



Everyday Decision



Extraordinary Impact

Choosing to prevent disease with Nobivac® vaccines is just the beginning of something greater. It's a decision that makes an impact beyond pets themselves, and unites people and pets around the world in broader protection and great health.

Learn more about using Nobivac® vaccines for your patients.




Protection unites us.

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WSAVA
Global Veterinary Community

Vaccination
Guidelines
Group



MSD
Animal Health

MSD Animal Health is the sole sponsor of the World Small Animal Veterinary Association Vaccination Guidelines Group (WSAVA VGG).

MSD Animal Health has sponsored the WSAVA VGG since its inception in 2006. We sponsor the WSAVA VGG because we believe there is a need for global guidelines to expand and improve the general knowledge and understanding of the immunological principles behind vaccination, as well as a need for independent expert guidance on the scientific evidence underpinning vaccination best practice. MSD Animal Health is proud to support the efforts of the WSAVA VGG.

Nobivac® Vaccine Brand Pillars

The following 5 pillars define the core attributes of Nobivac® vaccines.

They reflect the needs and values of our customers today and into the future.



Protection From Disease Is a Goal We All Share.

When protecting with Nobivac® vaccines, veterinarians join a movement to protect against serious, widespread, and potentially fatal infectious diseases in small animals and to positively impact global health.

The decision by veterinarians around the globe to use Nobivac® vaccines supports and empowers our ongoing philanthropy through the Afya Program. Since 1996, we have been passionately committed to the elimination of canine-mediated rabies through our support of academic research, our role in the mass vaccination of dogs and our community education in rabies-endemic areas of the world. Through donations of our Nobivac® Rabies vaccine, and partnership with organisations, such as Mission Rabies and Rabies Free Africa, we have made huge strides in saving lives and advancing science. Together, we are one step closer to meeting the United Against Rabies collaboration's goal of zero canine-mediated human rabies deaths by 2030.

Highlights of the Afya Program and its primary partners

25+ years supporting communities without access to life-saving rabies vaccines

20+ human lives saved annually through the Rabies Free Africa Project

5 million+ doses of rabies vaccine donated

0 human rabies deaths reported in Ranchi, India (2017) and Goa, India (2019)





MSD Animal Health

MSD Animal Health Gulf & Levant is a company grounded in science, innovation, and high-quality veterinary products. Both locally and internationally MSD Animal Health is dedicated to research and development, which leads to innovative products that make a real difference to animal health.

MSD Animal Health has a wide range of products and services that help veterinarians, pet owners, and farmers care for their animals. These products are manufactured in dedicated plants of 16 countries around the world. Many of region's leading veterinarians, farmers, and pet owners choose MSD Animal Health's quality products to help protect and treat the animals in their care.

Our products truly reinforce our mission, **the Science of Healthier Animals.**



Life Is About Strong Bonds. Nobivac® Is About Protecting Them.

The MSD Animal Health Gulf & Levant product portfolio comes from a solid foundation of innovative, high-quality veterinary products.

People and animals can form incredible bonds. To foster and protect these bonds, we created Nobivac®, the global brand for the MSD Animal Health range of small animal vaccines. Thanks to decades of experience and true commitment to research and development, Nobivac® offers a wide range of effective vaccines to protect dogs and cats. Together, we're helping veterinarians provide the high-quality care pets need and their owners expect.

Our products and services enable pets and people to enjoy their time together.




WSAVA Vaccination Guidelines and Nobivac®

The World Small Animal Veterinary Association (WSAVA) Vaccination Guidelines Group first published vaccination guidelines in 2007. They aim to provide recommendations that assist veterinarians to use vaccines efficiently, balancing the protection offered by vaccination with the very small risk of vaccine-associated adverse reactions.

In essence, the WSAVA guidelines propose:

"We should aim to vaccinate every animal with core vaccines and to vaccinate each individual less frequently by only giving non-core vaccines that are necessary for that animal".

