of water in few minutes and there by, dilute his blood and tissue fluids to an extent which may results in water intoxication in any other species of mammals.



4- Sexual behaviour

<u>a- Male sexual behaviour</u>

The period of maximum sexual activity which occurs in male camel known as Rut period.

- The manifestation of rut in camels is accompanied by signs, which considered as masculine .
- They are unaffectionate and difficult to control.

They show grinding of their teeth, sucking air, belching, drawing the neck back, wagging of their tails with splashing of urine and sometimes semen and crouching with jerky movement of the pelvis. Sometimes, diarrhea accompanies the rut.



www.shutterstock.com · 1325427

As the season advanced, they tend to go off food and lose the condition.

They become tucked up and show a reddish colored secretion from its poll glands, which trickle down along the hairs of the poll. The function of this secretion is the attraction and arousing the female.

The salivary glands also show an increased secretion.





The most obvious sign is the protrusion of the soft palate in the mouth cavity which known as Gulla. This sign may be due to expelling of gases from the rumen.

By approaching females, the male camel in full rut draws his heads backwards and raising his upper lip showing flehmen.



Copulation

Copulation in camels is preceded by courtship in which the male camel shows the following signs: Smelling the vulva of the receptive female.

Rubbing her along the back with the underside of his neck.

Show kicking movements.

Finally, forced her to the crouching position.



After that, male shows erection, protrusion, mounting, ejaculation and dismounting. Copulation occurs when the female in the crouching position and both of them face in the same direction.

Copulation may be repeated at frequent intervals as the highly excited male may spend all the day with the receptive female and finally exhausted and unable to stand.



b- Female sexual behaviour

Camels are seasonal polyesters. Oestrus occurs at regular intervals from December to March or April.

In Egypt, the duration of oestrus cycle is 24 days with oestrus period of 4-6 days.



Signs of oestrus or heat

Female camel in heat becomes restless, bleat continuously. Its tail becomes lifted and flabby. She frequently urinates and shows a mucous discharge from the vulva, which becomes swollen. She accepts the male to approach and smell her.



Ovulation is induced by copulation and occurs within 32-40 hours afterwards.

Sterile mating may followed by pseudo-pregnancy while successful one is followed by 13 months of pregnancy.

From about 15-20 days after mating, cow camel has conceived may be recognized by the habit of raising up the tail whenever approached or handled by their attendant.

5- Parturient and Maternal behaviour

a- Parturient behaviour

Cow camels in advanced stage of pregnancy with distended abdomen and enlarged udder are known to approach parturition. They show a faint edema of the udder and vulva from 5-10 days before parturition with slacking of the pelvic ligaments.

<u>1- First stage of labour</u>

It lasts about 24-48 hours and is characterized by intermittent restlessness and 3-5 hours before labour, she camel show interrupted feeding, lying down and getting up with excessive rumination during the day hours.

It ends with appearance of the water bladder at the vulva lips.

2- Second stage of labour: -

It lasts about 30 minutes. It characterized by straining or uterine contractions at intervals of 30-60 seconds. With rupture of the chorio-allantoic membrane, the calf's nose appears firstly before the forefeet which at soon emerges and protrudes beyond the nose. With more and more straining, the whole head becomes visible and followed by the body. Almost all presentations are anterior and the birth process appears to be achieved more easily than cow or mare. The umbilical cord ruptures as the calf comes from the dam or when the dam starts to stand up immediately after birth.

Birth usually takes place in normal sitting position or lying on one side while birth in standing position is

uncommon.



The third stage of labour

It lasts about 30 minutes. After the cow camel rises, she may nuzzles and nibbles the calf but never licks it or eat the after birth.

The calf usually stands within 30 minutes after birth and its first attempts are directed towards the udder of its dam



b- Maternal behaviour

A baby camel just a few weeks old being nursed by her mother and the mother is followed by her young in the plain.

Newly born camels fed on their mother's milk only for a prolonged period of time extending for about three months and then, adult food can be gradually offered to them in parallel to suckling their mothers until the age of 13 months where they are weaned.

The transition to adult feeding should be done gradually and the calf should given grasses and other easily digestible food.



For the first 20 days after birth, the calf is only allowed to suck one teat while the remaining teats are milked out by hands twice a day and tied up to prevent calves from suckling them.

This is due to the harmful effect of the camel colostrum on their offspring.



After that critical period has elapsed, the calf may be allowed to suck two teats only for the next two months , then three teats for the next three months until by the time when it reaches 6-7 months of age, it can have the whole udder to itself.



6- Bad vices in camel

1- Blatant noises

It is described by western travelers as a vile belching and it is most disturbing to the unaccustomed ears. It usually occurs during regurgitation of the cud.



Bad vices in camel

2- Blowing out the partially chewed food

When camels is excited, they salivate copiously and the adult males inflate their soft palates in their tongues (protrusion of Gulla) with emitting of a threat noise and they appear to prone to bite.



Bad vices in camel

3- Biting

During the rut period, the camel temper is changed to be very dangerous and there is a risk for the people who managing them from the biting. So, they have to keep a suitable distance from such camels.





Bad vices in camel

4- Kicking

When a camel is hit by the attendant or the rider, he usually kicks. Camel is a powerful kicker with both fore and hind limbs.



