

Pregnant cats, birth and care of young kittens



CATS PROTECTION
ESSENTIAL GUIDE 18



Cats Protection (CP) recommends neutering as the only effective way to reduce the number of unwanted cats in the UK. Cats are prolific breeders and their offspring need to be speedily neutered or the population will quickly get out of control. In fact, one female cat can be responsible for a staggering 20,000 descendants in just five years! In spite of CP assisting the neutering of over 175,000 cats in the UK each year, there are still thousands of unwanted cats and kittens in animal charities up and down the country needing loving homes.



Feline reproduction

Female cats – queens – can become sexually mature from just four months of age. If queens are not neutered they have regular heat cycles showing restlessness, calling and wailing, squirming, rubbing and presenting the rear, in attempts to attract a mate. These periods of reproductive activity lasting a few days recur every few weeks during the breeding season – which usually runs from February until August. During these heat cycles, a queen will be very attractive to unneutered male tom cats which can detect her scent from several miles away and will make great efforts to reach her.

Queens are not selective in their choice of mate and will accept advances made by any tom, including relatives. Allowing an unneutered female unsupervised time outside – or indoors with an unneutered tom – will inevitably put her at risk of pregnancy as well as putting both her and any resulting kittens at risk of the infectious diseases that unneutered roaming toms may carry.

Contrary to popular belief, there are no health or welfare benefits in allowing a cat to have a litter of kittens before she is neutered and providing appropriate care can be costly and time-consuming.

Pregnancy (Gestation) and care of the pregnant queen

Pregnancy lasts approximately 63-65 days – around nine weeks.

Heat cycles usually stop after mating once a cat becomes pregnant, although sometimes they will continue. If mating occurs again during the pregnancy this can lead to further fetuses being conceived and kittens born with different fathers in the same litter!

Pregnancy can be diagnosed by the vet using abdominal palpation from around three to four weeks of age or by using ultrasound. Pinkening up – enlargement and reddening of the teats – may be seen from around three to four weeks of pregnancy.

Behaviour changes may be seen in the last week of pregnancy. Queens may appear to search for a suitable place to give birth. Ideally, pregnant queens should be introduced to a quiet, clean and warm kitting area away from the family and other pets at least two weeks before the expected date for birth. Provide warm blankets and clean sheets that can be washed and replaced as necessary.

The queen will need to eat more than usual, especially in the last three to four weeks of pregnancy when she needs approximately 25 per cent more food. Feed her kitten food in regular meals. This feeding regime should continue through lactation until the kittens are weaned – queens use more than double their normal energy requirements when suckling

kittens. Pregnant, birthing and lactating queens should have access to plenty of water, but during and after birth this must be safely out of kittens' reach to avoid them drowning.

It is advisable to seek veterinary advice **before** allowing your cat to breed when it is important to discuss fitness to breed and vaccination. If your cat is already pregnant, seek advice about the specific care of your cat, including feeding and worming your cat and treating it for fleas. Ensure you use treatments which are safe for use during pregnancy.

Neutering during pregnancy can be performed and is best discussed with your own vet. You may wish to discuss neutering your cat following an unwanted mating or where there are significant health risks to the queen and/or the kittens.

Birth and kittening

The secret of being a good midwife to your cat is observation and timing. It is best to watch the cat quietly from a distance, taking care not to disturb her or make her anxious. Contact a vet if any problems occur. Birth, also called parturition or kittening, is divided into three stages, and the second and third stages are repeated for each kitten. Please note, this leaflet offers some guidance, but is no substitute for specific veterinary advice from your own vet.