With Nobivac®, MSD Animal Health was the first company in the world to offer vaccines with a two-year and then a three-year duration of efficacy, allowing extended vaccination intervals in line with the WSAVA vaccination guidelines. The Nobivac® range offers key advantages, such as vaccines with fewer components that align with the concepts of the WSAVA vaccination guidelines.

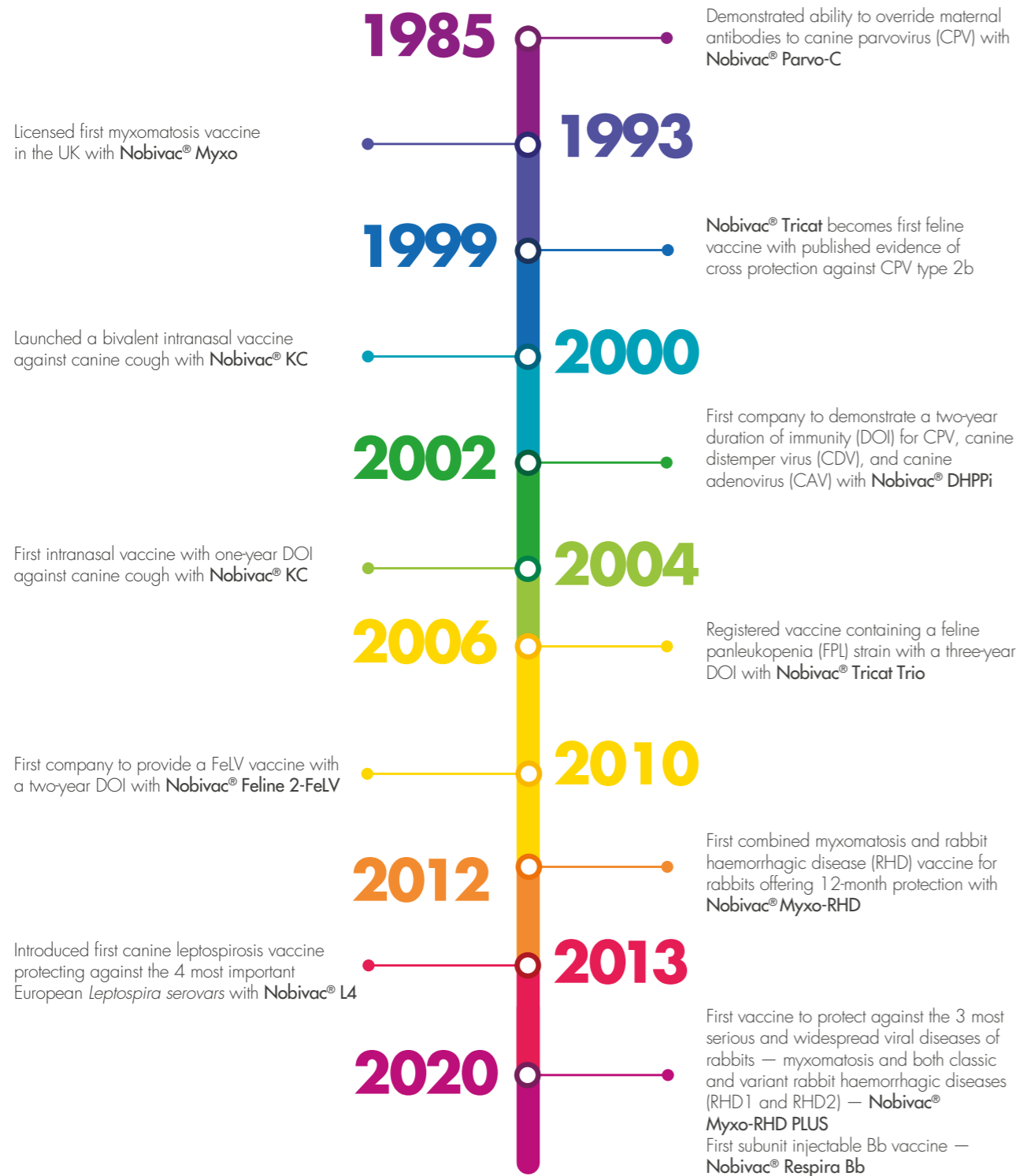
 FELINE VACCINES	 CANINE VACCINES
<ul style="list-style-type: none"> » Nobivac® Tricat Trio » Nobivac® Feline 2-FelV 	<ul style="list-style-type: none"> » Nobivac® DHPPi » Nobivac® KC » Nobivac® Lepto 1 » Nobivac® Puppy DP
 RABIES VACCINES	
<ul style="list-style-type: none"> » Nobivac® Rabies 	



