

## Animal Microchip Implantation **Best Practice Guide**

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Developed by:



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# Why we microchip companion animals

## Microchipping

Under current legislation it is mandatory to microchip dogs. Microchipped dogs must also have their microchip number registered with their local council and on the National Dog Database (NDD). In some areas it is also mandatory to microchip cats and register them on the NZ Companion Animal Register.

## The advantages of microchipping companion animals:

- Assists in re-homing of lost animals when a microchipped animal is also registered on a microchip database, such as the New Zealand Companion Animal Register or the National Dog Database.
- When injured and presented to a relevant authority for care, owners of pets that are microchipped, can be promptly identified and can be consulted as to the pet's treatment.
- Pets that are straying or causing nuisance can be identified and owners can be contacted and educated about their responsibility.
- Results in fewer animals being euthanased as pets can be identified and returned to their owner.
- Can help decrease the number of animal thefts. If all pets are microchipped and registered, then whenever a pet is scanned it can be quickly identified and returned to the owner.
- Gives owners peace of mind knowing that when their pet goes missing, there is a proven network for getting animals home
- Microchipping allows use of a microchip cat or dog door. This allows home access to specific pets, and keeps out unwanted visitors like strays.
- Some microchips can be used to non-invasively measure an animal's body temperature

Microchipping and chip registration are ONE step  
Microchipping without chip registration serves no purpose

# Legislation

## Dogs

The Dog Control (Microchip Transponder) Regulations 2005.

Legislation which came into force in 2006 defines those dogs which must be microchipped by law. They are:

- All dogs first registered from 1st July, 2006 (except working farm dogs and dogs deemed unfit by a veterinarian).
- All dogs classified as dangerous or menacing since 1 December 2003.
- Unregistered dogs that are impounded then released.
- Registered dogs that are impounded for a second time and released.

### *The National Dog Database (NDD)*

Owners have a legal requirement to ensure that their dog's microchip number is registered with their local council. Once a dog's microchip number is registered with the council it will automatically be transferred onto the National Dog Database (NDD).

Once a dog is microchipped, owners must provide this information to their council so that the information can be recorded and placed on the NDD.

Until the dog's microchip number is recorded by the council, owners have not met their legal obligation.

## Cats

Some regional councils have bylaws mandating that cats are microchipped and registered on the New Zealand Companion Animal Register. It is important that you understand what the bylaws for microchipping cats are in your region.

There is no legislative requirement to microchip cats in other locations in New Zealand at present. However, cats are commonly microchipped as this facilitates repatriation of lost cats.

### **Other companion animals**

It is optional to microchip other animals such as fish, birds, reptiles and small animals. For example, Arowana (large exotic fish) are all microchipped as they are on the CITES endangered list and may be sold for up to NZ\$10,000.

Unusual or exotic animals should not be microchipped except by a veterinary surgeon. The Animal Microchip Implantation Best Practice Guide only pertains to the microchipping of dogs, cats and rabbits.

**Legally, all dogs must have their microchip number registered with their local council**

# Microchipping Equipment

## A. The microchip scanner

The scanner is the device that reads the microchip number. It is usually a small hand-held unit, with a screen that will display the microchip number of the microchip when it is held over the chip. Microchips do not transmit a signal constantly, only in the presence of a suitable scanner.



## B. The implantation device

The implantation device is used to insert the microchip. It has a large bore needle that contains the microchip and a plunger to push the microchip out of the needle.

Note the 'bevel' end of the needle; this must be facing up during the procedure.

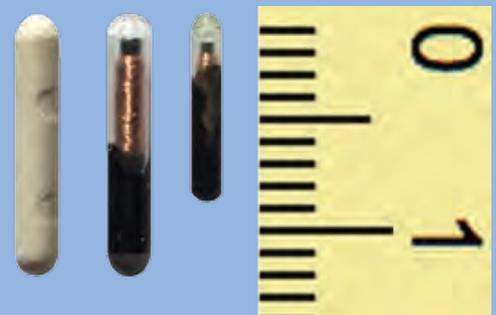


## C. The microchip

The microchip is a small glass or polyamide cylinder containing an electronic chip. This carries a 10 or 15 digit number and is about the size of a large grain of rice. It comes in two main shapes:

- An oval shape, with both ends rounded.
- Bullet shaped with one flat end and one round end.

