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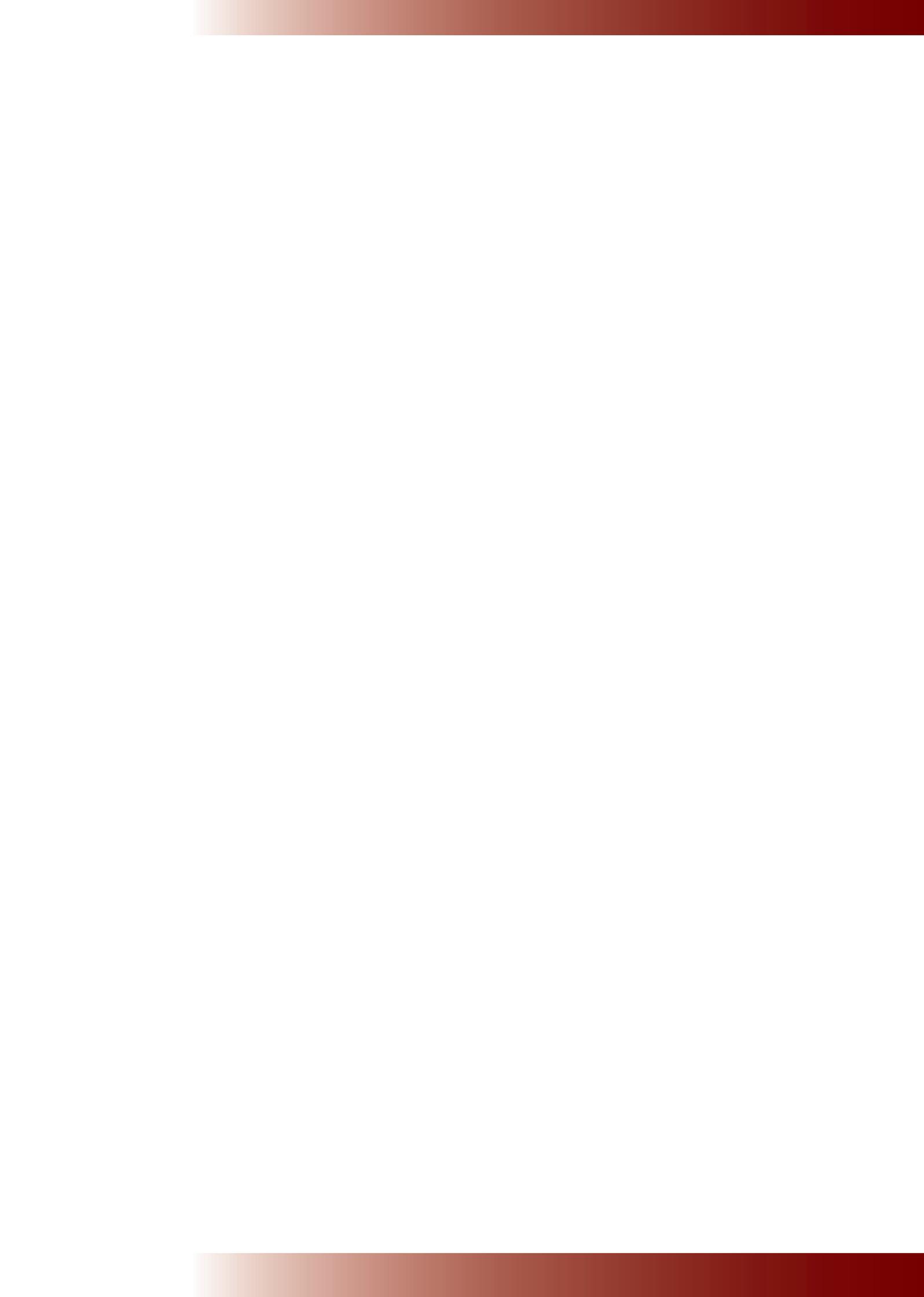
# GERMAN PINSCHER

## BREED-SPECIFIC BREEDING STRATEGY

### for 2017-2021

*This is a free translation without Finnish Kennel Club's approval,  
slight changes has been made from the original Finnish version.*





