

ANIMAL IMPLANTATION

Site Preparation

The site should be prepared in a manner similar to how you would prepare a site for any other routine aseptic injection. The needle and implant are clean, inert and come in a sterilized packaged. In horses, a complete surgical prep is necessary to prevent clostridial infection.

Implanting instructions

1. Scan the sterilized unopened needle assembly to verify the ten digit transponder code. Open the packet.
2. Place the needle assembly on the implanter and lock the implanter. Immediately before implantation, unlock the implanter and remove the needle cap.

Note: The needle is extremely sharp and has a long 60 degree bevel. It should be treated with the same respect a scalpel blade would receive.

Note: Never depress the plunger on the implanter before the needle is inserted into the animal. Ejection of the transponder will occur.

3. Implantation of the transponder is similar to any other subcutaneous injection. Implantation sites for most domestic species are depicted on attached sheets.
4. The implant motion should be straight in and straight out. Every effort should be made to eliminate rotational movement of the hand to avoid any “wobble” of the needle tip.
5. Once the skin has been penetrated, pull the skin fold back over the length of the needle while simultaneously moving the needle forward. A steady (not abrupt) insertion of the needle is the preferred procedure.
6. Insert the needle to the depth of the line marked on the needle and depress the plunger using a steady motion. Withdraw the needle and let the skin go. Check the implantation site to make sure that the transponder has been fully inserted.
7. Scan the animal to verify the transponder code.

Implant location and scanning technique

To assist in the retrieval of information on the microchip, certain conventions have been agreed upon as to the location of implantation.

1. **Dogs, cats, small mammals and primates** should be implanted at the base of the neck, on the dorsal midline, between the shoulder blades. Care should be taken that the transponder is implanted to the full depth of the needle and fully subcutaneously.

Due to the nature of the RF technology, there is a slight directional component to the manner in which the scanner interrogates the transponder. The following recommended technique should insure 100% data capture.

Make four passes longitudinally from the mid neck to over the shoulders, two on each side of the neck. Make four passes transversely in the same area covering a dorsal arc of 90 degrees.

Care should be taken to keep the scanning wand in close proximity to the animal, actually gliding it in contact with the skin or fur. The trigger button should be held down throughout each pass.

2. **Horses** should be implanted to the full depth of the needle in the nuchal ligament region, halfway down the neck and from the left side. The site should be one to two inches from the dorsal midline so the chip may be scanned from either side.
3. In **pets, livestock and exotics** (sheeps, goats, llamas, and so forth) the tail fold on the left side is used, staying as close to the dorsal midline as practical. This allows scanning from either side.
4. **Avian species** are implanted intramuscularly in the pectoral muscle. The owner wants the security that the chip is not easily detectable (or removable) on physical examination. To date almost all work done in avians has involved this site with no complications; however, it is pointed out that the potential exists for serious intramuscular hematoma to occur.

It is recommended that the veterinarian combine the implant with some other procedure (such as sexing) until a comfortable level of proficiency is achieved. They should be prepared to deal with complications and observe the bird for a period of time after implantation.

In smaller birds, the needle may only need to be inserted to the depth of the bevel to achieve intramuscular implant.

Scanning should involve both pectoral regions, the base of the neck, and wings. The latter should be included should subcutaneous implants be done in private (zoo) situations.

5. **Tortoises and turtles** are implanted under the tallplate, on the midline, where the skin meets the shell. In larger species, the needle may be inserted to the full depth. In smaller species and babies the chip may be inserted by placing the needle only to a depth of about 3/4 of the bevel. Care should be taken that the soft shell of young animals not be injured. The chip can be scanned through the shell or by passing the wand around the posterior base of the shell.
6. **Snakes** are implanted superficially intramuscular in the neck in the first one to two inches behind the head. Care should be taken to direct the needle parallel to the body surface.

7. **Pet Iguanas, monitor lizards** and so forth are implanted in the thick muscle at the base of the tail. The needle should be directed between the scales.

Global Implantation Site Chart

All transponders should be inserted on the animal's **left side (L)** where applicable.

<u>SPECIES</u>	<u>IMPLANT SITE</u>	<u>COMMENTS</u>
FISH		
Large (>30 cm)	left base of dorsal fin	
Small (<30 cm)	coelomic cavity	
AMPHIBIANS	lymphatic	Cover wound with skin bond.
REPTILES		
Chelonians	behind limb socket (L)	
Crocodylians	anterior to nuchal cluster (L)	
Lizards, Large (>12.5cm)	inguinal region (L)	
Lizards, Small (<12.5 cm)	intercoelomic cavity	
Snakes dorso-lateral (L)	anterior to the vent	
BIRDS		
Large (>1.5 kg and /or long-legged)	dorsally at juncture of neck and body (L)	Measurement is mass of adult bird.
Medium to Small (<1.5 kg)	pectoral muscle (L)	
Psittaciformes	pectoral muscle (L)	
New/Old World Vultures	base of neck (L)	
other Falconiformes	pectoral muscle (L)	
Storks	pectoral muscle (L)	
Ratites	pipping muscle	
MAMMALS		
Large - Medium (>17 cm)	behind left ear, at base	Size measurement is distance between back bone and shoulder blade of adult mammal.
Small - Medium (<17 cm)	between shoulder blades left of center	
Loris	intralumbar (L)	Thick skin on neck makes implantation difficult.
Hurax	intralumbar (L)	Dermal shield makes scapular implantation difficult.
Elephant	main caudal fold parallel to tail on (L)	