Flat-ended microchips are less likely to slip out when being implanted as the flat end helps to hold them in place.



# Implanting Microchips

Dog Control (Microchip Transponder) Regulations 2005, is the legislation which covers the implanting of microchips in dogs. It states regulations for the microchip type, and the implanting procedure that must be followed.

## Microchip Types

Microchips must:

- Comply with NZS/ISO 11784:2001, and NZS/ISO 11785:2001. This ensures that all microchips implanted in New Zealand meet the same standards and can be read by the available scanners.
- Be encased in a single-use needle, be sterile, individually packaged, and ready for use.
- Be supplied with at least 3 self-adhesive bar codes stating the microchip's unique identifying number.



## Microchip Implantation Technique

For dogs and cats this is:

- a) under the animal's skin:
  - i. at a point on the centreline of its back
  - ii. just forward of the shoulder blades
- b) so that the microchip lies parallel or at an oblique angle to the skin
- c) using aseptic technique.

The person implanting the microchip must comply with the following:

- Ensure the microchip is functioning prior to implantation.
- Be satisfied, on reasonable grounds, that the animal is not already implanted with a microchip.
- Handle the animal in a safe and humane manner to avoid any unnecessary stress and to ensure human safety.

See p14 for full legislative requirements relating to implantation of microchips.

# Overview of Implantation

Almost all species of animal are able to be microchipped. This Overview of Implantation describes the technique for implanting microchips into cats, dogs, and rabbits. These species are particularly simple to microchip as they have a large scruff making microchip insertion easy.

## **IMPORTANT:** Before microchip implantation

1. Scan the entire animal to check for an existing microchip.
2. Question the animal's owner to determine:
  - a) Any current health issues that may affect the decision to microchip.
  - b) Whether they are know if the animal has been microchipped before.

## Implantation Process

It is recommended that the implantation process is completed as a two person job – one person to hold the animal and one person to implant the microchip. Animals are generally very tolerant of the microchipping procedure. However, if safety is a concern then a muzzle can be utilised.

In accordance with legislation, the microchip is implanted:

- a) Under the animal's skin-
  - i. at a point on the centreline of its back;
  - ii. just forward of the shoulder blades.
- b) So that the microchip lies parallel or at an oblique angle to the skin.

Placement here means the chip is less likely to migrate when the animal moves. Standardisation of placement also means that anyone scanning the animal will know where a microchip is likely to have been placed.

- c) Using an aseptic technique:
  - i. Ensure the fur and skin in the scruff area is clean and that the animal is not showing signs of ill health
  - ii. Ensure the work surface is clean.
  - iii. Ensure the microchip implanter tip remains sterile until after implantation.
  - iv. Ensure any cuts etc on the hands are covered i.e. with a band aid or gloves.

## After microchip implantation

1. Check the microchip is working and can be scanned.
2. For microchipped dogs, remind the owner that they are legally required to register this microchip with their local council. Registration with the New Zealand Companion Animal Register is also recommended for dogs. For cats, registration on the New Zealand Companion Animal Register is necessary if the microchip is to be used to repatriate the cat if it is ever lost.

# Step by Step Process of Implantation

## Process

1. Scan the animal all over to check that it has not been microchipped previously.
2. Wash hands.
3. Check that the microchip is within its expiry date
4. Scan the microchip to ensure that the number matches that of the barcode/stickers that came with it (before opening the sealed sterile packet).
5. Assess the temperament of the dog. If there are concerns about implanter safety, apply a muzzle to the dog
6. Remove the implanter device from the sterile pack.
7. Prepare the implanter device by:
  - a) removing the plunger guard, if it has one;
  - b) pulling off the protective cap – (do not screw it off, as this may remove the needle). An aseptic technique must be observed throughout the procedure.
8. Identify the implant site (i.e. for dogs and cats: at a point on the centreline of the back, just forward of the shoulder blades).
9. Using the thumb and first one to three fingers, pull up the skin to form a tent shape (this is where the microchip will go).