First stage – lasts up to 36 hours – and is usually shorter in queens which have had kittens before:

- there are intermittent contractions, but NO straining is seen
- the queen is restless and there are usually repeated visits to the bed

- late in the first stage, some scratching of the bedding and panting may be seen
- vaginal discharge is rare

Second stage – lasts five to 30 minutes for each kitten:

- there are stronger contractions
- the foetal membranes – water bag – appear briefly at the vulva and burst. Liquid is usually cleared up by the cat
- active straining starts and the kitten usually comes out head first
- once the head is out, one or two strains from the cat should expel the kitten
- the mother breaks the bag and chews through the cord and licks the kitten – this cleans it and encourages it to start to breathe

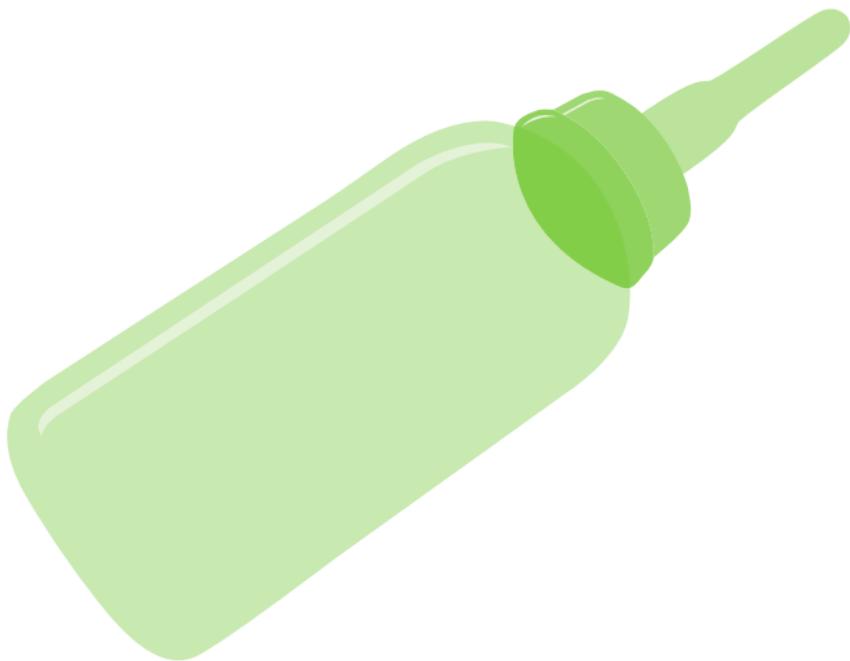
Third stage – passage of the membranes and dark flesh mass of the placenta or afterbirth:

- this usually follows immediately, although occasionally two kittens are born followed by two sets of membranes
- try to count the number of placentae to ensure one is passed for each kitten. If they are not all passed within four to six hours, veterinary advice should be sought. Bear in mind, the queen will usually eat the placenta to hide evidence of the birth and protect her offspring
- a red-brown vaginal discharge may be seen for up to three weeks after the birth. It is abnormal if it is green or foul smelling – although there may normally be a small amount of greenish discharge after the kitten or placenta

Time between delivery of kittens is usually 10 to 60 minutes and stages two and three are repeated. The birth is usually complete within six hours after the start of the second stage, but can last up to 12 hours.

Between one and nine kittens will be born in a litter – most commonly four to six. First-time queens usually have a small litter size. When the birth is finished the mother will settle and allow the kittens to feed.

Have clean towels, a hot water bottle, a feeding bottle or syringe and some specialist substitute cat milk replacement – not cow or goat milk – ready in advance. If everything goes well, leave the cat alone, but ensure she has access to food and water and a litter tray, without any risk of the kittens becoming trapped or drowning.



What can go wrong with the birth?