Nobivac® Vaccine Range History

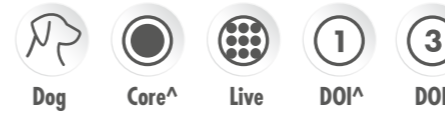
Since 1985, the **Nobivac®** brand has established itself as a force for good in the immunisation and care of companion animals across the globe.

Milestones of Our Nobivac® Range



MSD Animal Health History

NOBIVAC® DHPPI



Provides What Every Dog Needs

- » Reliable immunity against canine distemper virus (CDV), canine adenovirus type 1 and type 2 (CAV-1 & CAV-2), canine parvovirus (CPV), and canine parainfluenza virus (CPi).
- » Three-year DOI for CDV, CAV, and CPV core components. One-year DOI for CPi.^{1,2,3}
- » Puppies must be a minimum of 10 weeks of age at final vaccination.
- » Consistent with current international (WSAVA) extended vaccination guidelines for core diseases.
- » **Onset of immunity within 7 days** following vaccination^{4,5} for CDV, CAV, and CPV core components.
- » **Overcomes maternally derived antibodies** allowing a 10-week finish in puppies if required for early socialisation.
- » Premium parvovirus protection through patented C-154 parvovirus strain.
- » Studies have demonstrated clinical protection and prevention of shedding for **all known CPV field strains** (CPV2a, CPV2b, and CPV2c).^{1,6-8}
- » Can be used **during pregnancy**.
- » Diluent volume can be reduced to 0.5mL, aimed at providing a more comfortable experience.*

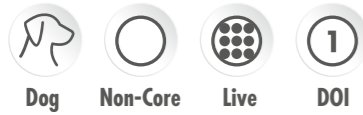
Nobivac® DHPPI can be reconstituted with Nobivac® diluent or Nobivac® Lepto 1 vaccine.

ICONS	
» Modified Live Vaccine	
» Core Vaccine	
» Inactivated Vaccine	
» Non-Core Vaccination	
» DOI: Duration of Immunity (years)	



*When Nobivac® DHPPI is reconstituted with Nobivac® Diluent only. If reconstituted with Nobivac® Lepto 1, the full 1mL dose must be used.

NOBIVAC® KC



NOBIVAC® LEPTO 1



Immunisation Against Important Canine Cough Pathogens With Just 0.4ml

- » Provides immunity against *Bordetella bronchiseptica* and canine parainfluenza virus, important pathogens in the canine cough complex.
- » **Fast onset of localised immunity** – 72 hours for the *B. bronchiseptica* component.⁹
- » 12-month DOI following a **single dose**.^{10,11}
- » **Small volume** (0.4ml) and **single nostril** administration for ease of use.
- » Trials have demonstrated efficacy and safety in puppies as young as **2 weeks of age**.⁹⁻¹³
- » A study has demonstrated the stimulation of protective immunity in the presence of maternally derived antibodies.¹³
- » Can be used **during pregnancy**.

Compatible for concurrent use with Nobivac® DHPPi and Nobivac® Lepto 1.

