



# MATRIX VACCINATION GUIDELINES

## 2015 ABCD recommendations for indoor/outdoor cats, rescue shelter cats and breeding catteries

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### Introduction

It was evident during the preparation of the 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 strategy appropriate to the lifestyle, geographical location and disease risks relevant to each feline patient. These matrix vaccination guidelines, like the 2013 version, 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 (eg, 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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### Conflict of interest

The authors do not have any potential conflicts of interest to declare.

**Overview:** In 2013, the ABCD published 'Matrix vaccination guidelines: ABCD recommendations for indoor/outdoor cats, rescue shelter cats and breeding catteries' in a Special Issue of the *Journal of Feline Medicine and Surgery* (Volume 15, Issue 7, pages 540–544). The ABCD's vaccination recommendations were presented in tabulated form, taking into account that there is no universal vaccination protocol for all cats. To support the veterinarian's decision making, recommendations for four lifestyles were made: for cats with outdoors access, cats kept solely indoors, rescue shelter cats and cats in breeding catteries. This update article follows the same approach, offering current and, where relevant, expanded recommendations.

#### 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.abcdcatsvets.org](http://www.abcdcatsvets.org) and [www.abcd-vets.org](http://www.abcd-vets.org)



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

Vaccination of outdoor cats							Comments
Vaccine/ disease agent	Kitten vaccination course			Adult cat			
	PV1	Primary PV2	PV3	Final PV/ first booster	Vaccinated <3 years ago	Unvaccinated/ no vaccine history	
Core	FPV	8–9 weeks	12 weeks	16 weeks (in certain situations)	1 year later	One immunisation, boost every 3 years or more	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	Two immunisations 2–4 weeks apart, boost annually	Recovered cats should be vaccinated
	FCV	8–9 weeks	12 weeks	16 weeks (if high risk or expected high MDA)	1 year later	Two immunisations 2–4 weeks apart, boost annually	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	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. Single immunisation	–	–	1 year later	Some vaccines’ DOI is 3 years, but legislation may require annual boosters	Vaccinate in endemic areas only – refer to national and regional legislation for booster frequency
Non-core	FCoV/FIP	Not before 16 weeks	3 weeks later	–	1 year later	One immunisation, boost annually	Intranasal vaccine against FIP is available in some European countries. Only vaccinate seronegative cats
	<i>Chlamydia felis</i>	8–9 weeks	12 weeks	–	1 year later	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. Single immunisation	–	–	1 year later	One immunisation in high-density populations only, boost annually	Do not use MLV in kittens <4 weeks of age. 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

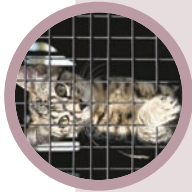
See page 583 for explanation of vaccine categories (core, circumstantial and non-core) and abbreviations. Image courtesy of [www.sureflap.co.uk](http://www.sureflap.co.uk)



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

Vaccination of indoor cats								
Vaccine/ disease agent	Kitten vaccination course			Adult cat		Comments		
	PV1	Primary PV2	PV3 Final PV/ first booster	Vaccinated <3 years ago	Vaccinated >3 years ago		Unvaccinated / no vaccine history	
<b>Core</b>	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, then every 3 years or more	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	16 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 with different FCV vaccine strains
<b>CS</b>	Rabies virus	12-16 weeks. Single immunisation	-	-	1 year later	One immunisation. Some vaccines' DOI is 3 years, but legislation may require annual boosters	One immunisation	Only vaccinate if required by local legislation and refer to national and regional legislation for booster frequency
<b>Non-core</b>	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	One immunisation, boost annually	Two immunisations, boost annually	Intranasal vaccine against FIP is available in some European countries. Only vaccinate seronegative cats
	<i>Chlamydia felis</i>	8-9 weeks	12 weeks	-	1 year later	One immunisation, boost 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	One immunisation in high-density populations only, boost annually	One immunisation in high-density populations only, boost annually	Do not use MLV in kittens <4 weeks of age. Consider vaccination where there is contact with dogs. Vaccine available in some European countries. Vaccinate in high-density areas where <i>Bordetella</i> is confirmed

See page 583 for explanation of vaccine categories (core, CS [circumstantial] and non-core) and abbreviations. \*Boost annually if using a boarding cattery. Image ©/Stockphoto.com/Kevin Russ



