

CPV vaccine strain C154
in Nobivac vaccines
prevents infection
and shedding
of all UK field strains

The risk of environmental contamination

Some CPV vaccines on the UK market prevent clinical signs and mortality due to CPV, but do not prevent shedding after infection occurs¹. Unfortunately, CPV virus is very stable in the environment, so any animal which sheds the virus may contaminate its environment, resulting in the infection of other animals many months later.

CPV strain C154 prevents infection *and* shedding

Nobivac vaccines contain the patented CPV strain C154. Several trials have demonstrated that this vaccine not only prevents clinical signs and mortality, but also prevents shedding^{2,3,4,5,6} of CPV into the environment after animals become infected.

Independent US comparative trial²

In a comparative trial carried out in the US, 6 groups of dogs were vaccinated with 6 commercially-available vaccines. Animals were vaccinated twice, at 6-7 weeks of age and again at 9-10 weeks of age. Only Nobivac DHPPi and one other competitor vaccine induced an immune response in 100% of the vaccinated animals (see figure 1).

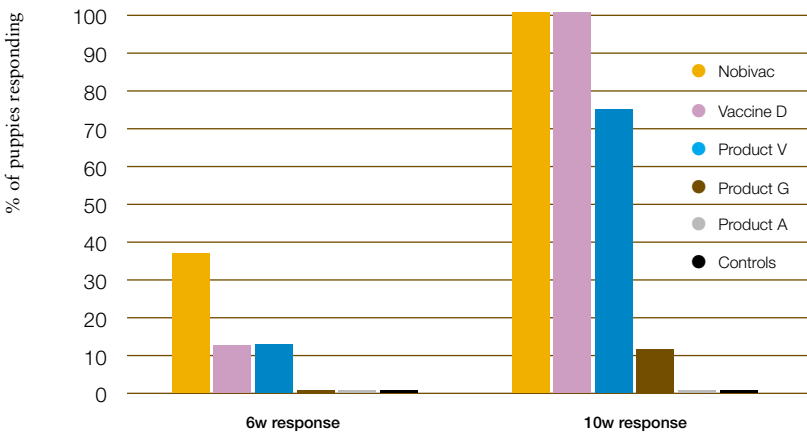


Figure 1, Percentage of pups responding to the CPV component of Nobivac DHPPi and Vaccine D at 6 and 10 weeks of age

5 weeks after the final vaccination, the dogs were challenged with a mixture of CPV type 2a and type 2b. The challenge did not result in an increase in titre in the animals vaccinated with Nobivac DHPPi, and no challenge virus could be re-isolated. All unvaccinated controls shed CPV after challenge. It was concluded that Nobivac DHPPi protected against infection.

Independent trial by Hoskins^{3,4}

In this trial, a group of 18 puppies was vaccinated with Nobivac DHPPi. After a second vaccination, carried out at 9 weeks of age, 100% of the animals had responded to vaccination. A challenge was carried out with a mixture of CPV type 2, 2a and 2b. All isolates were from clinical cases of CPV infection.

All animals were fully protected against challenge, and no challenge virus could be re-isolated from either the faeces or the intestinal tract. It was concluded that vaccination with Nobivac DHPPi resulted in protection against infection at intestinal level.

Duration of immunity trial⁶

Intervet carried out several duration of immunity trials with Nobivac DHPPi. In one of these trials, 6 animals were vaccinated with Nobivac DHPPi once, and 36 months later they were challenged with a mixture of CPV type 2, 2a and 2b. There were also 6 unvaccinated controls.

All the vaccinated animals were protected against challenge. None of the vaccinated animals showed any increase in titre, indicating that no infection occurred. Challenge virus could be re-isolated from all 6 controls (see figure 2) but from none of the vaccinated animals.

	Day -2	Day 0-3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10-14
Vaccinates	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Controls	0/0	0/0	4/6	6/6	6/6	4/4	4/4	3/4	0/0
			(66%)	(100%)	(100%)	(100%)	(100%)	(75%)	

Figure 2, number of animals (%) shedding CPV in their faeces between Day 2 and Day 14 after challenge with CPV type 2a and type 2b

Conclusion

Given the stability of CPV in the environment, shedding of CPV after infection is a potential threat. These trials show that strain C154 in Nobivac DHPPi prevents infection with CPV type 2a and type 2b; and, as a result, that there is no shedding of virus into the environment. This protection from infection - from any of the biotypes present in the UK - will last for at least 3 years.



Nobivac DHPPi the proven vaccine:

- More than half of the dogs in the UK that are vaccinated are vaccinated with Nobivac vaccines
- Intervet is the only manufacturer of a non adjuvanted vaccine with a 10 week final vaccination claim
- Efficacy at 10 weeks of age is supported by peer reviewed articles
- Nobivac DHPPi is the first vaccine in the world to obtain a 3 year duration of immunity
- Nobivac DHPPi is the only vaccine on the UK market with a datasheet claim to re-vaccinate every three years against CPV, CDV, CAV₁ and CAV₂
- No contra-indication for pregnant or lactating bitches
- Nobivac vaccines come with a comprehensive range of support materials

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For further information about Nobivac® DHPPi,
please contact your Intervet Account Manager,
call the Veterinary Support Group on 01908 685685,
or visit www.intervet.co.uk

Nobivac® DHPPi is a live attenuated vaccine containing canine distemper virus, canine adenovirus-2 (CAV₂), canine parvovirus and canine parainfluenza virus. Legal category: POM

References

1. Comparison of competitor datasheets.
2. Larson. L.J & Schultz, R.D, (1997), *American Journal of Veterinary Research*, 58, 360-363.
3. Hoskins, J.D, (1995), *Proceedings of the ACVIM forum*, 13, 819-821.
4. Hoskins, J.D, (1995), *Journal of Veterinary Internal Medicine*, 9, 197.
5. Taneno A., Bergman J.G.H.E., de Snayer G. and Paul G., *Proceedings of the ESVIM*, (1997), 6, 127 - 128.
6. Data on file, Intervet Study report 99R/0806