Premium Leptospirosis Protection

- » For active immunity against leptospirosis by providing protection against *Leptospira Interrogans Serovar Canicola* and *Lcterohaemorrhagiae*.
- » One-year duration of immunity after primary course or subsequent annual booster. Dogs must be a **minimum of 10 weeks of age** at completion of primary course.
- » VacciPure filtration process used during manufacture results in reduced levels of serum proteins, designed to **minimise the risk of allergic reactions** after vaccination.¹⁴
- » Can be used **during pregnancy**.

Nobivac® Lepto 1 can be used as a diluent for Nobivac® DHPPi.



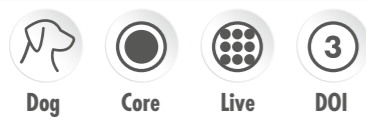
ICONS	
» Modified Live Vaccine	
» Core Vaccine	
» Inactivated Vaccine	
» Non-Core Vaccination	
» DOI: Duration of Immunity (years)	



ICONS	
» Modified Live Vaccine	
» Core Vaccine	
» Inactivated Vaccine	
» Non-Core Vaccination	
» DOI: Duration of Immunity (years)	



NOBIVAC® PUPPY DP



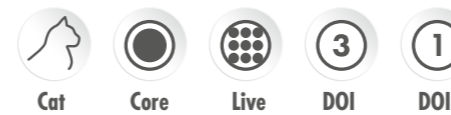
Fewer Components for Flexibility

- » Nobivac® Puppy DP provides active immunity against canine parvovirus and canine distemper virus.
- » With the same D (distemper), and P (parvovirus C-154) components as in Nobivac® DHPPi, you can trust in Nobivac® Puppy DP to provide premium protection.
- » Can be used at **4–6 weeks of age** followed by Nobivac® DHPPi for later vaccinations.*
- » Use Nobivac® Puppy DP for early puppy vaccinations, particularly in high-challenge situations, or **where fewer antigens are desirable**.
- » **Onset of immunity within 7 days** following vaccination.^{4,5}
- » **Three-year duration of immunity.**^{*1,2,3}

Nobivac® Puppy DP can be reconstituted with Nobivac® diluent or Nobivac® Lepto 1 vaccine.

*Puppies must be a minimum of 10 weeks of age at final vaccination.

NOBIVAC® TRICAT TRIO



The Core Vaccine for Cats

- » For active immunity against feline herpes virus type 1 (FHV-1), feline calicivirus (FCV), and feline panleukopenia virus (FPLV).
- » **Three-year DOI.**^{15,16}
- » Premium calicivirus protection. Contains the F9 FCV strain, shown to be broadly cross-protective against a wide range of FCV field isolates in a UK study.¹⁷
- » Can be used safely for early vaccination of kittens from **6 weeks of age**.¹⁸
- » Kittens must be a minimum of **12 weeks of age** at final vaccination.

NOBIVAC® FELINE 2-FELV



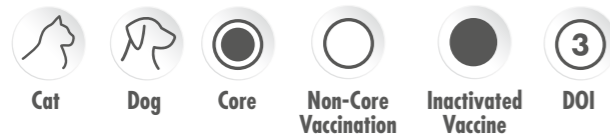
ICONS

- » Modified Live Vaccine
- » Core Vaccine
- » Inactivated Vaccine
- » Non-Core Vaccination
- » DOI: Duration of Immunity (years)

Extended Duration of Immunity for Indoor/Outdoor Cats and Kittens

- » Indicated for the vaccination of healthy cats to aid in the prevention of lymphoid tumors caused by and diseases associated with feline leukemia virus (FeLV) infection.
- » **The ONLY feline leukemia vaccine shown to be effective against viremia for two years after vaccination.**²¹ With a two-year duration of immunity and a **99% reaction-free safety profile**, Nobivac® Feline 2-FelV delivers unrivaled confidence and peace of mind.
- » Aqueous based adjuvant is a tissue friendly adjuvant that ensures safe injection and stimulates a hardy immune response.
- » Can be used safely for early vaccination of kittens from 9 weeks of age.