10. With the needle bevel up firmly insert the needle of the implanter device fully under the skin. This is done at an oblique angle so that the needle remains under the skin and does not penetrate the muscle underneath. The animal may feel slight discomfort with the injection, and react to the insertion which may cause the animal to move or vocalise.
11. Push down on the plunger of the implanter device to push the microchip into the space under the skin.
12. Ensure the plunger is fully depressed to the final "click" (if applicable – varies between brands of implanter device).
13. While continuing to hold up the skin tent, carefully pull out the implanter device needle
14. Ensure the microchip doesn't pop out of the hole you have just made in the skin and isn't sitting in the fur.



**Note:** If the plunger does not have a non-return "click" system ensure that the microchip is not drawn back into the needle.

15. Remove the needle and place immediately in the sharps container. If this is not possible, use safe needle re-capping procedures.
16. Scan the implant site to check that the microchip has been implanted correctly.
17. If the microchip cannot be read, locate the missing microchip before re-chipping.
18. Wash hands.



# Post-Microchipping Care

Occasionally the needle may go through a blood vessel in the animal's skin and the site may bleed. On a white dog, this may appear to be quite significant, but is very unlikely to result in any serious blood loss (unless concurrent disease is present).

Using a gloved hand, gently pinch the microchipped area between 2 fingers, and apply firm but gentle pressure for 2 minutes to staunch the bleeding.

If this is not successful, and bleeding is persistent or profuse, seek veterinary advice.

Also sometimes the microchip may stick to the syringe when withdrawn so it pays to check that the chip is implanted and not sitting in the fur.



Whilst problems are extremely unlikely, the owner of the newly microchipped animal needs to be told to watch the implant site and the animal for signs of any of the following:

- Swelling
- Pain
- Heat
- Discharge
- Persistent bleeding
- Infection

If any of the above signs occur, contact a veterinarian.

If the animal is to remain in the facility, then staff should regularly check the implantation site.



# Registering the Microchip

## National Dog Database

By law, all dogs over 3 months of age must be registered with their local council. When the microchip details for a dog are provided to the local council they are also automatically transferred into The National Dog Database (NDD). This holds information on all registered dogs including registration detail, microchip number (if applicable), breed and year of birth. The name, address and date of birth details of owners are also recorded. Local councils supply and maintain information held on the database, established by the Department of Internal Affairs. The information is accessible to councils and is not available to the general public. The cost of this will vary depending on the council. This database is accessible by council staff and council employed animal control officers.

## New Zealand Companion Animal Register

Companion animals (including dogs) that are microchipped can be registered on the the New Zealand Companion Animal Register (NZCAR).

The NZCAR is a nationwide database, and registered organisations (e.g. Local SPCAs, animal rescue organisations and veterinary clinics) can access records 24 hours a day.

There is a \$15 one-off registration fee which is for the lifetime of the animal.

*Note: In order to register microchipped animals with the NZCAR, the implantation must be carried out by a trained implanter. To ensure the best welfare interests of the animal, the NZCAR does not accept registrations from untrained implanters.*

# NZCAR Implanter Certification

Certified implanters are able to be recognised implanters for the NZCAR.

It is the implanter's responsibility to apply to the NZCAR to become registered as an approved implanter. The NZCAR reserves the right to decline applications if they consider the candidate an unsuitable person or they receive substantiated complaints regarding microchipping.

## Registration of Animal

In order to register microchipped animals with the NZCAR you need to register as an approved implanter.

