



Being a Greyhound Breeder - Owner

Greyhound Welfare & Integrity Commission handbook



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The Greyhound Welfare & Integrity Commission acknowledges the substantial contribution of Greyhound Racing Victoria to the content of this booklet.

1. What greyhound breeders need to know

Greyhound breeders are expected to have a good knowledge of greyhound welfare and behaviour.

Participants wanting to breed greyhounds must register with GWIC as either a Breeder – Owner or a Breeder - Whelper.

A Breeder - Owner can arrange for the service or artificial insemination of a dam, but you must be registered as a Breeder – Whelper if you want to manage the whelping or care for pups before they are old enough to leave the dam (usually at 14 -16 weeks).

Both Breeder – Owners and Breeder – Whelpers are expected to understand the requirements relevant to a breeder's role. These are contained in:

- The NSW Greyhound Welfare Code of Practice www.gwic.nsw.gov.au/codeofpractice
- The NSW Greyhound Racing Rules www.gwic.nsw.gov.au/rules

Breeders should also read and understand the official GWIC policies, as a breach of one of these policies is a breach of the Greyhound Racing Rules. Official policies are available on the GWIC website.

Breeders also have obligations under the *NSW Greyhound Racing Act 2017* and the *Prevention of Cruelty to Animals Act 1979*.

Breeders should also understand the different roles played by the Greyhound Welfare & Integrity Commission (GWIC) and Greyhound Racing NSW (GRNSW) in the administration of greyhound racing:

- The Greyhound Welfare and Integrity Commission administers the Greyhound Racing Rules, registers greyhounds and industry participants (including owners, breeders, trainers and bookmakers), employs race stewards, inspectors and on-track veterinarians, and investigates animal welfare and integrity concerns relating to greyhound racing in NSW. The GWIC website contains more information.
- Greyhound Racing NSW manages greyhound grading, nomination of greyhounds for races and performance trials, the racing calendar, and distribution of prize money. Greyhound racing clubs are also regulated by GRNSW. The GRNSW website (grnsw.com.au) includes tutorials on how to nominate a greyhound for a race, and information about the Greyhounds As Pets (GAP) program for rehoming retired greyhounds.

You should read and understand GWIC's requirements for registration and notification (outlined in Section 7) before deciding to breed a litter. If you do not comply with these requirements, you may not be able to register the pups as racing greyhounds.

The Rehoming Policy requires participants to prepare their greyhounds for life as a pet after racing, and try to rehome any greyhounds that they do not wish to keep.

A breach of an official GWIC policy is a breach of the Greyhound Racing Rules.

All of these documents are available on the GWIC website www.gwic.nsw.gov.au

2. Things to consider before you go into breeding

What you do as a breeder will influence the whole of a greyhound's life – from its racing success and risk of injury, through to its chances of finding a home as a pet.

Many participants in the greyhound racing industry consider breeding a litter at some time. You may have a successful racing female who you have now retired and want to see her talent passed on to her pups, or you may want to continue your involvement in greyhound racing in a new role.

Unfortunately, some people decide to breed with the mistaken idea that they might be able to re-coup some money from a female greyhound that was not a good race dog.

Before you decide to breed, consider that breeding is expensive and there is no guarantee you will breed good runners.

No guarantees

Racing success depends on many factors. Pups inherit genes from both their dam and sire, and while genetics strongly influences racing success, it does not guarantee that all pups of a litter will be good racers. Nutrition, rearing and training also influence a dog's racing success.

While the average greyhound litter size is 6.7 pups, litters may range in size from 1 pup to 13 pups, and there is no guarantee that a particular pregnancy will result in more pups. If you plan to keep some pups and recoup your set-up costs by selling others, this may not be possible if the bitch whelps a small litter.

Costs

The cost of breeding your own litter may seem like a good option when compared to the cost of buying a greyhound from a reputable and experienced breeder or trainer, but that may not be the case.

Before deciding to breed, you must be in a financial position to cover the costs - not just the expected costs of stud service and care of the dam and pups, but the unexpected costs such as emergency veterinary treatment. If the litter is large, vaccination and food costs will also be higher.

Below are some of the things you will need to factor into your budget. Please be aware that all the costs quoted here are estimates and vary somewhat.

Registration

Approval to breed males (stud sires) is granted by Greyhounds Australasia and requires a DNA test. The fee to register a sire is currently \$1350. A bitch must be registered with GWIC as a breeding female – the fee for this is currently \$150. A breeding lease costs \$55 to register.