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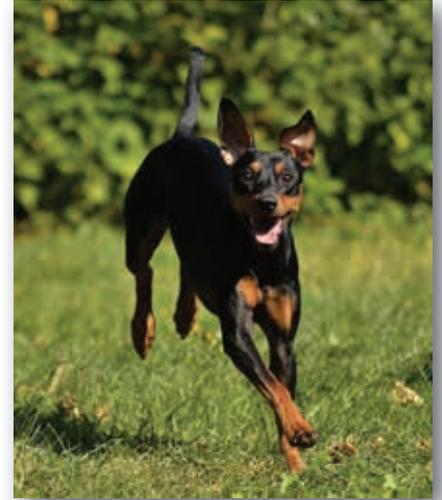
# 1. SUMMARY

## DESCRIPTION OF THE BREED AND ORIGINAL PURPOSE

German Pinscher is a companion for family living and hobbies for active people. According to FCI Breed standard its functional purpose is to be guarding and companion dog.

German Pinscher's original purpose as a ratter and a guard dog shows in its character and temperament even today. Pinscher is not very interested pleasing its owner, because it was bred to work independently preventing vermin, whereas traditional herding breeds were bred to work with their human gathering and herding livestock.

German Pinscher is relatively healthy and long living breed considering its small population and gene pool. German Pinscher's appearance is strong yet elegant and square built. GP's approved colours are solid red in its different shades and black&tan.



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## STATUS OF THE BREED AND BREEDING GOALS

### POPULATION STRUCTURE AND GENE POOL

GP population is small worldwide and dogs are related to each other. During the latest years, active importing and exporting between different countries has lowered the COI (Coefficient Of Inbreeding) in different countries, but it is difficult to find dogs that would have truly different pedigrees. Using popular sires in breeding should be avoided strongly. Breeders are doing co-operation over country borders and breeding material is being exchanged quite often. Along with taking care of diversity, also breed's health and temperament has to be taken care of to keep the breed able to compete with similar breeds for people who are looking for a companion dog.

### TEMPERAMENT & BEHAVIOR AND UTILITY FEATURES

As said, German Pinscher is a companion dog and it originally was a ratter and a guard. Pinscher needs activities, exercise and training for basic good manners and obedience. Pinscher is an intelligent yet challenging breed for many activities and hobbies. For example agility and rally-obedience are very suitable hobbies with Pinscher, as it is energetic and agile. As a clever breed, Pinscher is quick to learn, but it requires some effort and patience from its owner to find the right motivator for their dog, because Pinscher is not so interested in pleasing its owner.

German Pinscher's temperaments are tested and screened quite much in Nordic countries. There are some weakness in the breed's temperament, such as sensitivity to noises and to slippery floors, and in some extents also overall shyness. Much work with temperament is still required, even though the breed has come a long way from the past, when there were more biting and aggressive dogs. Today's main problems are elsewhere.

### HEALTH AND REPRODUCTION

German Pinscher is relatively healthy breed, which has some breed specific problems. With Finnish Kennel Club's PEVI-SA-program Pinscher's eye- and hip situation is constantly screened. Young pinschers usually suffer from post vaccinal reactions after first distemper shot, and eartip vasculitis (ear splitting).

Small genepool exposes the breed to new health problems. Finnish Pinscher people and Finnish Pinscher Club are well enlightened and take care of the breed: There is a Crossbreeding program and lately the Breed Club has started a project for screening the breed's diversity.

Usually Pinschers reproduce naturally and problems are rare. Male dog's libido is mostly normal, and breed's natural structure enables easy deliveries of litters.

### EXTERIOR

Finnish Pinscher breeding constantly produces dogs that are internationally high quality. Dogs are strong built but also elegant. Finnish Breed Club does not require breeding dogs being merited showdogs, only a VG at a show or an breeding evaluation to be done, so the Breed Club is able to screen the development.

One of the biggest exterior problem in Finland and also in other countries are insufficient front structure; short, straight upper arms and problems in movement caused by it, and also insufficient forechests.

## IMPORTANT RECOMMENDATIONS AND CRITERIA FOR BREEDING DOGS

During years 2012-2016 GP's in Finland have PEVISA-program that requires Hip x-ray and eye examination to be done before breeding. Eye examination is valid for 8 months. There is no prohibitions to breeding, only requirement to have these examinations done.