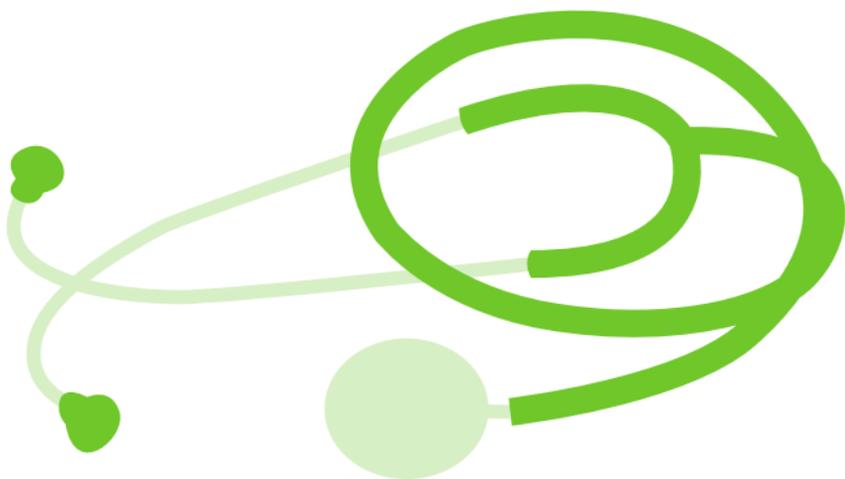
In most cases the cat will manage without any help, with kittens born five to 30 minutes after a queen starts actively straining. Discreet and quiet observation is ideal. However, difficult births can occur and here are some things you can do to help:

- seek veterinary advice if you have any concerns
- if a kitten is seen partly out, but the mother is very tired and the kitten isn't passed within a few seconds, you can gently try to pull it out by pulling downwards with clean hands, but be **very** gentle and seek veterinary advice
- if the mother does not clean the kitten, you can quickly and quietly clear the membranes from its head with clean, soft kitchen roll. Wipe its nose and open the mouth to clear it. Rub the kitten in small circular movements to get it breathing
- if the mother does not bite through the cord, you can tie it off twice with clean sewing thread around 3cm from the kitten's body and gently tear between the two ties. Clean hands are essential
- provide warmth if the mother is avoiding the kittens – a warm, **well covered** hot water bottle
- if you've had to intervene at all, it is best to seek veterinary advice straight away, as the kittens may be more at risk of infection or being mismothered – being injured or rejected and not suckled or kept warm by the queen

An owner should call the vet for advice during the birth:

- if the first stage is lasting longer than 24 hours without any sign of straining
- if the cat has been straining for more than 30 minutes without producing anything, as this could indicate an obstruction eg a very large kitten
- if the first kitten has arrived and no further kittens appear after an hour
- if the cat suddenly seems weak
- if there is excessive bloody discharge or greenish discharge without a kitten. However, there may be a greenish discharge after the kitten or with the afterbirth
- if a kitten is stuck half-way out and cannot be delivered with gentle traction

In some cases, a caesarean section may be required to deliver the kittens.



Things you can do after the birth

Warmth is very important as newborn kittens lose heat very quickly. If the mother is an attentive one, she will clean them and use her own body heat to keep the kittens warm. If she is very tired or disturbed she may ignore them, in which case heat must be supplied, via a heat pad or a covered hot water bottle – no hotter than body temperature – and the kittens should be covered with a light towel or blanket. Keep the room temperature warm and the bedding clean and dry. The kittens should start to suck from their mother almost immediately. If they haven't started after half an hour gently guide them towards the teats. If they don't start feeding, consult your vet and you may need to start giving a substitute milk replacer to the kitten – follow the instructions carefully. Remember, newborn kittens cannot go more than a few hours without milk.

If the queen is calm and settled you may wish to quickly and quietly check each kitten. Speak to your vet for advice and if you have any concerns.

The queen should be carefully monitored following the birth. Veterinary advice should be sought if any problems are noted. These may include:

- **bleeding** from the vagina or unusual vaginal discharge
- **prolapse** of the uterus (womb) – straining can occasionally cause the uterus to be pushed out
- **disturbed behaviour** – normally queens spend most of the time with the litter for at least two weeks and are usually very calm after the birth. However, some queens may show disturbed behaviour:

- severe disturbance, constant interruptions or pain can cause the queen to kill her offspring. The risk of this is reduced if mum is familiar with her environment, the surroundings are quiet and she is in good health. Be very calm and quiet and do not disturb a mother with very young kittens unless necessary and keep other pets away
- if the queen seems to reject one of her kittens, putting some of the birthing fluids on the kitten may help her to accept it
- if the queen is not comfortable with her environment and feels she or the kittens are at risk of threat, she may try to move the kittens in her mouth to a preferred location. It is important to ensure the queen has access to a warm, clean and quiet place. She may appreciate a cardboard box lined with soft blankets and sheets to hide the kittens in.
- ignoring kittens
- **mastitis** – infection of usually one mammary gland, which becomes hot, painful and enlarged. The queen may be off colour
- **poor appetite, excessive drinking or vomiting**
- **awkward or clumsy movement, twitching or collapse**

As with all cats, if any unusual signs are noted, the queen should be checked by your vet. If taking the mother cat to the vet, ask them whether you should also transport the kittens with her. If the kittens are to remain at home during the vet visit, ensure adequate care is arranged for them and that they are kept warm at all times.

Care of newborn kittens

Nutrition

The first milk produced – colostrum – is rich in antibodies and will help to protect kittens against diseases. These antibodies last for six weeks or more. Kittens can only absorb colostrum during their first 16 to 24 hours of life and they should feed within two hours of birth. It is essential that they receive this colostrum to protect them against disease. If for any reason a kitten does not receive the first milk, speak to your vet.

Newborn kittens should feed every two to three hours. Kittens receiving adequate nourishment from the queen will sleep in between feeds and do not need additional nutrition until three to four weeks old. If not receiving sufficient food from the queen they may constantly cry and seek the teats.

Distressed newborn kittens may be restless, without sleeping for prolonged periods, cry excessively, leave the queen and kitting area, appear neglected by the queen or stop feeding and have a reduced sucking reflex. Consult your vet as they will require additional care and supplementary feeding.

If the queen is relaxed, it is recommended to gently weigh kittens at birth, when they are usually between 90 and 110g each. Keep records and weigh the kittens daily to ensure they are gaining around 10-15g each per day, doubling their birth weight by two weeks old.

Weaning – the transition of kittens from the queen's milk to solid food

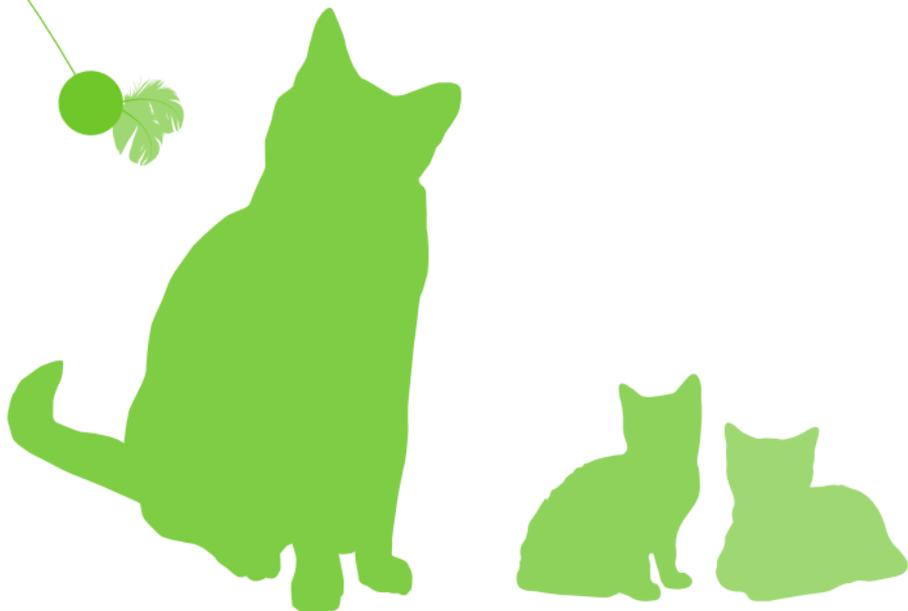
Weaning can begin at three to four weeks of age but will take several weeks:

- start with diluted specialised kitten milk replacement in a shallow bowl. Always follow the product's instructions very carefully to ensure the correct amount and dilution is used and at the correct temperature. Place a small amount on the mouth and gradually encourage the kitten to lap directly from the bowl. Offer several times a day
- add a small amount of wet kitten food to the milk over time
- gradually increase the ratio of food to milk until the kitten is eating solid food
- this whole process should happen gradually over three to four weeks while kittens also continue to suckle, until they are feeding freely. Monitor each kitten through this time to ensure they are each feeding effectively



Separating the queen from the kittens:

- once fully weaned, it is a good idea to allow the queen to gradually spend time apart from the kittens each day to help her milk to gradually dry up. However, the kittens will still be learning from her, so kittens should not be fully separated from the queen until at least eight weeks of age. It may be best not to separate the kittens from the queen all at once as her mammary glands may become engorged. A common reaction is to try to mother something else, such as a cuddly toy. Instead gradually separate them over a period of several days
- some behavioural issues may be seen when kittens are fully separated from their queen and litter mates too early – for example the retention of juvenile behaviours such as kneading or sucking may be seen in cats separated before eight weeks of age



Veterinary care

- Seek veterinary advice on the best time and safe products to use for flea and worm control in both the queen and the kittens – some may be recommended from as young as two days of age, dependent on the risk to the kittens and any treatment the queen had during pregnancy. Also, discuss the best time to start a vaccination course, to protect the kittens from disease as the protection they received from the queen's colostrum wanes and leaves them vulnerable to disease – often at eight to nine weeks of age
- Also seek your vet's advice on the best time to rehome the kittens – it will depend on their behavioural development, as well as the risk of disease. However, whenever possible, do not separate the kittens from the queen until at least eight weeks of age, except on veterinary advice
- Neutering – see Cats Protection's *Essential Guide: Neutering – family planning for felines*
 - The queen can be neutered while she is still with or feeding the kittens as long as the surgical wound will not be affected by enlarged mammary glands. Fortunately the spay wound will normally be on her side. You do not need to wait until her milk has dried up, though it is usually best to wait until the kittens are no longer dependent on her and neuter her when the kittens are around eight weeks of age. The queen can get pregnant again as early as one to two weeks after giving birth, so it is advisable to get her neutered promptly
 - The kittens should be neutered around four months of age. If neutering is not carried out by then, males should be separated from females and the queen – to prevent in-breeding. Ask your vet for help with sexing the kittens, if needed

Behavioural development

– see Cats Protection's *Essential Guide: Understanding your cat's behaviour*.

Kittens learn what is normal and safe during a very sensitive period of development between two and eight weeks of age – the 'socialisation period.' Having a variety of positive experiences during this time period – for example with different sights, sounds, textures and smells – will mean they are more likely to be able to adapt in the future.

Kittens which are not exposed to different experiences during this sensitive period are more likely to be fearful of novelty later in life. For example, feral kittens born in the wild without exposure to people during the socialisation period cannot be tamed and will remain very scared of people throughout their lives, making them unsuitable as pets.

It is therefore important that kittens have positive experiences before seven weeks of age, with as many aspects of the domestic environment they are likely to meet in the future such as:

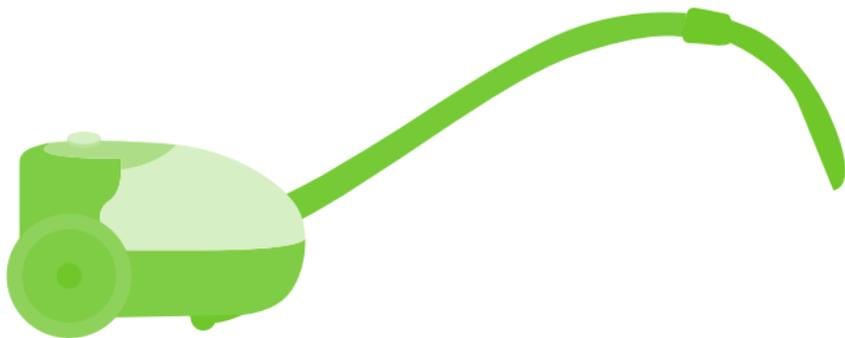
- the noise of the washing machine, vacuum cleaner etc
- car journeys to prepare for veterinary visits
- meeting a variety of different people – from babies to adults
- being gently touched and handled

Ensure these are gentle and positive experiences or this can cause more harm than good.