All services (matings or inseminations) must be registered with GWIC and the current fee is \$55. Litters must be registered with GWIC, and the current fee is \$65.

Stud services

The cost of insemination varies enormously depending on the sire you choose. You may be lucky enough to get a free service from a newly-registered sire, or you may pay \$10,000 for a straw from a top sire, or anywhere in between.

Be aware that if you do not keep the proposed dam yourself, you will have to pay to board her somewhere until she comes on season – and you can't be sure when this will be. You may also need to pay to have the bitch transported to the vet, if you can't do this yourself.

Veterinary fees

It is a good idea to talk to your veterinarian about costs before breeding, as veterinary services will typically include pre-service vaccinations and tests, the surgery to inseminate, X-rays and ultrasounds, and post-whelping checks. You can expect to pay about \$700 for a frozen semen insemination

Vaccination and worming

A breeding female must have up to date vaccinations before breeding. Any pups require vaccinations at 6-8 weeks, 10-16 weeks, and 12 months. A vaccination typically costs about \$120 per greyhound.

Whelping

If you are not registered as a Breeder – Whelper yourself, you will need to pay someone to whelp the litter for you. Whelping is hard work – many whelpers sleep with the dogs for the first few days because they need to monitor the litter around the clock.

Different whelpers charge differently, but you can expect to pay about \$5,000 for someone to whelp a litter of puppies and care for them until they are old enough to leave home.

Rearing

Care of a greyhound from 3 months to 14 months by an experienced rearer can be expected to cost about \$100 a week, or \$4,000 per greyhound. This should include learning to walk on a lead, chase a drag lure and standing for a physical examination.

Education

Education or breaking in courses vary from 3 to 6 weeks and may cost about \$200 a week for each pup. Greyhounds are trained to exit a starting box, chase a lure and finish a race.

Emergencies

Consider whether you have access to funds for emergencies, such as additional veterinary care in the event of difficulties with the whelping, or an injury or an infection among the pups. Such emergencies can happen at any time and you, as the owner, will have to bear the cost.

Overall cost

Experienced NSW breeders estimate an approximate cost of breeding a litter of 7 pups to the point of being 'race ready' (which includes DNA testing of the dam, the keep of the dam for 12 months, a \$2500 service fee, veterinary procedures, whelping, immunisation, worming, rearing, registration fees and breaking in) can be up to \$40,000.

Find a mentor

If you are seriously considering breeding, find yourself a suitable mentor. This will be a breeder who have a good reputation and success in the industry over a long period of time. A successful breeder understands greyhound genetics, anatomy, nutrition, behaviour and temperament.

A good mentor is a source of information that is not going to be found in books or on the internet. Ask lots of questions and listen to their answers. Discuss your breeding plans with them and ask for their opinions. Assisting your mentor with their whelpings and the care of their pups is also a good way to get some experience and to see if breeding a litter of greyhounds is for you.

Work with your veterinarian

If you are seriously considering breeding, establish a good working relationship with a veterinarian well before the breeding takes place. Your veterinarian will be responsible for providing advice about nutrition and care of your pregnant greyhound and her pups from your veterinarian, develop a plan to manage the birth and any problems that may occur in whelping, and providing 24-hour emergency services.

Is breeding really for me?

Before you decide to breed, consider these questions carefully.

- Why do I want to breed greyhounds?
- Do I know enough to get good results from my choice of dams and sires?
- Can I afford the costs?

- Do I plan to outsource the whelping and rearing of the pups to experienced people?
- Can I put in the money, time and effort to get the best results for a litter of growing pups?
- Do I plan to sell all, most or none of the pups?
- Do I have access to reliable and experienced veterinary care?
- How will I rehome any pups that are not suitable for racing?

- have a C5 vaccination administered within the last 12 months and a copy of her vaccination certificate issued by the veterinarian that clearly identifies the greyhound, the type of vaccine, and the date the vaccination was administered; and
- be no more than 8 years of age and not have had three litters already.

It is possible to apply for an exemption from the rules that restrict litters to 3 in a bitch's lifetime, and the maximum age for a breeding female to 8 years. An application form must be completed and submitted to GWIC, with a health and fitness certificate completed by a registered veterinarian, and a copy of the greyhound's current vaccination certificate.