Finnish Pinscher Club has it's own criteria for litters. Criteria highlights the importance of diversity with following regulations that breeding combinations must always fulfill to get to the Club's puppy list:

- COI of the combination must be under 6,25% with 6 generations, and the 6-generation pedigree must be known at least 90%.
- Repeat litters from same combination are not allowed.
- Bitch can have 3 litters and male can have 4 litters within Finland during it's lifetime.
- Breeding dogs must be physically healthy. Shy or aggressive dogs are not allowed to be used for breeding.

There are also some additional requirements from which breeder can make an exception once per dog.

All Current standing criteria can be seen on the Club's website.

## 2. BREED HISTORY

### ORIGINS AND PURPOSE

Presumably German Pinschers originated from ancient swamp dog, and it is a German breed. Place of it's origin is said to be Württemberg in Southern Germany, but the breed was bred also in other parts of the country. Pinscher was known as a ratter and stable dog. The first very detailed breed standard of the breed was published as early as year 1881. Originally Pinscher and Schnauzer were the same breed, Schnauzer was known as wire-coated Pinscher.

### DEVELOPMENT TO CURRENT FORM

During WW2 and after it Pinscher was near extinction. During years 1950-1957 there weren't any new Pinscher registrations in Germany. Werner Jung, the Breed Warden of PSK (Breed Club of Germany) managed to save the breed. He found two German Pinscher bitches and three miniature pinscher males, and created a 60 dog base from those five dogs, from where other breeders could carry on.



*Pinschers from kennel Geranium, year 1903*

In Switzerland there were also some pepper&salt coloured Pinschers, and those as well as crossbreeding between schnauzers and pinschers were used for breeding mainly in France. These dogs were integrated into the Pinscher population created by Werner Jung.

First FCI approved Breed standard is from year 1955.

### RELATED BREEDS

Originally Schnauzers were Wire coated Pinschers, but they were divided to their own breed. As seen from above, Miniature Pinschers played a big part of reconstruction of German Pinscher after WW2.

### DIVIDED BLOODLINES

There is no divided bloodlines in German Pinschers. To date there has been two crossbreedings done to bring more diversity to the breed: Year 1990 in Germany, dobermann bitch Evi v.d. Edeltanne was bred to German Pinscher male Fips v Nordkristall, and in 1998 in Finland Pinscher bitch Yarracitta Ipanapapanetta was bred to P&S Schnauzer Balthasar v Achterplätzchen. Also, in year 2010 P&S Schnauzer bitch Ankor Kurazh Eparhia was bred to Pinscher male Ceriinan Gilbert, but at least to date none from that litter has been used for breeding. The first two crossbreedings have developed to many generation lines and integrated well into the German Pinscher population.

## FIRST GERMAN PINSCHERS IN FINLAND, DEVELOPMENT OF THE POPULATION

Two "Rehpinscher's" were marked to Finnish Kennel Club's breed books in year 1908. First time the breed Pinscher is mentioned in FKK's breed books was in 1913, breed book number IX.

Next time German Pinscher, "Tysk Pinscher", was mentioned in breed book number XIII, during years 1922-1924, when four Pinschers were registered.

After WW2 it was very difficult to find German Pinscher from Germany. Dr. Kurkiala managed to find Pinschers after lots of efforts, when he contacted Werner Jung. With Mr. Jung's help, black&tan male Falk vom Stein was imported to Finland.

Falk was very much used for breeding because there were not much to choose from. Falk sired 50 puppies.

Because it was early days for breeding work in Finland, there was need for more imports. Next imports after Falk were Virra v.d. Birkenheide (1964) and Figaro, Fara and Fay v.d. Birkenheide. They all came also from Germany. Fay's bloodline is still very influential to Finnish population through her daughter Julia, who became the foundation for kennel Of Leijliden.

Red male Illo vom haingraben was imported in year 1969 from Germany. Because there still was very little material for breeding, Illo became very influential male. Illo sired 16 litters.

Still today Illo can be found from every Finnish-lined Pinscher's pedigree. Before he was imported to Finland, he was used for breeding in Germany.