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

### Vaccination of rescue shelter cats

Vaccine/ disease agent	Kitten Primary vaccination course			Adult cat		Comments			
	PV1	PV2	PV3	Final PV/ first booster	Vaccinated <3 years ago		Vaccinated >3 years ago	Unvaccinated/ no vaccination history	
<b>Core</b>	FPV	6 weeks (4 weeks if needed)	3-4 weeks later until 16 weeks	3-4 weeks later until 16 weeks	1 year later	Booster vaccinations at 3 year intervals	One immunisation, then at 3 year intervals	One immunisation, boost 1 year later, then at 3 year intervals	Do not use MLV in kittens <4 weeks of age
	FHV	6 weeks (4 weeks if needed)	3-4 weeks later	3-4 weeks later until 12 weeks	1 year later	One immunisation, boost annually	Two immunisations 2-4 weeks apart, boost 1 year later	Two immunisations 2-4 weeks apart, boost 1 year later	Vaccinate new cats as soon as possible
	FCV	6 weeks (4 weeks if needed)	3-4 weeks later	3-4 weeks later until 16 weeks	1 year later	One immunisation, boost annually	Two immunisations 2-4 weeks apart, boost 1 year later	Two immunisations 2-4 weeks apart, boost 1 year later	Vaccinate new cats as soon as possible. Due to high antigenic variation of strains, recovered cats should be vaccinated
<b>CS</b>	Rabies virus	12-16 weeks. Single immunisation	-	-	1 year later	Some vaccines' DOI is 3 years, but legislation may require annual boosters	One immunisation, boost 1 year later	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
<b>Non-core</b>	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	Quarantine and test before two immunisations 2-4 weeks apart, boost 1 year later	Not needed if no contact with other cats
	FCoV/FIP	First immunisation from 16 weeks	3 weeks later	-	1 year later	-	Two immunisations 2-4 weeks apart, boost 1 year later	Two immunisations 2-4 weeks apart, boost 1 year later	Intranasal vaccine against FIP is available in some European countries. Only vaccinate seronegative cats
	<i>Chlamydia felis</i>	8-9 weeks	12 weeks	-	1 year later	One immunisation, boost annually	Two immunisations 2-4 weeks apart, boost 1 year later	Two immunisations 2-4 weeks apart, boost 1 year later	Where cats are kept close together long term, vaccinate regularly
<i>Bordetella bronchiseptica</i>	One immunisation in cats 1 month or older	-	-	-	1 year later	One immunisation, boost annually	One immunisation, boost annually	One immunisation, 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 583 for explanation of vaccine categories (core, CS [circumstantial] and non-core) and abbreviations. Image ©/Stockphoto.com/Dwight Smith



## BREEDING CATTERIES (cats in any multi-cat environment used for breeding purposes)

Vaccination of cats in a breeding cattery							
Vaccine/ disease agent	Kitten vaccination course			Breeding cats	Comments		
	PV1	Primary PV2	PV3 Final PV/ first booster				
Core	FPV	8–9 weeks	12 weeks	16–20 weeks	1 year later	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	1 year later	Recovered cats should be vaccinated. Consider earlier vaccination in litters from queens that have had infected litters previously. In special circumstances kittens can be vaccinated from 4–6 weeks of age, then every 2 weeks until 12 weeks of age
	FCV	8–9 weeks	12 weeks	16 weeks	1 year later	1 year later	Recovered cats should be vaccinated. In special circumstances kittens can be vaccinated from 4–6 weeks of age, then every 2 weeks until 12 weeks of age
CS	Rabies virus	12–16 weeks. Single immunisation	–	–	1 year later	1 year later	Only vaccinate if required by local legislation
Non-core	FeLV	8–9 weeks	12 weeks	–	1 year later	1 year later	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	1 year later	Intranasal vaccine against FIP is available in some European countries. Only vaccinate seronegative cats
	<i>Chlamydia felis</i> <i>Bordetella bronchiseptica</i>	8–9 weeks One immunisation in cats 1 month or older	12 weeks –	–	1 year later 1 year later	1 year later 1 year later	– 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 583 for explanation of vaccine categories (core, CS [circumstantial] and non-core) and abbreviations. Image ©iStockphoto.com/oksun70