3. Preparing to breed

There are a number of rules and notification requirements around breeding. The purpose of these requirements is to ensure that greyhounds are well looked after and that people who invest in greyhounds are protected.

Knowing which forms need to be submitted and when means there will be no hold-ups - GWIC may refuse to register any pups from the mating if you do not comply with the requirements. Below are the key forms that you need to complete.

Authority to breed the female

If you do not own the female you intend to breed, you must either transfer her ownership into your name or, if you are just leasing a female, submit a Breeding Lease Sire or Dam form. This way you will be listed as the breeder of the litter.

DNA Fingerprint

If this is the bitch's first litter, she will have to be DNA tested by Greyhounds Australasia (GA) - the relevant form and instructions are available on the GA website (www.galtd.org.au). The test only needs to be performed once in the female's life, before the first mating, and is a simple mouth swab done by a veterinarian.

DNA test results and proof of current vaccination are required before the female can be registered for breeding by GWIC, and before she is mated. DNA test results can take 6-8 weeks to come back, so it is important to get this done early to ensure that breeding is not held up.

Register the female for breeding

All females which you wish to breed from must be registered with GWIC as breeding females. This only needs to be done for the first litter and can be done online from the GWIC website. To be eligible for breeding registration, your bitch must:

- be named;
- be microchipped;
- have completed DNA testing;

Ensure the male is registered for breeding

Male dogs intended for breeding must be registered as a stud sire with Greyhounds Australasia. This registration requires a DNA test, a semen evaluation report and a fee. Stud dogs must also have up to date vaccinations, and a copy of the vaccination certificate must be provided to GWIC.

Transfer of ownership of a breeding unit

If you are planning to use frozen semen, you must use one of the approved Artificial Insemination facilities registered with Greyhounds Australasia (<http://galtd.org.au/>)

BREEDER & TRAINER REGISTRATION APPLICATION FORM

Your application must include:

Document	Checked
Colour passport sized photograph	<input type="checkbox"/>
Copy of drivers licence or passport	<input type="checkbox"/>
Copy of other existing female registration (if applicable)	<input type="checkbox"/>
Fee Payment	<input type="checkbox"/>
Copy of two other forms of identification	<input type="checkbox"/>
Photographs of your facilities	<input type="checkbox"/>
Drawing of your kennel/whelping box with measurements	<input type="checkbox"/>

Any missing documents can delay the processing of your application, if inspections are required, this will delay the approval of your application.

This form is to be completed if you wish to be a greyhound breeder, train your own greyhounds or train other people's greyhounds.

Clause 10(2)(b) of the Greyhound Racing Regulations 2009 provides authority for the Commission to ask you for information necessary for the Commission to determine if you are eligible for registration.

Which type of registration are you applying for? (Select one or more)

Owner/Trainer Public Trainer Breeder

Personal details

Title: Mr Mrs Miss Ms Dr Other

First name: Middle name: Surname:

Date of birth: / / Pending Registration Number (if applicable):

Submits of litters: Weeks of litters: Country of litters:

Telephone number(s):

Home: Mobile: Daytime:

Postal address:

Preferred contact method: Email SMS Mobile Home Post

Receive SMS alerts: Yes No

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The straws of frozen semen (called “breeding units”) that you intend to use must be transferred into your name. Transfer of breeding units is notified to Greyhounds Australasia (GA) within 14 days of the transfer, with both the seller’s and the purchaser’s signatures on the form. Transfer of breeding units needs to occur BEFORE the breeding unit is used to inseminate the female. Your veterinarian will not conduct the insemination unless this process is completed.

Some registration applications can be lodged online and some require paper forms that can be downloaded from the GWIC web site (www.gwic.nsw.gov.au). If you have any questions, contact the GWIC Registration and Welfare Team on 13 49 42.

Notification of Service

GWIC must be notified within 14 days that a female has been mated or inseminated (‘served’) using the Register Services by a Registered Stud Dog Application Form, which is available on the GWIC website.

In the case where frozen semen is used, the veterinarian or approved technician conducting the insemination will submit the details of the service to Greyhounds Australasia.

In the case of a natural mating or artificial insemination (AI) using fresh or chilled semen, the details of the service are completed and registered by the stud master.

Whelping Notice and Litter Registration

When the female has whelped, you must notify GWIC of the number of pups born alive, the number born dead

or which die soon after birth, and the sex and colour of each pup – a Whelping Notice and Litter Registration can be completed online, via the GWIC website.