NOBIVAC® RABIES



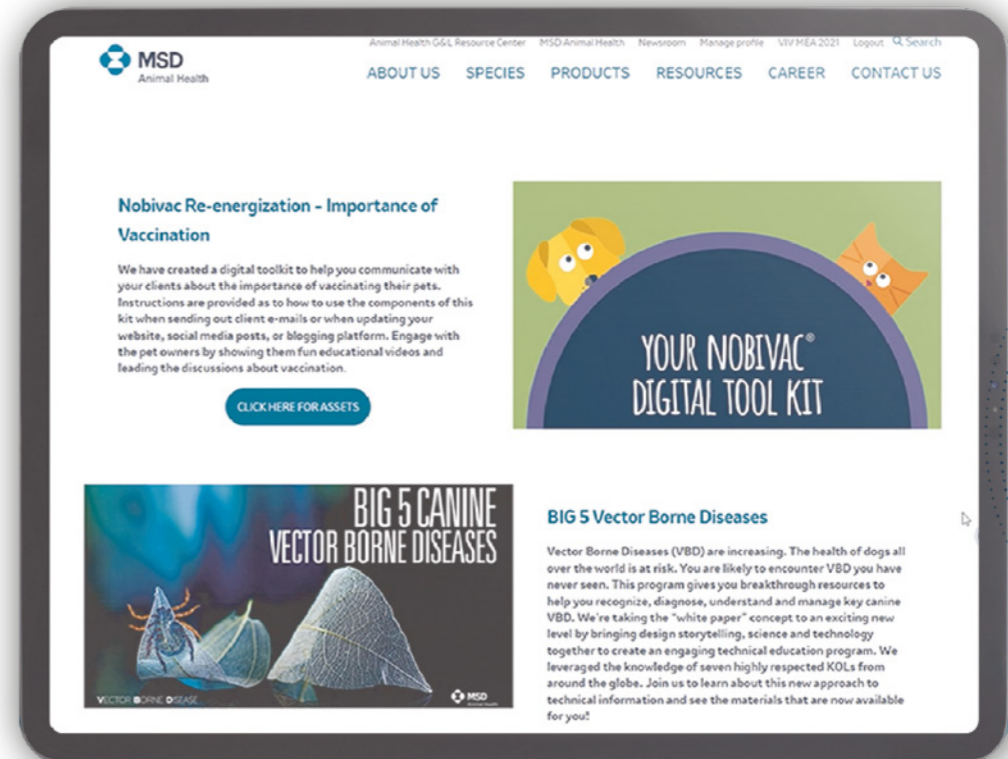
Three-Year Duration of Immunity for Dogs and Cats

- » Nobivac® Rabies provides active immunization to healthy dogs, cats, cattle, sheep, goats, ferrets, foxes, and horses, and in principle to **all healthy mammals against rabies.**
- » Vaccination leads to a high peak of antibody levels within 3 weeks.
- » **Can be used during pregnancy in dogs.** There are no laboratory data on use during pregnancy in other species but on basis of field experience, such use is expected to be safe.
- » Thermotolerance studies proved that vaccine is likely to be efficacious if exposed to elevated temperatures (neutralizing antibody response not inferior after vaccine stored at 30°C for 3 months).²⁰

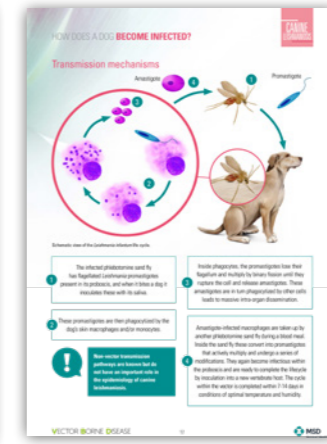
Nobivac® Rabies can be used to reconstitute the freeze-dried canine vaccines of the Nobivac® series (Nobivac® DHPPi). Nobivac® Rabies can be administered with the Nobivac® Lepto at the same time but at a different administration site.

