

# 十日齡之幼犬注射狂犬病疫苗之效果仍然非常良好

歐美藥廠都規定幼犬狂犬病疫苗要滿三月齡後再施打之原因，是怕母狗給小狗之移行抗體干擾了疫苗之效力。然而，就不太遵守疫苗注射規定之國家，母狗根本沒有移行抗體，故小狗一出生就暴露在感染狂犬病之高風險中。台東縣海端鄉之小黑就是因為沒有移行抗體，被狂犬鼬獾咬了之後就發病了。根據研究報告，非洲與亞洲之犬狂犬病疫區國家中，幼犬感染率都比成犬高。成犬感染率較低是因為未打狂犬病疫苗之狗在幼犬時期就感染狂犬病死亡。因此，WHO也鼓勵狗狂犬病疫區之幼犬不要在滿三月齡後再施打，應該在更幼年時期就施打狂犬病疫苗。下表顯示即使是10日齡之幼狗，打狂犬病疫苗效果還是很好！一般狗狗之犬瘟疫苗在6~8週就打第一劑了([https://www.rabies.tw/strategy\\_2022/dog%20vaccine%20plan.pdf](https://www.rabies.tw/strategy_2022/dog%20vaccine%20plan.pdf))。

南非 Zenzele 市之試驗結果(Morters et al. 2015)

試驗狗隻序號	性別	打疫苗時之週齡	試驗開始時之抗體力價(IU/ml)	打疫苗後30天抗體力價(IU/ml)	試驗開始時母狗之抗體力價(IU/ml)
1	母	8-10	0.06	11.3	0.06
2	公	8-10	0.06	2.0	0.06
3	母	7-8	未測試	45.3	0.18
4	公	6-7	未測試	22.6	0.06
5	公	6-7	未測試	45.3	0.06
6	母	7-8	未測試	16.0	0.06
7	公	5-6	未測試	64.0	0.06
8	母	4-6	未測試	45.3	0.06
9	母	5-7	未測試	32.0	0.06
10	母	5-7	未測試	64.0	0.06
11	公	5-7	未測試	5.7	0.06
12	公	4-6	未測試	45.3	0.18
13	母	4-6	未測試	90.5	0.18
14	母	5	未測試	22.6	0.06
15	母	5	未測試	8.0	0.06
16	母	5	未測試	5.7	0.06
17*	母	10 days	未測試	5.7	0.09
18	母	6-8	未測試	32.0	未測試
19	母	10-12	未測試	22.6	未測試

\*即使是10日齡之幼犬對疫苗的反應還是非常好！

## Effective vaccination against rabies in puppies in rabies endemic regions

資料來源：Morters MK, McNabb S, Horton DL, Fooks AR, Schoeman JP, Whay HR, Wood JL, Cleaveland S 2015. Effective vaccination against rabies in puppies in rabies endemic regions. *Vet Rec.* 177:150. doi: 10.1136/vr.102975. Epub 2015 Jun 24. PMID: 26109286; PMCID: PMC4552936.

In rabies endemic regions, a proportionally higher incidence of rabies is often reported in dogs younger than 12 months of age, which includes puppies less than 3 months of age; this presents a serious risk to public health. The higher incidence of rabies in young dogs may be the effect of low vaccination coverage in this age class, partly as a result of the perception that immature immune systems and maternal antibodies inhibit seroconversion to rabies vaccine in puppies less than three months of age. Therefore, to test this perception, the authors report the virus neutralising antibody titres from 27 dogs that were vaccinated with high quality, inactivated rabies vaccine aged three months of age and under as part of larger serological studies undertaken in Gauteng Province, South Africa, and the Serengeti District, Tanzania. All of these dogs seroconverted to a single dose of vaccine with no adverse reactions reported and with postvaccinal peak titres ranging from 2.0 IU/ml to 90.5 IU/ml. In light of these results, and the risk of human beings contracting rabies from close contact with puppies, the authors recommend that all dogs in rabies endemic regions, including those less than three months of age, are vaccinated with high quality, inactivated vaccine.

在狂犬病流行地區，12個月以下的犬（包括3個月以下的幼犬）的狂犬病發病率通常較高；這對人類之安全具有嚴重威脅。幼犬狂犬病發病率較高可能是：(1)疫苗接種率低(low vaccination coverage)；(2)部分原因是認為不成熟的免疫系統；(3)母狗之移行抗體會抑制小於三個月大的幼犬對狂犬病疫苗的免疫反應。因此，為了驗證此一看法，本文進行了27隻狗的病毒中和抗體力價，這些狗接種了3個月大及以下的高品質之狂犬病死毒疫苗，試驗在南非以及坦桑尼亞進行。所有這些接種單劑疫苗狗之血清力價都上陽，且無任何不良反應。疫苗接種後每隻狗之最高力價介於2.0 IU/ml ~ 90.5 IU/ml之間。根據本文之試驗結果，以及人類因與幼犬密切接觸而有較易感染狂犬病的風險，本文建議狂犬病疫區的所有狗，包括小於三個月大的狗，都應該接種高品質之狂犬病死毒疫苗。