On this form you will tell GWIC the location of the pups if they have not been whelped at your registered address. If the female misses (does not whelp any live pups) then you must notify GWIC of this via the same form. You must provide this form within 14 days of the whelping date.

After the Whelping Notice and Litter Registration has been submitted, GWIC will contact you to arrange a time to come to your property to ear brand and microchip the pups. This should occur before the 10-16 week vaccination.

The GWIC staff member will leave you with a form which records the colour, sex and the microchip number for each pup. The form includes space for your veterinarian to record vaccination details, and you should take this form to the vet when you take the pups for their 10-16 week vaccination.

As soon as 10-16 week vaccinations, ear tattooing and micro-chipping are completed, GWIC will send you individual Registration forms for each pup in the litter.

The Greyhound Racing Rules require that all greyhounds have two forms of identification: a micro-chip and an ear tattoo. All pups are given a single 5-letter ear brand (a punch tattoo) placed in their left ear. The first letter of the brand represents the state in which the pups were born (i.e. ‘N’ for New South Wales), the second letter indicates the year that the pup was born (‘A’ = 2011, ‘B’ = 2012, etc.) and the rest of the ear brand is unique for that pup.

Sale of pups

When you sell a pup, it is a requirement that you notify GWIC within 10 days, so that the pup can be transferred into the new owner's name. Complete the transfer form at the time of sale – transfer notifications can also be completed online.

You should also keep the details of the purchaser – including name, address and contact phone number – recorded with the microchip number of the pup and its litter records. Notification of the sale of the pups is required by GWIC. In NSW, any advertisement for sale of pups must include the microchip number of each pup or, if the pups are not yet micro-chipped, your breeder registration number.

Record keeping

Keeping accurate and detailed records of breeding activities, and for each individual dam, sire and pup resulting from your breeding program, is important. Health and treatment records are required under both the Greyhound Racing Rules and the NSW Greyhound Welfare Code of Practice.

Your records should include information about:

- health, illness, injuries and all veterinary treatment;
- results of any tests;
- feeding regimes for dams and pups;
- the dates of dams coming into season and undergoing insemination;
- litter and whelping information, such as how long the dam was in labour and whether assistance was required; and
- sale of pups, including the name, address and contact phone number of buyers.

When you transfer a greyhound, you must supply the greyhound or pup's health record to the new owner or trainer. It is a good idea to keep photocopies or electronic copies of all forms that you give to others. Use a calendar for calculating and displaying important dates, including when the pups are due for worming or vaccination.

Accurate and detailed record keeping also allows you to learn from and improve your breeding practices, helps your veterinarian identify the source of any problems, and gives buyers confidence that you have a professional approach to breeding.

4. Genetics and selection for breeding

Basic breeding principles

- All pups get half their genes from their mother and half from their father, so both parents are equally important.
- The genes can be thought of as the 'Instructions' for building a racing greyhound.
- The actual assortment of genes each pup receives from each parent is random. Some pups get more of the 'good genes' than others. No two littermates have the exact same genes (unless they are twins – which is extremely rare), even though they come from the same parents.
- Because all dogs carry some 'good' genes and some 'bad' genes, no matter how good the dog is on the racetrack they will all produce some inferior pups.
- Certain traits are more likely to be passed on – they have what is called 'high heritability'. Other traits may have a low heritability.
- Temperament traits (such as aggression or fearfulness) are highly heritable – this means if you breed a greyhound that is aggressive you are more likely to produce pups that are aggressive. If you breed a very nervous greyhound you are more likely to produce pups that are nervous, though the way pups are raised will also influence their temperament.
- 'Line-bred' animals have a common ancestor behind each parent within the first 3-4 generations. The aim of line-breeding is to try to accentuate desirable traits by increasing the frequency of the desired genes in the pups.
- 'In-breeding' is the mating of closely related animals such as brother-sister, mother-son, father-daughter, and is not permitted under the NSW Greyhound Welfare Code of Practice.
- An 'out-cross' is a mating of two basically unrelated animals. This means that they do not have any common ancestors for at least 6 generations. The two individual dogs may still be line-bred themselves; they are just not related to each other. Out-crossing is generally done to introduce a desirable trait, or to try to increase 'hybrid vigour'.
- A 'pedigree' is a list of ancestors for a particular individual. Although all the dogs in the pedigree have some input into the individual, the first 2-3 generations are the most important and influential. For example, a dog appearing in the 6th generation may only contribute 1% of the genetics for the pup in question. Even if a dog appears a number of times in the 5th or 6th generation it still might only have a small influence on the genetics of the pup.