Cats which see and smell unrelated and non-aggressive cats when they are under eight weeks of age usually get on better with other cats as adults. Of course, take care to avoid any stress to the queen and maintain good hygiene standards to prevent the transmission of disease – so avoid direct contact.

Making the most of opportunities for socialisation during this sensitive period will help the kittens to be well-adjusted, content and sociable pets for the rest of their lives. Kittens can learn a great deal from their mother, so it is recommended that they stay with her until they are at least eight weeks of age.

In the home environment, people often make the mistake of playing with kittens with their fingers or by moving their feet around under the duvet. Although this may be fun with a young kitten, it can start to direct play or predatory behaviours towards the owner, which may be painful as the kitten becomes an adult cat.



Rehoming

It is important to find suitable new homes for the kittens with owners who will provide for them and have them neutered. Kittens may be homed singly or in pairs, but if homed singly, ensure the new owners will provide sufficient stimulation. If homed in pairs, ensure the new owners will provide separate beds, bowls and toileting areas for the kittens in case they choose to live more separate lives when they are older. For more information see Cats Protection's *Essential Guides: Caring for your kitten* and *Understanding your cat's behaviour*.

Supplementary feeding and hand rearing

In most situations, kittens will have their nutritional needs met by their mother. However, if the queen dies, rejects the kittens or is too ill to support them, assistance will be required. It can be very risky to rear orphaned kittens using another lactating queen. The queen may not accept the kittens, she may neglect or attack them and there is the risk of spreading infectious diseases – some of which may be fatal. Seek veterinary advice and discuss hand rearing.

Hand reared kittens need:

- a carer who can attend to them throughout the day and night
- a clean, warm environment. If there is no queen, a cat-carrying basket with lots of bedding and a soft toy to snuggle up to is ideal
- to be provided with a safe source of heat
- a strict hygiene routine to prevent disease

- a consistent feeding regime. Newborn kittens must be fed every two to two and half hours
- to be stimulated to pass urine and faeces before and after each feed until at least three weeks old
- to be adequately socialised with positive experiences and given the opportunity to be taught normal behaviour that the kittens would normally learn from their queen

If a queen is only temporarily ill, kittens may only need to be hand fed for a few days, while in other situations kittens may need to be fed by hand until they are weaned.

If a litter is too large for the queen to support and as long as the kittens are gaining some milk from their mother, they may only need supplementary feeding. If possible, it is important that they remain with their queen and litter mates because orphaned kittens may be at risk of developing behavioural issues.

If staying with the queen is not possible, then kittens need to be given the opportunity to learn normal behaviour, such as how to deal with frustration – something the kittens would normally learn from their mum. As the kitten starts weaning, slightly delay giving the feed as well as delay providing attention – including eye contact – as opposed to instantly meeting the kitten's every demand. However, it is equally important to ensure the kitten's nutritional needs are met.

It is also essential that kittens are not encouraged to bite or attack hands or fingers and that these behaviours are not reinforced by an excited reaction.

Hand feeding

Use substitute kitten milk replacer, formulated specifically for kittens – seek your vet’s advice on an appropriate milk and guidance on hand rearing. Cow or goat’s milk should not be used as kittens cannot easily digest this. Manufacturer’s instructions should be followed carefully regarding dilution, frequency and volume of feeding – overfeeding can be as dangerous as underfeeding. The milk should be warmed to approximately 35°C. Test it carefully by allowing a drop of milk to fall on the inside of your wrist – you will not feel it when it is the right temperature. It is important that the milk is not too hot or too cold.