In year 1975 red female, Ceda vom Haingraben was imported from Germany. Ceda became the foundation of kennel Ceriinan. Ceda gave birth to five litters, from which two were sired by Of Leijliden Norman (son of Julia, mentioned above). Another of these litter sired by Norman became very important in Finnish Pinscher breeding, Ceriinan I-litter. Also Ceda's J-litter's only puppy Ceriinan Jidi became very influential male; his three daughters took his heritage forward.



*French import from 1990's, Inox de la Capelliere*



*Figaro von der Birkenheide*

Red male Lord vom Haingraben was imported from Germany in 1979. He sired 6 litter in Finland. In 1980 again from Germany, were imported three siblings, bitches Assi and Ancora and male Asko vom Warturm. From these three, Asko made biggest influence to Finnish pedigrees through her daughter Asta.

In 1990's many dogs were imported and some of them were used for breeding. Lack of proper health checking, for example not doing the eye examinations, delayed importing.

From 2000's forward importing and exporting between different countries has been quite active. Not many of the countries have pure "own lines". Pedigrees has been mixed together quite much.

### 3. BREED CLUB ORGANISATION AND HISTORY

#### PRESENT BREED CLUB AND PAST ORGANIZATIONS

Pinsirit ry, Finnish Pinscher Club has been officially established in 16.6.1981. After closing down the Finnish Schnauzer-Pinscher Central Organization in year 2012, Pinsirit ry has been the parent club for German Pinschers. Pinsirit ry is a member of Finnish Kennel Club, Finnish Dog Breeders Association and Finnish Agility Society.



#### BREED CLUB'S MEMBERS

Year 2015 was 34th year of activity for Pinsirit ry, and also fourth year as a parent club. In end of year 2014 insert ry had 245 members.

There has been slight changes in amount of members, but it consistently stays around 250 members.

#### BREEDING COMMITTEE AND IT'S RESPONSIBILITIES

Breeding committee consists 4 to 7 actual members, and it can have maximum of 3 auditors at a time. At least one actual member must have the competency of breeding advisor (educated and approved by Finnish Kennel Club). Breeding committee can invite other people from outside of the committee to work with it's projects.

Breeding committee's responsibilities are gathering and sharing information about breeding, updating the standing criteria for breeding combinations and litters and when needed, organising breeder education seminars, judge education, and arranging yearly temperament tests. Also updating JTO and following breeding results.