MSD Animal Health Gulf & Levant Resource Center

Visit www.msd-animal-health-me.com/animal-health-gl-resource-center/ to get access to a number of educational materials available for your use. This includes FAQs, videos, clinic posters, and digital materials for your website, social media, and waiting room area.



Rabies Vaccines



Nobivac® – Afya Program

Fighting Rabies in Africa, Asia, and India

Although no longer a problem in large parts of the world, rabies still causes more than 59,000 deaths per year, many of them are children. Canine vaccination is one of the most effective ways to prevent this terrible problem and this is what Afya is doing.

For Nobivac® vaccines administered, we donate free rabies vaccines through our Afya Program to organisations including Mission Rabies and Rabies Free Africa to support their respective efforts in Africa, Asia, and India.

To find out more, visit www.afya.org



Eliminating Rabies

MSD Animal Health, through our Afya Program, has been donating canine rabies vaccines to our non-profit partners for vaccination campaigns for more than 25 years.

Rabies is 100% vaccine preventable.

Rabies is one of the deadliest global diseases for both humans and dogs, yet it is preventable.

99% With 99% of human cases being caused by dog bites, canine mass-vaccination initiatives are the most cost-effective rabies prevention measure.

70% In fact, rabies transmission can be eliminated in rabies-endemic areas when at least 70% of dogs are covered through annual mass-vaccination.

However, in many large areas around the world, rabies continues to be a serious health issue.

Many communities around the world have limited access to resources and vaccines, and often awareness and education about rabies is low.

Rabies kills an estimated 59,000 people each year, with almost half of them children under 15 years of age.

Globally, the economic burden of dog-mediated rabies is estimated at U.S. \$8.6 billion per year.

Working with our partners, we're eliminating rabies.

5 million doses of rabies vaccines to support organizations like Mission Rabies and Rabies Free Africa to eliminate rabies.

Mission Rabies collaborates with governments and local communities to run vaccination drives and provide critical education to children about dog bites.

Mission Rabies has educated 5 million children about rabies prevention.

Rabies Free Africa is advancing critical research into efficient and effective vaccination efforts to be implemented in areas with high rates of rabies.

Together, we are one step closer to meeting the United Against Rabies collaboration's goal of **zero dog-mediated human rabies deaths by 2030.**

This World Rabies Day, share the importance of eliminating canine-mediated rabies using #WorldRabiesDay and #EndRabiesNow.

Zero by 30 is only 8 years away!

1. The World Health Organization. Rabies. Accessed June 3, 2022. <https://www.who.int/news-room/fact-sheets/detail/rabies>

2. Merck Animal Health. Vaccinating Dogs Prevents Spread of Zoonotic Disease. Accessed June 3, 2022. <https://www.merck-animal-health.com/merck-animal-health-marh-25-year-commitment-to-rabies-elimination-on-world-rabies-day/>

3. The World Health Organization. Rabies. Accessed June 3, 2022. <https://www.who.int/news-room/fact-sheets/detail/rabies>

4. The World Health Organization. Rabies. Accessed June 3, 2022. <https://www.who.int/news-room/fact-sheets/detail/rabies>



Nobivac® Chiller Unit

An Innovative Way to Give Vaccines a Prominent Place in Every Practice

The chiller unit is a highly practical and ergonomic way to store, present, and dispense vaccines. Wall mounted and compact, it keeps Nobivac® vaccines at the ideal temperature and always at your fingertips.

Chillers are available to Nobivac® vaccine customers. To request chiller, contact your MSD Animal Health representative in your market.