- 'Progeny records' are a list of the offspring from an individual. They are by far the most important indicator of a dog or bitch's ability to produce successful pups.
- The genes form the dog's 'genetic potential', and this is influenced by other things such as nutrition, exercise and handling. A well-bred dog can be ruined by poor nutrition and care and never actually reach its full potential. Conversely, all the good food and care in the world is not going to turn a poorly bred dog into an athlete.

Selecting a dam

Starting off with the best dam should be a priority. A female that has won in city races is certainly the ideal starting point. If she has been mated previously check the performance of her offspring. If she has not managed to produce any winners within one or two litters, it is very unlikely that she will suddenly produce a good dog no matter which sire you use.

Because temperament is more highly heritable than many other traits, avoid bitches who are non-chasers, 'fighters' or extremely fearful or shy.

Unless there are problems with the male's fertility, it is the bitch which determines litter size based on the number of eggs produced. Look for a bitch which has come from a large litter herself, rather than one which came from a small litter. Smaller litters are more likely to lead to problems such as the need for caesarean section. Ask the previous owner for as much information as possible about the bitch's reproductive cycle – including when she was last on season, how she cycles, and the days she was mated. The more information you have the better.

A dam's litter size is usually fairly constant over time, although older females tend to have fewer pups as fertility declines with age. Select a female that comes from a line of good dams, and avoid those that have been hand reared themselves.

Ensure the female is in excellent physical health so that she has the best chances of getting pregnant. She must be up to date with her vaccinations so that she can pass on her immunity to the pups when they are born and ensure she has been properly wormed and is free from external parasites.

Many females that have recently retired from racing need to increase their body condition prior to breeding, and your vet should give you an ideal weight for your bitch to be at breeding. The prolonged use of oestrus suppressants during racing may affect the bitch's likelihood of coming in season. Consult your veterinarian in this regard.

Once your bitch starts showing signs of a season, it is essential she is locked away from any male greyhounds on your property to avoid the risk of a mis-mating.

Selecting a sire

A suitable sire is one that produces the traits that you desire in their progeny complements the traits of the dam. List the strengths and weaknesses of the dam - this becomes your 'shopping list' as you consider each sire. Prioritise the features you would like to improve and avoid doubling up on faults or weaknesses.

The cost of the stud fee is only a small part of the cost of whelping and raising a litter, and it costs just as much to whelp and raise lesser quality pups as it does good quality pups.

Read carefully the information supplied about each prospective sire. All stud masters will highlight the best things about their stud dog, and not mention the negative. Just because a sire is well advertised, does not mean that he will produce pups that will win races.

Look at the performance of the progeny he has already produced to ensure that he passes these traits on to his offspring. Progeny data is probably the most important information about the sire. There are many good racing dogs who have failed to produce winning pups.

When looking at lists that compare the number of winners for each sire, consider how many pups were produced to reach these totals. If two sires have both produced 15 city winners each and are equally ranked in the 'Top Sires' lists based on winning progeny, the sire who has sired 150 litters is nowhere near as efficient at producing winners as the sire who has sired 30 litters to achieve the same result.

Knowing when a sire started his career is also important. If the sire is in his first or second season, he probably will not have many of his pups racing as they will be too young, and he may appear lower on the ranking list.

If possible, look at the performance of any offspring from prospective sires and females that are related to yours as this will give a good idea of whether the two dogs are likely to produce good pups. When looking at progeny, look at the average over all progeny, not just the feats of one or two exceptional offspring. Pedigree data can be obtained from www.greyhound-data.com.

It is important that you are clear about what you are getting for your money. As it is a private contract between you and the stud master, the various state greyhound racing authorities will not get involved if there is a dispute.

Insemination

Most greyhound breeding is now done through artificial insemination, using either fresh or frozen semen. Some stud masters will allow their stud dogs to perform natural matings, although the more popular sires are more likely to be mated using artificial means due to the high demand for their services.

Timing the mating of a female is very important. If the timing is wrong, the female is likely to have either a very small litter or does not become pregnant at all ('misses'). Greyhound fertility cycles can be anything from 6 to 12 months but each female tends to have a constant interval between fertile periods - hence the importance of keeping accurate records of when she come into season.