*Finnish German Pinscher Club arranges different activities to it's members*



Annual mental tests



Unofficial Match Shows for all breeds



Annual Specialty Show



Agility training & Annual Agility Championships for the breed



Dobo-courses

*..and much more.*

## 4. THE BREED TODAY

### 4.1. POPULATION STRUCTURE

#### 4.1.1 POPULATION STRUCTURE AND INBREEDING COEFFICIENT

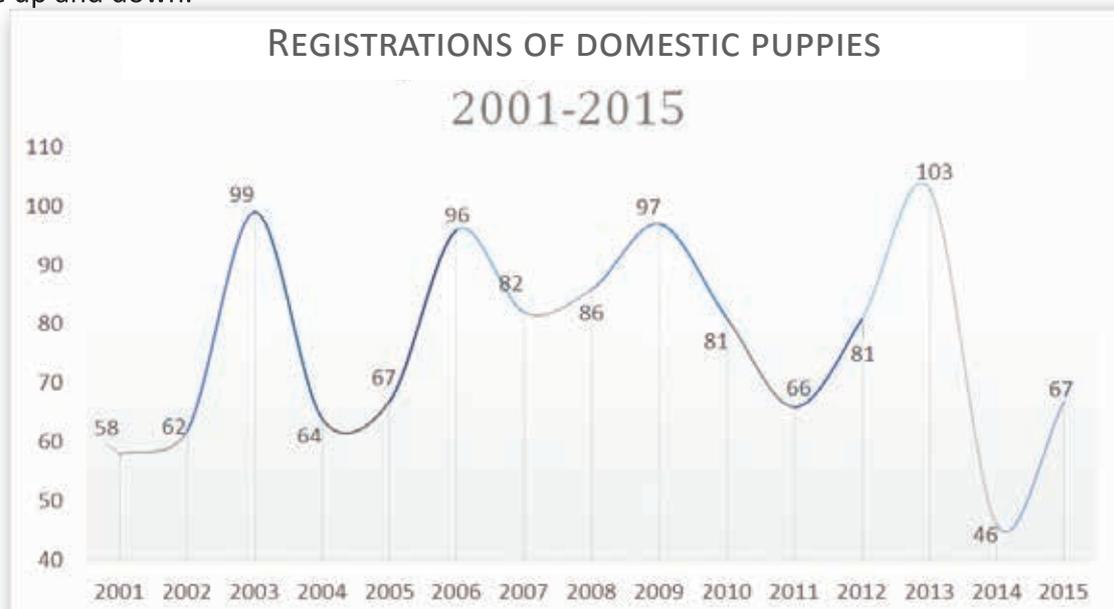
ANNUAL STATISTICS - REGISTRATIONS						
	2015	2014	2013	2012	2011	2010
Offspring (domestic)	67	46	103	81	66	81
Imports	6	6	3	6	9	10
Registrations altogether	73	52	106	87	75	91
Litters	10	8	17	13	10	16
Size of litter	6,7	5,8	6,1	6,2	6,6	5,1
Breeders	9	7	13	10	8	12
Different sires used for breeding						
- all	8	8	15	12	7	15
- domestic	5	3	9	5	3	12
- imports	1	4	2	3	2	3
- foreign	2	1	4	4	2	0
- average breeding age	3 y 4 mo	4 y 7 mo	3 y 11 mo	3 y 10 mo	5 y 4 mo	4 y 6 mo
Different dams used in breeding						
- all	10	8	17	13	9	16
- domestic	7	5	12	6	7	11
- imports	3	3	5	7	2	5
- average breeding age	4 y	3 y 5 mo	4 y 1 mo	3 y 7 mo	3 y 8 mo	3 y 2 mo
Grandsires	17	15	26	22	16	26
Granddams	17	15	29	24	17	26
Inbreeding *	1,90%	0,91%	2,02%	2,78%	1,58%	2,00%
Ancestor loss *	0,86	0,87	0,82	0,83	0,81	0,82

FKC DogNet database 12.1.2016; COI & ALC from DogsFiles-data

#### REGISTRATIONS IN FINLAND

One goal of JTO for years 2007-2011 was to solidify annual registrations to 80 puppies. Calculated from last 15 years (2001-2015) the mean average was 77 puppies per year, and during last 5 years mean average was almost 79 puppies per year, so the set goal has been fulfilled quite well.

It is normal that after active breeding year is usually followed by bit slower year, so registration amounts have always gone up and down.