References: 1. Horspool LJI, Bergman JGH, (2005). A MLV vaccine prevents clinical signs and shedding of CPV 2a and 2b after challenge at 36 months after vaccination. *BSAVA Congress Proceedings*; 48: 548. 2. Bergman JGH, et al (2005). A MLV vaccine has a duration of immunity of at least 36 months against CDV, CAV-2 and CPV. *BSAVA Congress Proceedings*; 48: 547. 3. Gore TC, et al (2005). Three-year duration of immunity in dogs following vaccination against canine adenovirus type-1, canine parvovirus, and canine distemper virus. *Vet Therap*; 6(1): 5. 4. Gray A, et al (2003). Nobivac® DHPPi offers protection against infection with CDV and CPV within 7 days of vaccination. *Proceedings 46th BSAVA Annual Congress*, Birmingham, UK, 3-6 April 2003: 559. 5. Helps J, et al (2007). An injectable modified live vaccine protects young puppies against challenge with either canine adenovirus-1 or canine adenovirus-2 seven days after a single vaccination. *Voorjaarsdagen Congress Proceedings*; 40: 193. 6. Hoskins JD, et al (1995). Challenge trial of a new attenuated canine parvovirus vaccine. *J Vet Int Med*; 9: 197. 7. Greenwood NM, et al (1995). Comparison of isolates of canine parvovirus by restriction enzyme analysis, and vaccine efficacy against field strains. *Vet Record*; 136: 63. 8. Spibey N, et al (2008). Canine parvovirus type 2 vaccine protects against virulent challenge with type 2c virus. *Vet Micro*; 128: 48. 9. Gore T, et al (2004). Intranasal kennel cough vaccine protecting dogs from experimental *Bordetella bronchiseptica* infection within 72 hours. *Vet Record*; 156: 482. 10. Jacobs AAC, et al (2005). Protection of dogs for 13 months against *Bordetella bronchiseptica* and canine parainfluenza virus with a modified live vaccine. *Vet Record*; 157: 19. 11. Lehr C, et al (2008). Demonstration of 1-year duration of immunity for attenuated *Bordetella bronchiseptica* vaccines in dogs. *Vet Therap*; 9(4): 257. 12. Bergman JGHE, et al (2004). Compatibility of an intranasal kennel cough vaccine with an injectable MLV vaccine against CPV,CDV and CAV2. *BSAVA Congress Proceedings*; 47: 537. 13. Jacobs AAC, et al (2006). An intranasal kennel cough vaccine administered at 3 weeks of age is able to stimulate protective immunity despite the presence of passive antibody. *WSAVA/FECAVA/CSAVA World Congress Proceedings*; 850. 14. Klaasen HLB, et al (2015). VacciPure™ filtration process for manufacturing leptospirosis vaccines with reduced levels of bovine serum albumin to minimise the risk of allergic reactions after vaccination. *European Leptospirosis Society Meeting Abstract*, April 2015. 15. Gore TC, et al (2006). Three-year duration of immunity in cats following vaccination against feline rhinotracheitis virus, feline calicivirus and feline panleukopenia virus. *Vet Therap*; 7(3): 213. 16. Data on file, MSD Animal Health Study Reports FCT/0002/03, FCT/0003/03, FCT/0004/03. 17. Porter CJ, et al (2008). Comparison of the ability of feline calicivirus (FCV) vaccines to neutralise a panel of current UK FCV isolates. *J Feline Med Sur*; 10: 32. 18. Dawson S, et al (2001). A field trial to assess the effect of vaccination against feline herpesvirus, feline calicivirus and feline panleukopenia virus in 6-week-old-kittens. *J Feline Med Sur*; 3: 17. 19. Day MJ, et al (2016). WSAVA guidelines for the vaccination of dogs and cats. *JSAP*, 57. 20. Lankester FJ, et al (2016). Thermotolerance of an inactivated rabies vaccine for dogs. *Vaccine*; 34(46): 5504. 21. Jirjis FF, Davis T, Lane J, et al. Protection against feline leukemia virus challenge for at least 2 years after vaccination with an inactivated feline leukemia virus vaccine. *Vet Ther*. 2010;11:E1-E6.