By taking repeated blood tests over several days, the rise in the progesterone level that is associated with ovulation can be detected. This is essential if you are using frozen semen, as it can be much weaker than the fresh variety. Frozen semen does not remain viable for very long after insemination (12-24 hours), meaning the timing has to be accurate. On the other hand, fresh semen can survive a few (3-4) days, which increases the chances of viable semen being present when the eggs are ready to be fertilised.

A stud dog may have frozen 'breeding units' of semen located at a number of Greyhounds Australasia approved facilities. When you apply to the stud master to use the dog, you will need to have one of these units transferred into your name prior to you being able to use it. If the breeding unit is not located near you, it will then need to be shipped to the facility that you plan to use. Forms for registering transfer of ownership of units are available on the Greyhounds Australasia website.

When the bitch is ready to be mated, the frozen semen is carefully thawed, and then used to inseminate the bitch, either trans-cervically (a non-surgical method), or surgically. The inseminating veterinarian or AI technician will examine the semen after it is thawed to check its quality and post-thaw motility. At least 100 million motile sperm are required for each breeding unit.

Surgical insemination involves anaesthetising the bitch and making a small incision in her abdomen so that her uterus can be gently lifted out. The semen is then injected directly into the uterus via a fine catheter with half of the semen being injected into each side (called 'horns') of the uterus. The uterus is then placed back, and the surgery site is closed.

Trans-cervical insemination is preferred by some artificial insemination facilities as it does not require the bitch to have a general anaesthetic or surgery. With the bitch awake and standing, a fibre-optic scope is used to guide a special catheter through the cervix, and the semen is deposited inside the uterus. Done by an experienced and proficient person, this method can be completed quite quickly, and the results are similar or superior to the surgical method.

Which method is used will depend on the facility and the veterinarian that you use. Talk to the person who will be doing the insemination before the bitch comes into season so that you know exactly what they need from you, and what is involved. You will also want to know what the costs are likely to be, and make sure the semen arrives well in advance so that there is no last-minute rush.



5. Pregnancy and birth

Care of the pregnant greyhound

There are several ways to detect a pregnancy. By the third week after mating, it may be possible for a veterinarian or an experienced person to palpate (feel) her gently and feel the pregnancy. Ultrasound of the abdomen will detect the heartbeat of the pups from about day 22-26 of pregnancy and movement of puppies after day 30. X-rays can be used in the last 7 days of pregnancy and can be useful to count the number of puppies. Teeth are visible on x-ray from 4 days before birth.

It is not uncommon for a female greyhound who is not pregnant to display symptoms of a pseudo-pregnancy or false pregnancy. They may put on weight, produce milk, or display behaviours associated with whelping such as digging a nest – so these features alone are not a reliable indicator of pregnancy.

In the early stages of pregnancy, it is important not to over-feed the mother. She should continue to eat a well-balanced diet at the same rate as before she was pregnant. If her diet is nutritionally balanced and complete, she will have no problems growing puppies. Overfeeding and excess weight can lead to problems giving birth.

Bitches can decline food around three weeks following a mating. In general terms, this is much like 'morning sickness' and it is critical to find food that the bitch is willing to eat at this time. Some bitches will eat roast chicken, cooked sausages, canned fish (tuna or sardines), cooked liver and kidney or tinned cat food.

The morning sickness will abate in most cases after 7 to 10 days, but some bitches will be fussy about food for the duration of their pregnancy.

A diet that is not balanced will deprive the mother and growing puppies of vital nutrients. Over-supplementation is just as dangerous as a diet that is lacking in essential nutrients. Over-supplementing with calcium during pregnancy can be particularly damaging and lead to problems when the bitch has whelped. Consult your veterinarian about diet and any use of supplements.

As the bitch moves into the latter stages of the pregnancy, her intake of food will need to increase, but you may have to increase the number of meals, rather than increase the amount in each meal. This is because the puppies will be taking up much of the space in her abdomen and this does not leave a lot of room for the stomach to expand. If you feed a dry kibble, you may choose to gradually change the bitch over to a puppy formula as these are more energy-dense and tend to have slightly higher levels of protein and calcium.

Please take the time to consult your veterinarian about what you should be feeding and what to avoid.

