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MATRIX VACCINATION GUIDELINES

ABCD recommendations for indoor/outdoor cats, rescue shelter cats and breeding catteries



Margaret J Hosie, Diane Addie, Sándor Belák, Corine Boucraut-Baralon, Herman Egberink, Tadeusz Frymus, Tim Gruffydd-Jones, Katrin Hartmann, Albert Lloret, Hans Lutz, Fulvio Marsilio, Karin Möstl, Maria Grazia Pennisi, Alan D Radford, Etienne Thiry, Uwe Truyen and Marian C Horzinek

Overview: This article presents, in a user-friendly, tabulated form, the ABCD's current vaccination recommendations for four broad categories of cats: outdoor cats (ie, those with access outdoors that come into contact with other cats outdoors); indoor cats (ie, those with no contact with other cats from outdoors); rescue shelter cats; and cats in breeding catteries. Note that it is not always possible to make a clear distinction between these various categories and the definition in any individual case is left up to the veterinary surgeon conducting the vaccination interview.

European Advisory Board on Cat Diseases
The European Advisory Board on Cat Diseases (ABCD) is a body of experts in immunology, vaccinology and clinical feline medicine that issues guidelines on prevention and management of feline infectious diseases in Europe, for the benefit of the health and welfare of cats. The guidelines are based on current scientific knowledge of the diseases and available vaccines concerned.

The latest version of the guidance presented in this article is available at www.abcd-vets.org

Introduction

It was evident during the preparation of the complete ABCD vaccination guidelines that no single vaccination protocol would be appropriate for all cats across Europe. Rather, it is important to conduct a vaccination interview in order to devise a vaccination strategy appropriate to the lifestyle, geographical location and disease risks relevant to each feline patient. These matrix vaccination guidelines were compiled to assist veterinary surgeons during the vaccination interview, summarising the ABCD's vaccine recommendations. The 'core' vaccines should be administered to all cats, whereas 'circumstantial' vaccines are required under specific circumstances (for example, for cats travelling to areas where rabies is endemic, or cats with outdoor access and therefore at risk of infection with FeLV), and 'non-core' vaccines are recommended only for cats at risk of specific infections.

Abbreviations used in the matrix tables

DOI	Duration of immunity
FCV	Feline calicivirus
FCoV/FIP	Feline coronavirus/feline infectious peritonitis
FeLV	Feline leukaemia virus
FHV	Feline herpesvirus
FPV	Feline panleukopenia virus
MDA	Maternally-derived antibodies
MLV	Modified-live vaccine
PV	Primary vaccination course



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OUTDOOR CATS (cats that have access outdoors and contact with other cats from outdoors)

Vaccination of outdoor cats

Vaccine/ disease agent	PV1	PV2	Kitten PV3	Primary vaccination course PV3	Final PV/ first booster	Vaccinated <3 years ago	Adult cat	Comments
FPV	8–9 weeks	12 weeks	16 weeks (in certain situations)	1 year later	One immunisation, boost every 3 years or more	One immunisation, boost 1 year later	Two immunisations 2–4 weeks apart, boost 1 year later	Do not use MLV in kittens <4 weeks of age Do not use MLV in pregnant cats
FHV	8–9 weeks	12 weeks	–	1 year later	One immunisation, boost annually	One immunisation, boost annually	Two immunisations 2–4 weeks apart, boost 1 year later	Recovered cats should be vaccinated
FCV	8–9 weeks	12 weeks	16 weeks (if high risk or expected high MDA)	1 year later	One immunisation, boost annually	One immunisation, boost annually	Two immunisations 2–4 weeks apart, boost 1 year later	Recovered cats should be vaccinated with different FCV vaccine strains
FeLV	8–9 weeks	12 weeks	–	1 year later	Boost every 2–3 years after 3 years of age	Boost every 2–3 years after 3 years of age	Two immunisations 2–4 weeks apart, boost 1 year later	Cats of uncertain FeLV status should be tested prior to vaccination (unless risk of FeLV is considered very low) and vaccinated if negative
Rabies virus	12–16 weeks	–	–	1 year later	Some vaccines' DOI is 3 years, but legislation may require annual boosters	One immunisation	One immunisation	Vaccinate in endemic areas only – refer to national and regional legislation
FCoV/FIP	Not before 16 weeks	3 weeks later	–	1 year later	Annually	Only vaccinate seronegative cats	Only vaccinate seronegative cats	Intranasal vaccine. Vaccine against FIP is available in some European countries
<i>Chlamydomphila felis</i>	8–9 weeks	12 weeks	–	1 year later	Annually	Two immunisations 2–4 weeks apart, boost 1 year later	Where cats are kept together long term, vaccinate regularly	Consider vaccination when there is contact with dogs. Vaccine available in some European countries. Vaccinate in high-density areas where <i>Bordetella</i> is confirmed
<i>Bordetella bronchiseptica</i>	1 month or older: Single vaccination	–	–	1 year later	Annually in high-density populations only	One immunisation in high-density populations only, boost annually	Do not use MLV in kittens <4 weeks of age.	
Non-core								

See page 540 for explanation of vaccine categories (core, circumstantial and non-core) and abbreviations. Image courtesy of www.sureflap.co.uk



INDOOR CATS (cats that have no contact with cats from outdoors)