Suggested Feline Vaccination Protocol and Best Practices

	CORE DISEASES	FELINE LEUKEMIA	RABIES
	Nobivac® Tricat Trio	Nobivac® Feline 2-FelV	Nobivac® Rabies
Primary Vaccination			
9 weeks			
12 weeks			
Annual Revaccination			
Year one			
Year two			
Year three			
Year four			
Unknown Vaccination Status			
Older than 12 weeks			
3–4 weeks later			

Nobivac® Tricat Trio:

*Primary vaccination can start at 8 weeks of age.
Needs two doses 3–4 weeks apart for the completion of primary course.






























Nobivac® Rabies:

Nobivac® Tricat Trio cannot be mixed with Nobivac® Rabies.
Single dose primary course from 12 weeks (second dose is not needed).
Nobivac® Rabies can be used in animals younger than 12 weeks of age but a final dose from 12 weeks of age is always required.
**Three-year DOI but it may be required to vaccinate annually depending on local regulations and requirements for travelling cats.

Nobivac® Feline 2-FelV:

Second dose 3–4 weeks apart for primary course (a minimum of two doses is required for primary immunisation).
Nobivac® FeLV cannot be mixed with Nobivac® Tricat Trio nor with Nobivac® Rabies.
Two-year DOI but depends on country requirements whether to vaccinate annually.

Suggested Canine Vaccination Protocol and Best Practices

	CORE DISEASES		LEPTOSPIROSIS	CANINE COUGH	RABIES
	Nobivac® Puppy DP	Nobivac® DHPPi	Nobivac® Lepto	Nobivac® KC	Nobivac® Rabies
Primary Vaccination					
4–6 weeks					
8 weeks					
12 weeks					
Annual Revaccination					
Year one		 *			 **
Year two		 (if Nobivac® KC is not available)			 **
Year three					
Year four		 (if Nobivac® KC is not available)			 **
Unknown Vaccination Status					
Older than 10 weeks					
2–4 weeks later					 ***

Nobivac® DHPPi:

*First-year "full booster" is very widely used but not strictly needed according to our SPC. Irrespective of mixing claims, we should never mix more than 2 products together in the same syringe, e.g., Nobivac® DHPPi + Nobivac® Lepto, Nobivac® DHPPi + Nobivac® Rabies but never Nobivac® DHPPi + Nobivac® Lepto + Nobivac® Rabies. Two doses of Nobivac® DHPPi with a final dose at 12 weeks are given due to possible interference from MDA (maternally derived antibodies). Three-year DOI for the core components D, H, and P. It can be used from 6 weeks onwards.

Nobivac® Rabies:

Single dose primary course from 12 weeks (second dose is not needed). Rabies can be used in animals younger than 12 weeks of age but a final dose from 12 weeks of age is always required. **Three-year duration of immunity in our SPC but it may be required to vaccinate annually in different countries. ***Not required if a puppy was 12 weeks of age or older. Nobivac® Rabies can be administered with the Nobivac® leptospirosis vaccines at the same time but at a different administration site.

Nobivac® Puppy DP:

It has a higher minimum antigen level of canine distemper virus (CDV) strain Onderstepoort therefore, can be used at a very early age. It can be mixed with Nobivac® Solvent (Diluent). After administering Nobivac® Puppy DP, first Nobivac® DHPPi dose follows after 2–4 weeks.

Nobivac® Lepto:

It always requires annual booster. Two doses, 2–4 weeks apart to complete primary course is necessary.

Nobivac® vaccines are restricted veterinary medicine and are available only under veterinary authorisation. www.msd-animal-health-me.com. GU-NOV-230100001. © 2022 Merck & Co., Inc., Kenilworth, NJ, USA, and its affiliates. All rights reserved.