## Costs

The cost of microchipping is made up of several components:

1. The microchip.
2. The implantation fee.
3. The cost of placing the animal on a register.

# Frequently Asked Questions

## 1. Are there any dangers to the animal in having a microchip implanted?

Answer: There should be no danger to the animal as long as

- a) A correct and aseptic implantation technique is used.
- b) The glass microchip is very resistant and cannot be broken inside the animal's body.
- c) The electronic chip, contained inside the microchip, is passive and doesn't have a source of power. It only becomes active when the reader (scanner) is used.

## 2. Will the microchip migrate?

Answer:

- a) This was a problem in the past, but the risk of this has now decreased due to the new composition of the glass.
- b) After implantation, there is an inflammatory reaction which creates fibrous tissue around the capsule, helping keep it in place.

## 3. Can we implant a microchip without a reader?

Answer: No, because:

- a) The animal needs to be scanned to verify that it has not received a microchip implant before.
- b) The number of the microchip needs to be verified to ensure it corresponds with the number on the barcode stickers.
- c) The newly implanted microchip needs to be scanned to ensure that it is working correctly.

## 4. Is the same kind of microchip used on all species?

Answer: These microchips can be used on all species and usually range in size from 8mm to 12mm long. However, there are larger ones available for livestock.

## 5. Is there a minimum age when an animal can be microchipped?

Answer: No. Puppies and kittens are often microchipped when they receive their vaccinations.

## 6. Is the needle likely to break off while inserting the microchip?

Answer: There have never been any reports of this happening.

## 7. Will the animal reject the microchip? Answer:

No.

## 8. Is it better to insert from the head end or the tail end of the tented skin?

Answer: It doesn't make any difference, just whichever is more comfortable for the person performing the implant.

**10. Can the microchip be inserted into the side of the tented skin rather than the base (or top)?**

Answer: No, there is a risk of the needle penetrating through both layers of skin.

**11. If the microchip falls out, can it be reused?**

Answer: No, if this happens a new implanter device must be used.

**12. Should the inserter wear gloves?**

Answer: No, wearing gloves is not necessary unless the implanter has a cut or wound on their hands

**13. Can the microchip implanter be opened and prepared before use?**

Answer: No, it must be kept in the sealed, sterile packet until just before inserting into the animal.

**14. Who has access to the NZCAR database?**

Answer: Veterinarians, SPCAs and other approved agencies using a login system.

**15. Who has access to the NDD?**

Answer: Local Territorial Authorities

**16. How close does the scanner need to be to read the microchip?**

Answer: This varies depending on the scanner. Running the scanner along the animal's fur, or within 1cm of the fur, is often recommended

**17. Can an animal be microchipped if a topical flea treatment (such as Frontline) has been applied?**

Answer: Only if the oily residue has dispersed. Do not apply flea treatment until 48 hours after microchip implantation.

**18. What should you do if the animal jumps and the needle comes out before the microchip has been implanted?**

Answer: If the needle has touched nothing else apart from the animal it may still be used;  
e.g. if it was dropped on the floor, a new implanter device would need to be used.

**19. As an implanter, do I require insurance?**

Answer: As there are some risks, and possible complications, involved with this type of procedure, certified implanters should ensure they are covered under their employer's insurance policy.

# Dog Microchipping Regulations

The Dog Control (Microchip Transponder) Regulations 2005 came into force on 1 July 2006.

They are technical regulations made under section 78(1) of the Dog Control Act 1996 that help implement the 2003 and 2004 amendments to the Act.

The regulations prescribe the kinds of microchips that must be implanted, where they must be implanted and how this must be done.

The regulations were developed in consultation with a range of stakeholders and are largely based on the microchipping guidelines of the New Zealand Veterinary Association.

A full copy of the regulations are listed on the following 8 pages.

**Reprint  
as at 16 December 2005**



**Dog Control (Microchip  
Transponder) Regulations 2005**

(SR 2005/333)

Silvia Cartwright, Governor-General

**Order in Council**

At Wellington this 12th day of December 2005

Present:

The Right Hon Helen Clark presiding in Council

Pursuant to section 78(1)(ba) and (bb) of the Dog Control Act 1996, Her Excellency the Governor-General, acting on the advice and with the consent of the Executive Council, makes the following regulations.