FKC DogNet data - registration statistics 13.1.2016

## BREED'S DIVIDING TO DIFFERENT LINES

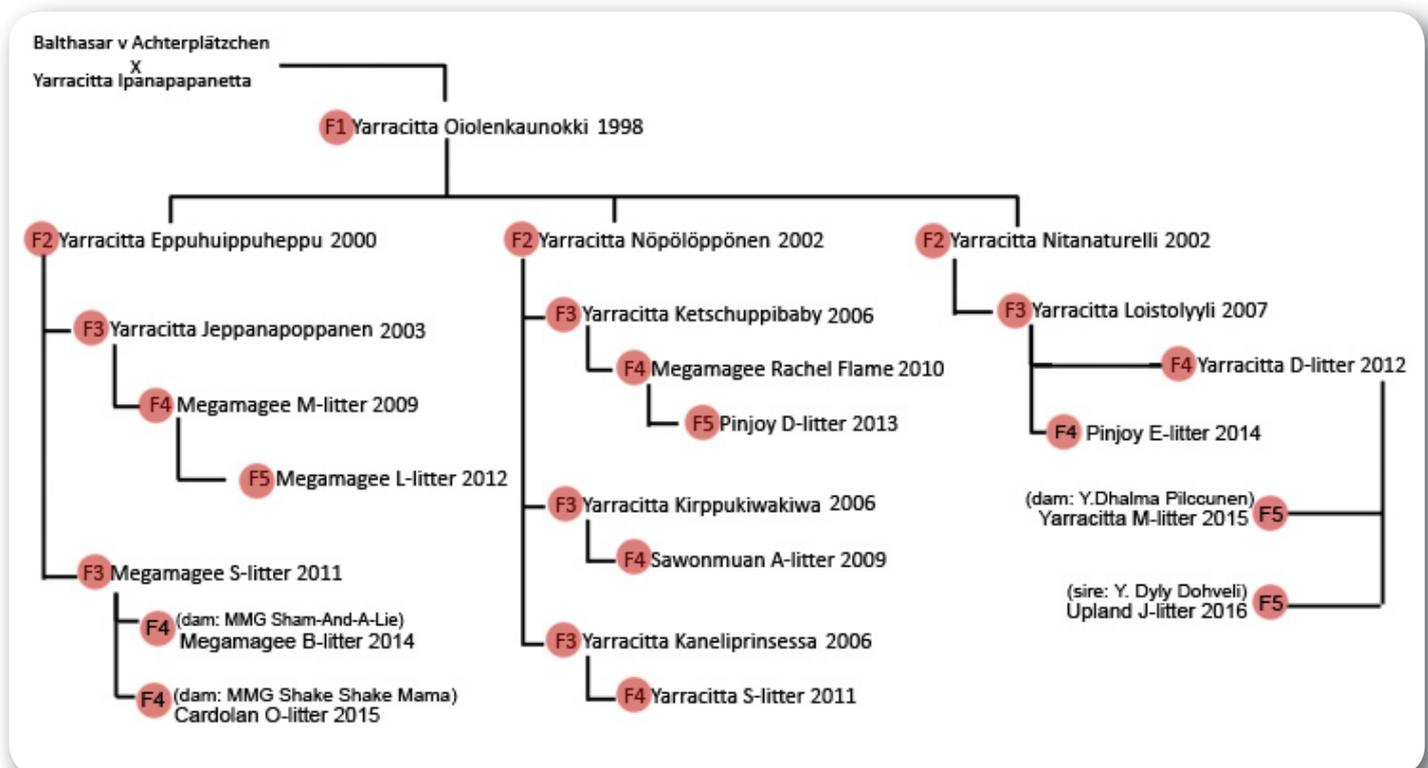
The breed has not divided to different lines, for example to working- and show line. Because of very narrow genepool it is more typical that for years the pedigrees have been mixed together and all dogs are more or less related to each other. Therefore would be important to screen also the COI of long pedigrees and also keep an eye on the Ancestor loss coefficient.

Dividing to lines between different countries can be viewed through the foundation dogs; because of the small gene pool, every country has certain dogs that are strongly presented in the pedigrees. Ostensibly the COI of short pedigrees can be low, but when viewed with 8 to 10 generations, certain dogs usually recur strongly.

## SCHNAUZER CROSSBREEDING PROJECT

During years 1998-2015 the Schnauzer crossbreeding project has proceeded quite much. The foundation dogs of the crossbreeding line are P&S Schnauzer male Balthasar v Achterplätzchen and German Pinscher female Yarracitta Ipanapapanetta.

Diagram of the crossbreeding line:



kennel Megamagee website

Dogs from the crossbred line has been exported to other countries:

- 2 bitches from Yarracitta E-litter, year 2000 to USA, not bred
- male from Megamagee M- litter, year 2009 to Germany, 4 litters
- male from Sawonmuan A-litter, year 2009 to Sweden, 1 litter
- female from Yarracitta S-litter, year 2011 to sweden, not bred
- male from Megamagee L-litter, year 2012 to Norway, not bred yet
- female from Megamagee L-litter, year 2012 to Estonia, not bred
- male from Megamagee B-litter, year 2014 to Germany, not bred yet
- puppy from Cardolan O-litter, year 2015, to Estonia, not bred yet
- male from Megamagee S-litter, born in 2011 has been used in breeding in Netherlands in year 2015, 2 puppies born



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In year 2010 kennel Yarracitta bred a F1-generation litter from P&S Schnauzer dam and b&t Pinscher sire. 5 puppies were born. To date none of these dogs has been used for breeding.

One of the crossbreeding combination permissions from Finnish Kennel Club is still left to use.

## ANNUAL AMOUNTS OF IMPORTS

Importing and exporting has been very active during the last 15 years. Between years 2001-2015 there has been 70 registered imported German Pinschers in Finland. Most of them are imported from Sweden, but there are also dogs from USA, Estonia, Russia, Austria, Germany, Norway, Czech Republic, Latvia and Poland.

For comparison, between years 1964-2000 there was only 46 registered imports.