The pregnant mother should continue to exercise regularly. Fit, healthy muscles are necessary to help push the puppies out. Your bitch should have some exercise every day, although the amount may decrease as she gets nearer to her due date. In summer, exercise her only in the cooler parts of the day and avoid extremes of temperature.

Early in pregnancy, it is quite safe to run the female with other dogs, provided they are compatible. In later pregnancy, she may prefer to exercise her on her own.

Many worming and parasite treatments are considered safe to give throughout pregnancy but before using any product or medication, consult your veterinarian.

If your pregnant greyhound does become unwell, consult your veterinarian and ensure they know she is pregnant. Some drugs should never be administered during pregnancy because they may affect unborn puppies or cause the pups to be aborted.

Whelping

Preparing for the birth

Be prepared for the birth well ahead of time so there is no panic if the dam gives birth earlier than expected. If surgically inseminated, your veterinarian/technician will be able to more accurately predict your whelping date. If the date of service is unknown, due to mis-mating or other reasons, it will be important to talk to your veterinarian and to date the pregnancy.

If you are registered only as a Breeder – Owner, you will need to find someone else to manage the whelping and rearing of the litter. Experienced whelpers are in demand, so it is important to ensure that you have someone arranged well in advance.

Before making a decision about a whelper, inspect the facility and make sure that you are comfortable with the arrangements for your bitch. You also need to be clear on what is covered in the agreement, and what is to happen if there are unexpected problems with the mother or pups.



Knowing when the dam is going to whelp

The expected date of whelping is usually 63-65 days (9 weeks) from the time of ovulation. If frozen semen has been used, the date of whelping will be more accurate to predict. Many inseminators say that whelpings from surgical implants are usually at day 61 because of the direct insemination process.

Importantly, the final week of gestation is critical to lung development, bone density, formation of teeth and size (to survive the rigours of birth). Pups born more than 5 days before the due date have a very low survival rate.

During the last week of pregnancy, monitor the bitch's rectal temperature once or twice a day. The normal temperature for dogs is 38-39°C Celsius, and it is common for the rectal temperature of the bitch to drop 1°C or more approximately 24 hours prior to the birth in about 85% of bitches. Bitches carrying small litters (1-2 pups) will not show a decrease in rectal temperature.

Loss of appetite and restlessness are other signs to watch for. Some bitches go off their food a couple of days before whelping, but others will eat right up to the hour before. Mammary development (milk filling) starts to occur in the last 10-14 days. Nesting will also occur in the last 5-7 days, although this will become more intense as the first stages of labour start. Often, the bitch will shiver and start to nest feverishly approximately 24 hours before labour. More obvious shivering will commence in the hours prior to whelping.

The Greyhound Racing Rules require that a dam must be located at the premises of a registered Breeder – Whelping no later than 14 days before her due date. If for some reason this is not possible, please call GWIC to advise of this.

6. Raising the litter

Worming and vaccination

Pups are usually wormed at 2, 4, 6 and 8 weeks of age. They need to be weighed and dosed accurately with a product that will kill round worms and hook worms at the absolute minimum. Many breeders choose to use a worming syrup when the pups are 2 weeks of age due to the ease of dosing, but then move to a worm tablet once the pups are bigger. Rotate different brands of worm treatment containing different drugs so that resistance to the treatment does not develop. Ask your veterinarian for advice on the best products to use at each stage.

At 6-8 weeks of age pups are due for their first vaccination, which is usually a C3 – distemper, hepatitis, and parvo-virus – although your veterinarian may advise you to vaccinate against kennel cough or other diseases at the same time. The vaccination, once given, takes 10-14 days to be effective, so it is important not to assume that the puppies are protected from these diseases as soon as they receive the vaccine.



The second compulsory vaccination must be at least C5 and must be given at 10-16 weeks of age. Proof of this vaccination needs to be provided with the Litter Registration Application.

Some veterinarians will also recommend vaccinating against canine coronavirus and leptospirosis (C7), depending on the local prevalence of these diseases.

Before they can be moved from the property at which they were whelped, pups must be fully vaccinated and registered. A pup is fully vaccinated from 2 weeks after it has had its 10 – 16 week vaccination – this is because it takes two weeks for the vaccination to take effect.

Ear-tattooing and microchipping

After the Whelping Notice and Litter Registration has been submitted, GWIC will contact you to arrange a time to come to your property to ear brand and microchip the pups. This should occur before the 10-16 week vaccination.