Feeding should be done with great care as it is easy for kittens to inhale the milk and develop pneumonia which can be fatal. Specialised feeding bottles and teats can usually be bought from your vet.

Hypoglycaemia – low blood sugar

Hypoglycaemia results from inadequate or infrequent feeding. It can cause severe depression, muscle twitching and occasionally lead to convulsions. If a kitten refuses to feed, prompt veterinary care is required. Kittens have no reserves and will deteriorate very rapidly.

Toileting

Kittens are unable to pass urine or faeces without assistance for the first few weeks of their lives so the ano-genital region – the area around the bottom and the urinary opening of the kitten being hand-reared – needs to be stimulated using a slightly damp piece of cotton wool before and after each

feed to encourage toileting. The mother would normally do this by licking the rear end of kittens before, during and after feeding.

This should be carried out in the litter tray if possible so that the kittens learn to associate the feeling of litter under their feet with going to the toilet. From about four weeks of age, simply placing them in the litter tray should encourage them to pass urine and faeces on their own. Ensure the litter tray has shallow sides so the kittens can access it easily and provide litter with a sandy texture.

Constipation can be a problem in hand reared kittens. Normal faeces have the consistency of toothpaste. If the faeces become very hard, making the kitten strain excessively or if a kitten does not pass any motions for a day, veterinary advice should be sought.

Diarrhoea can be caused by overfeeding, by giving too concentrated a solution of milk replacer, or by an infection. Because a kitten's condition can deteriorate rapidly, it is best to consult your vet if a kitten is suffering from diarrhoea.



Hygiene precautions

Hygiene is of the utmost importance as hand reared kittens are very prone to infection. Kittens that have received no colostrum from the queen will have little or no immunity to disease. It is vital that these kittens are protected from exposure to disease, including other cats and their faeces. Some feline infectious diseases can be fatal or lead to lifelong health issues.

Personal hygiene when preparing feeds and toileting kittens should be excellent and utensils used for preparing or administering the milk should be safely sterilised – seek advice from your vet.

Temperature considerations

Kittens cannot regulate their own temperature well. If the mother is not there to keep them warm then:

- ensure that newborn kittens are towel dried quickly
- provide a source of warmth such as a covered heat pad or well wrapped hot water bottle. Make sure these are not too hot and that there is somewhere for the kittens to move away to should they overheat

Normal kitten development

- Birth weight – approximately 90 to 110g – dependent on breed and number of kittens in the litter
- Growth rate – kittens should gain around 50 to 100g/week (10-15g/day) and should double their birth weight by two weeks of age
- The umbilical cord should dry out quickly after the birth and remain dry until it naturally falls off around three days after birth

- Eyes are closed at birth and open at an average of 10 days old – though this varies from two to 16 days. The iris – or coloured part of the eye – stays a blue-grey colour until four to six weeks old before changing colour permanently
- Crawling starts at seven to 14 days old
- Walking starts at around two weeks old
- Kittens cannot pass urine and faeces without stimulation of the rear end by the queen until around three weeks of age
- Weaning starts at around three to four weeks old
- The sensitive period of a kitten's learning is two to eight weeks of age – the 'socialisation period'
- Kittens can start to spend short periods of time away from the queen from six to seven weeks of age
- Kittens should not be fully separated from the queen until at least eight weeks of age
- Vaccination can usually start at eight to nine weeks of age – worm and flea treatment is often recommended before this
- Sexual maturity is reached from four months of age
- Kittens lose their 26 baby teeth and have their 30 adult teeth by six months of age
- Social maturity occurs between 18 months and four years of age, when relationships between cats may change

Learn more about your cat online!

Take a look at our free interactive tool to help you understand cats' origins and their behaviour within our homes. <http://learnonline.cats.org.uk/content/ufo>

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For more information about Cats Protection or to make a donation, please visit www.cats.org.uk or phone our Helpline on 03000 12 12 12.

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