In year 2009 nine imports were registered to Finland and in year 2010 ten imports, but usually annually around 3-5 imports are being registered. Nowadays some dogs are imported as pets too, not only as breeding prospects.

Amount of exports is more difficult to evaluate as exported dogs are not marked to FKC's DogNet database. However, Finnish bred dogs are wanted in other countries and puppies are exported as well as breeding prospects and pets.

## AVERAGE AGE OF BREEDING DOGS

YEAR	MALES	FEMALES
2015	3 y 4 mo	4 y
2014	4 y 7 mo	3 y 5 mo
2013	3 y 11 mo	4 y 1 mo
2012	3 y 10 mo	3 y 7 mo
2011	5 y 4 mo	3 y 8 mo
2010	4 y 6 mo	3 y 2 mo
2009	3 y 9 mo	3 y 9 mo
2008	2 y 8 mo	3 y 11 mo
2007	3 y 9 mo	2 y 9 mo
2006	3 y 6 mo	3 y
2005	3 y 10 mo	3 y 10 mo
2004	3 y 11 mo	3 y 5 mo
2003	3 y 8 mo	4 y 5 mo
2002	4 y 7 mo	3 y 10 mo
2001	3 y 9 mo	3 y 2 mo

*DogNet, breeding statistics, Jan. 2016*

The average age of breeding dogs stays near 4 years with both sexes, so calculated four-year generation interval suits German Pinschers well.

However, considering the fact that males are able to reproduce almost half longer than females, males should be used at older age. Then there would be more information about their health, temperament and characteristics.

## ABOUT INBREEDING COEFFICIENT (COI)

*In general terms, inbreeding is where the sire and dam have ancestors in common. The level of inbreeding is simply how closely related these relatives are across the sire and dam lines.*

*The standard (mathematical) measure for the level of inbreeding is the Inbreeding Co-efficient. It indicates the probability (between 0% and 100%) that genes at a randomly chosen location in the DNA are identical by descent. The technique assumes that there are 2 forms of a gene and that each form has an equal chance to be passed on to the next generation.*

*One limitation on calculating inbreeding coefficients is the depth of pedigrees available. Animals with a shallow pedigree may have a low inbreeding coefficient simply because their related ancestors are not on the database.*

*[http://abri.une.edu.au/online/pages/inbreeding\\_coefficient\\_help.htm](http://abri.une.edu.au/online/pages/inbreeding_coefficient_help.htm)*

## ANCESTOR LOSS COEFFICIENT (AVK OR ALC)

*The ancestor loss coefficient is a measurement for the number of different ancestors in both the paternal and the maternal line. It is calculated by dividing the number of different ancestors by the total number of ancestors over X generations. (According to this calculation method the coefficient would have to be called strictly speaking "ancestor variety coefficient", because with its maximum value of 100% the ancestor loss is zero.)*

*The ALC is only meaningful together with the indication of the number of regarded generations. With increasing number of generations the ALC declines usually very fast. This is caused by the fact that the distance of the ancestors counted is not taken into account.*

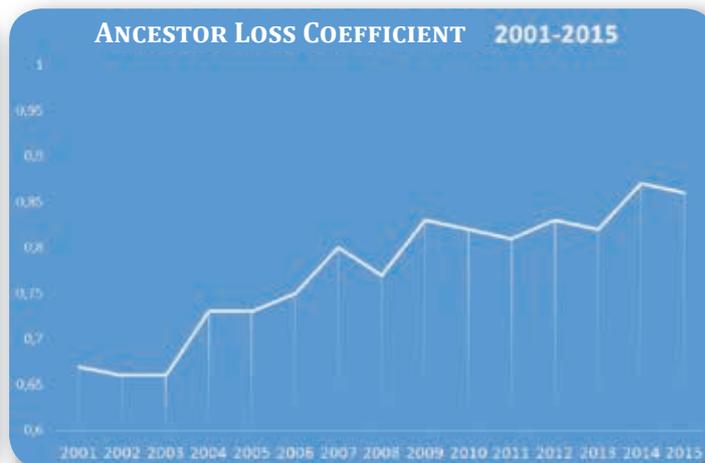
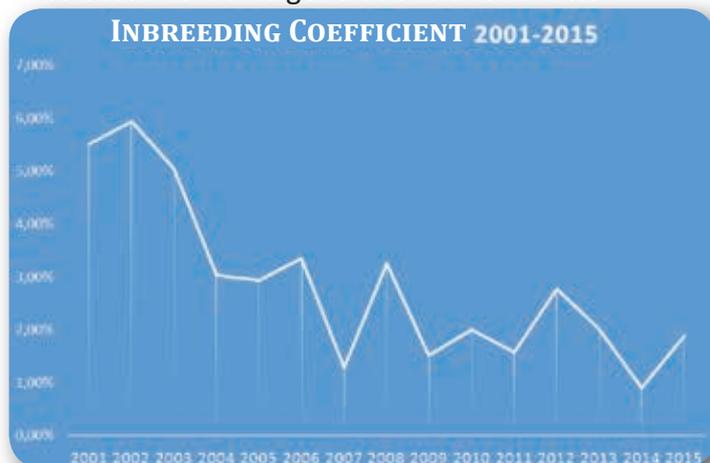
*The advantage of the ALC is that it (with limited precision) permits to estimate the variety of the gene pool of an animal.*