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**Note**

Changes authorised by section 17C of the Acts and Regulations Publication Act 1989 have been made in this reprint.

A general outline of these changes is set out in the notes at the end of this reprint, together with other explanatory material about this reprint.

**These regulations are administered by the Department of Internal Affairs.**

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## Regulations

- 1 Title**  
These regulations are the Dog Control (Microchip Transponder) Regulations 2005.
- 2 Commencement**  
These regulations come into force on 1 July 2006.
- 3 Interpretation**  
In these regulations, unless the context otherwise requires,—  
**Act** means the Dog Control Act 1996  
**microchip transponder** means a microchip transponder that  
complies with regulation 4(1)  
**NZS/ISO** means New Zealand Standard/International Organization  
for Standardization Standard.
- 4 Prescribed microchip transponder**  
(1) A microchip transponder to be implanted in a dog under section 36A or section 69A of the Act must—  
(a) comply with the following standards (as stated at 1 July 2006):  
(i) NZS/ISO 11784:2001 Radio-frequency identification of animals—Code structure; and  
(ii) NZS/ISO 11785:2001 Radio-frequency identification of animals—Technical concept; and

- (b) be encased within a single-use implantation device and, as a unit, be sterile, individually packaged, and ready for use; and
  - (c) be supplied with no fewer than 3 self-adhesive bar codes stating the microchip transponder's unique number.
- (2) For the avoidance of doubt, even if a transponder has been implanted in a dog, another transponder that meets the requirements prescribed in subclause (1) must be implanted in the dog if the first transponder does not comply with those requirements.

**5 Where and how microchip transponder must be implanted**

- (1) A microchip transponder must be implanted in a dog in a way that allows the transponder to function properly.
- (2) Without limiting subclause (1), the transponder must be implanted—
  - (a) under the dog's skin—
    - (i) at a point on the centreline of its back; and
    - (ii) just forward of the shoulder blades; and
  - (b) so that the transponder lies parallel or at an oblique angle to the skin; and
  - (c) using a sterile technique.

**6 Person implanting microchip transponder must be satisfied dog is not already implanted with functioning prescribed transponder in prescribed location**

Before implanting a dog with a microchip transponder, the person performing the procedure must be satisfied, on reasonable grounds, that the dog is not already implanted with a microchip transponder—

- (a) in the location prescribed in regulation 5; and
- (b) that is functioning.

**7 Person implanting microchip transponder must handle dog in appropriate manner**

- (1) When implanting a dog with a microchip transponder, the person or persons performing the procedure must take into account the breed, size, temperament, and other characteristics

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of the dog (for example, in deciding how to restrain the dog during the procedure).

- (2) Without limiting subclause (1), when implanting a transponder in a dog that is classified, under the Act, as a dangerous dog or a menacing dog, the dog must be—
  - (a) muzzled; and
  - (b) restrained by a person other than the person implanting the transponder.
- (3) Subclause (2) does not apply if the dog is anaesthetised during the procedure.

Diane Morcom,  
Clerk of the Executive Council.

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### **Explanatory note**

*This note is not part of the regulations, but is intended to indicate their general effect.*

These regulations are the Dog Control (Microchip Transponder) Regulations 2005. The regulations come into force on 1 July 2006. This is the same commencement date as the sections in the Dog Control Act 1996 relating to the requirement for certain dogs to be implanted with microchip transponders.

The regulations prescribe the type of microchip transponder that a dog must be implanted with, where the transponder must be implanted, and how it must be implanted. The prescribed requirements are based on the guidelines issued by the New Zealand Veterinary Association and the World Small Animal Veterinary Association.

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Issued under the authority of the Acts and Regulations Publication Act 1989.  
Date of notification in *Gazette*: 15 December 2005.

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**Notes****1 General**

This is a reprint of the Dog Control (Microchip Transponder) Regulations 2005. The reprint incorporates all the amendments to the regulations as at 16 December 2005, as specified in the list of amendments at the end of these notes.