As soon as 10-16 week vaccinations, ear tattooing and micro-chipping are completed, GWIC will send you individual Registration forms for each pup in the litter.

If you are planning on selling all or some of the pups, the pup's individual Registration form should go to the new owner along with its health record.

Pups must not be moved from the property at which they were whelped until they are fully vaccinated and registered. Fully vaccinated means at least two weeks after their 10-16 week vaccination, as it takes up to two weeks for a vaccination to have its full effect.

7. Checklist

For newcomers to breeding

1. Do I have the money to build and equip suitable facilities to whelp and rear a litter?
2. Do I have the money to pay for the care of a mother and large litter, including stud services, veterinary expenses and emergencies such as caesareans?
3. Do I have the space for raising a large litter and will my local council allow it?
4. Do I have the time and energy to rear and educate a large litter of pups?
5. Do I have a mentor to guide and teach me?
6. Do I have a veterinarian I trust and can work with?

Steps towards breeding

7. Do I understand the registration and notification requirements for breeding greyhounds?
8. Have I completed the Breeder Competency questionnaire and am I registered as a breeder?
9. Is my chosen dam up to date with worming, vaccinations and parasite control?
10. Is my chosen dam registered for breeding and has she been DNA tested?
11. Is my chosen sire registered for breeding with Greyhounds Australasia?
12. Has the breeding unit of frozen semen been transferred to my name before being used?
13. Do I know how to tell when my dam is in season?
14. Have I provided GWIC with a notification of service within 14 days of service?
15. Do I understand how to keep good records?

Genetics and selection for breeding

16. Do I understand the basic principles of inheritance and breeding for characteristics?
17. Do I understand how to pick a good dam and compatible sire?

Pregnancy and birth

18. Do I know how to detect a pregnancy?
19. Do I know how to feed and care for a greyhound throughout her pregnancy?
20. Do I have a whelping box and all the equipment I need for whelping?
21. Do I know what signs to look for that my greyhound is close to whelping?
22. Do I know what to look for and do in each stage of labour?
23. Do I know the signs that the labour may be going wrong?
24. Do I know what to do after the labour is finished?

Raising the litter

25. Do I know how to care for pups that are cold, losing weight or smaller?
26. Do I know how to care for a lactating dam and the signs of mastitis?
27. Do I know at what age pups need worming and vaccination?
28. Have I submitted the whelping notice and receive a litter registration form?

8. GWIC applications and notifications

Application or notification	When submission required
Breeder and Trainer Registration Application Form	Submission and approval required before undertaking breeding
Application to register a greyhound as a breeding female (<i>if required</i>)	Submission and approval required before breeding that female
Application to lease a sire or dam (<i>if required</i>)	Submission and approval required before breeding those animals
Application to breed a female over 8 years of age or with 3 litters whelped already (<i>if required</i>)	Submission and approval required before breeding that female
Register Services by a Registered Stud Dog Application Form	Submit within 14 days after service
Whelping notice	Submit within 14 days after whelping
Notification of 6-8 week vaccination	Submit within 7 days after vaccination
Litter registration and 10-16 week vaccination forms	Submit within 14 days after microchipping and ear branding
Kennel notification when pups moved from birth location	Within 14 days after being moved

9. Further reading

ABC's of Dog Breeding -Orlandi, CW, American Kennel Club, <https://shop.akc.org/products/abcs-of-dog-breeding-what-every-breeder-should-know>

Animal Welfare Code of Practice - Breeding Dogs and Cats (2009), Industry & Investment NSW, https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0004/299803/Breeding-dogs-and-cats-code-of-practice.pdf

Care of the Racing and Retired Greyhound (2007), Blythe, LL, Gannon, JR, Craig AM and Fegan, DP, American Greyhound Council.

Care of the Racing Greyhound: A Guide for Trainers, breeders and veterinarians (1994), Blythe, LL, Gannon, JR, and Craig AM, American Greyhound Council.

Genetics for Dog Breeders 2nd Ed (2001), Robinson, R, Butterworth-Heinemann.

Greyhound Racing Rules – Greyhound Welfare and Integrity Commission, <https://www.gwic.nsw.gov.au/integrity/rulesandpolicies>

NSW Greyhound Welfare Code of Practice – Greyhound Welfare and Integrity Commission, <https://www.gwic.nsw.gov.au/welfare/code-of-practice-for-the-welfare-of-greyhounds>



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