Vaccination of indoor cats

Vaccine/ disease agent	PV1	Primary vaccination course PV2 PV3	Kitten Final PV/ first booster	Vaccinated <3 years ago	Adult cat	Comments
FPV	8–9 weeks	12 weeks (in certain situations)	1 year later	One immunisation, boost every 3 years or more	One immunisation, boost 1 year later	Do not use MLV in kittens <4 weeks of age Pregnant cats should not be vaccinated
FHV	8–9 weeks	12 weeks –	1 year later	One immunisation, boost every 3 years*	Two immunisations 2–4 weeks apart, boost 1 year later	Recovered cats should be vaccinated
FCV	8–9 weeks	12 weeks (if high risk or expected high MDA)	1 year later	One immunisation, boost every 3 years*	Two immunisations 2–4 weeks apart, boost 1 year later	Recovered cats should be vaccinated
Rabies virus	12–16 weeks	–	1 year later	One immunisation. Some vaccines' DOI is 3 years, but legislation may require annual boosters	Only vaccinate if required by local legislation	
FeLV	8–9 weeks	12 weeks –	1 year later	Boost every 2–3 years after 3 years of age	Two immunisations 2–4 weeks apart, boost 1 year later	Only vaccinate if there is contact with FeLV- positive cats or those of unknown FeLV status
FCoV/FIP	Not before 16 weeks	3 weeks later	1 year later	Boost annually	Only vaccinate cats likely to be seronegative	Intranasal vaccine. Vaccine is available in some European countries
<i>Chlamydophila felis</i>	8–9 weeks	12 weeks –	1 year later	Annually	Two immunisations 2–4 weeks apart, boost 1 year later	Where cats are kept together long term, vaccinate regularly
<i>Bordetella bronchiseptica</i>	1 month or older. One immunisation in high-density populations only	–	1 year later	Annually in high-density populations only	One immunisation in high- density populations only, boost annually	Do not use MLV in kittens <4 weeks of age. Vaccine available in some European countries. Vaccinate in high-density areas where <i>Bordetella</i> is confirmed

See page 540 for explanation of vaccine categories (core, CS [circumstantial] and non-core) and abbreviations. *Boost annually if using a boarding cattery. Image ©iStockphoto.com/Kevin Russ

Vaccination of rescue shelter cats

RESCUE SHELTER CATS (cats living in centres for unowned and abandoned cats)



Vaccine/ disease agent	PV1	PV2	PV3	Kitten vaccination course	Final PV/ first booster	Vaccinated <3 years ago	Adult cat	Comments
FPV	6 weeks (4 weeks if needed)	3–4 weeks later	3–4 weeks later until 16 weeks	1 year later	Booster vaccinations at 3 yearly intervals	One immunisation, boost 1 year later	Do not use MLV in kittens <4 weeks of age. Vaccination should be repeated every 2–4 weeks until 16 weeks of age	
FHV	6 weeks (4 weeks if needed)	3–4 weeks later	3–4 weeks later until 16 weeks	1 year later	Annually	Two immunisations 2–4 weeks apart, boost 1 year later	Vaccinate new cats as soon as possible. Due to high antigenic variation of FCV strains, recovered cats should be vaccinated	
FCV	6 weeks (4 weeks if needed)	3–4 weeks later	3–4 weeks later until 16 weeks	1 year later	Annually	Two immunisations 2–4 weeks apart, boost 1 year later		
Rabies virus	12–16 weeks	–	–	1 year later	Some vaccines' DOI is 3 years, but legislation may require annual boosters	One immunisation, boost 1 year later	In endemic areas: handle all strays with caution as potentially infected Vaccinate only in endemic areas – refer to national and regional legislation	
FeLV	8–9 weeks	12 weeks	–	1 year later	Boost every 2–3 years after 3 years of age	Quarantine and test before two immunisations 2–4 weeks apart, boost 1 year later	Not needed if no contact with other cats	
FCoV/FIP					1 year later	–		
Chlamydophila felis								
Bordetella bronchiseptica								
Non-core								

See page 540 for explanation of vaccine categories (core, CS [circumstantial] and non-core) and abbreviations. *Image ©iStockphoto.com/Dwight Smith*



BREEDING CATTERIES (cats in any multicat environment used for breeding purposes)

Vaccination of cats in a breeding cattery

Vaccine/ disease agent	PV1	Primary vaccination course PV2	Kitten vaccination course PV3	Final PV/ first booster	Breeding cats	Comments
FPV	8–9 weeks	12 weeks	16–20 weeks	1 year later	Boost queens 3 yearly, or annually before breeding if low MDA is a concern	Do not use MLV in kittens <4 weeks of age Pregnant cats should not be vaccinated
FHV	8–9 weeks	Vaccinate every 2 weeks until 12 weeks	–	1 year later	Boost queens annually and before breeding	Recovered cats should be vaccinated. Consider earlier vaccination in litters from queens that have had infected litters previously
FCV	8–9 weeks	Vaccinate every 2 weeks until 16 weeks	–	1 year later	Boost queens annually and before breeding	Recovered cats should be vaccinated
Rabies virus	12–16 weeks	–	–	1 year later	Some vaccines' DOI is 3 years, but legislation may require annual boosters of queens	Only vaccinate if required by local legislation
FeLV	8–9 weeks	12 weeks	–	1 year later	Boost queens every 2–3 years after 3 years	Breeding catteries should be FeLV negative. Vaccination not needed unless there is access to outdoors and in a high-risk geographical area
FCoV/FIP	Not before 16 weeks	3 weeks later	–	1 year later	Boost queens annually	Intranasal vaccine. Vaccine available in some European countries
<i>Chlamydyphila felis</i>	8–9 weeks	12 weeks	–	1 year later	Boost queens annually	–
<i>Bordetella bronchiseptica</i>	One immunisation in cats 1 month or older	–	–	1 year later	Boost queens annually	Do not use MLV in kittens <4 weeks of age. Vaccine available in some European countries. Vaccinate in catteries where <i>Bordetella</i> is confirmed

See page 540 for explanation of vaccine categories (core, CS [circumstantial] and non-core) and abbreviations. *Image © Stockphoto.com/oksun70*