Relevant provisions of any amending enactments that have yet to come into force or that contain relevant transitional or savings provisions are also included, after the principal enactment, in chronological order.

**2 Status of reprints**

Under section 16D of the Acts and Regulations Publication Act 1989, reprints are presumed to correctly state, as at the date of the reprint, the law enacted by the principal enactment and by the amendments to that enactment. This presumption applies even though editorial changes authorised by section 17C of the Acts and Regulations Publication Act 1989 have been made in the reprint.

This presumption may be rebutted by producing the official volumes of statutes or statutory regulations in which the principal enactment and its amendments are contained.

**3 How reprints are prepared**

A number of editorial conventions are followed in the preparation of reprints. For example, the enacting words are not included in Acts, and provisions that are repealed or revoked are omitted. For a detailed list of the editorial conventions, *see*

<http://www.pco.parliament.govt.nz/legislation/reprints.shtml>  
or Part 8 of the *Tables of Acts and Ordinances and Statutory Regulations, and Deemed Regulations in Force*.

**4 *Changes made under section 17C of the Acts and Regulations Publication Act 1989***

Section 17C of the Acts and Regulations Publication Act 1989 authorises the making of editorial changes in a reprint as set out in sections 17D and 17E of that Act so that, to the extent permitted, the format and style of the reprinted enactment is consistent with current legislative drafting practice. Changes that would alter the effect of the legislation are not permitted.

A new format of legislation was introduced on 1 January 2000. Changes to legislative drafting style have also been made since 1997, and are ongoing. To the extent permitted by section 17C of the Acts and Regulations Publication Act 1989, all legislation reprinted after 1 January 2000 is in the new format for legislation and reflects current drafting practice at the time of the reprint.

In outline, the editorial changes made in reprints under the authority of section 17C of the Acts and Regulations Publication Act 1989 are set out below, and they have been applied, where relevant, in the preparation of this reprint:

- omission of unnecessary referential words (such as “of this section” and “of this Act”)
- typeface and type size (Times Roman, generally in 11.5 point)
- layout of provisions, including:
  - indentation
  - position of section headings (eg, the number and heading now appear above the section)
- format of definitions (eg, the defined term now appears in bold type, without quotation marks)
- format of dates (eg, a date formerly expressed as “the 1st day of January 1999” is now expressed as “1 January 1999”)
- position of the date of assent (it now appears on the front page of each Act)

- punctuation (eg, colons are not used after definitions)
- Parts numbered with roman numerals are replaced with arabic numerals, and all cross-references are changed accordingly
- case and appearance of letters and words, including:
  - format of headings (eg, headings where each word formerly appeared with an initial capital letter followed by small capital letters are amended so that the heading appears in bold, with only the first word (and any proper nouns) appearing with an initial capital letter)
  - small capital letters in section and subsection references are now capital letters
- schedules are renumbered (eg, Schedule 1 replaces First Schedule), and all cross-references are changed accordingly
- running heads (the information that appears at the top of each page)
- format of two-column schedules of consequential amendments, and schedules of repeals (eg, they are rearranged into alphabetical order, rather than chronological).

**5** *List of amendments incorporated in this reprint  
(most recent first)*

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# You belong together ...

## Register your pets on the NZCAR

Following the 2011 earthquake, the NZCAR helped Canterbury SPCA by providing an 0800 lost pet service for all pets, chipped and non-chipped.

Of the hundreds of animals dealt with we managed to get 25% of non-chipped pets home within seven days. However we managed to get 85% of chipped pets home in an average of 1 to 2 hours!

The NZCAR is the largest New Zealand based, not for profit, repatriation database in New Zealand. Our sole purpose is getting lost pets home. Since its formation in 2007, the register has achieved:

- Over one million animals registered
- Over 750 vets, SPCA's and agencies who have access
- Over \$5 million donated to support animal welfare charities



**Companion  
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REGISTER

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