*<http://www.barnim.net/database/genetik.html?language=en>*

In German Pinschers the Ancestor Loss Coefficient is essential with COI because of the small gene pool.

## BREED'S YEARLY AVERAGE INBREEDING COEFFICIENT

Below are shown the breed's average of COI (Inbreeding coefficient) and ALC (Ancestor loss coefficient), calculated with full 6 generations of each litter.



*DogsFiles-data, Jan. 2016*

The average COI of Finnish population has been decreasing. From year 2009 the average COI of born litters has been under 3%. Correspondingly the ALC has been increasing. Development is good.

### 4.1.2 GENE POOL

ANNUAL STATISTICS - GENE POOL											
PER GENERATION (4years)	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
- litters		36				52				57	
- different sires used for breeding		28				36				43	
- different dams used for breeding		32				44				44	
- ratio of sires/dams		0,88				0,82				0,98	
- effective population		41 (57%)				55 (53%)				58 (51%)	
- % of males used for breeding		4%				8%				14%	
- % of bitches used for breeding		1%				19%				25%	

*DogNet, breeding statistics, annual statistics, Feb. 2016*

*Note: Latest generation (2013-2016) is missing numbers from year 2016.*

For some reason during generation 2009-2012 only quite few males have been used compared to bitches. This shows up as over 10% of decrease in ratio of sires/dams. Different males should be preferred in breeding, and breeders should avoid using males multiple times.

### PERCENTAGE OF DOGS AND BITCHES THAT HAS BEEN USED FOR BREEDING FROM ALL BORN INDIVIDUALS

The percentage of used males is decreasing. During years 1996-2005 usually around 20% of the born males has been used for breeding, and after year 2006 the percentage has been clearly under 20%. Although males that are born after 2006 are still in active breeding age.

The percentage of used females is also decreasing. 1990's the percentage was around 30%, and after year 2006 it has decreased down to bit over 20%.

One reason for decreasing numbers is of course the growth of the whole population.

	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
- % of possible males used for breeding	4%	6%	8%	8%	9%	12%	12%	14%	18%	19%
- % of possible bitches used for breeding	4%	9%	14%	19%	21%	21%	23%	25%	24%	24%
	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996
- % of possible males used for breeding	22%	22%	20%	17%	17%	18%	19%	22%	22%	20%
- % of possible bitches used for breeding	24%	24%	22%	22%	23%	20%	25%	28%	31%	36%

*DogNet, breeding statistics, annual statistics, Jan. 2016*

## RATIO OF SIRES/DAMS

The ratio of sires to dams, meaning amount of sires divided by amount of dams, shows how close the amount of sires used for breeding are to amount of females used to breeding. When the ratio is 1, there are as many sires used as dams and genetic variation is preserved better than when there are only few sires being used.

GENERATION	S/D-RATIO	GENERATION	S/D-RATIO
1965-68	0,33	1989-92	0,86
1969-72	0,57	1993-96	0,83
1973-76	0,82	1997-2000	1
1977-80	0,88	2001-04	0,91
1981-84	0,79	2005-08	0,97
1985-88	1	2009-12	0,81

In the latest generation the ratio of s/d has decreased significantly compared to three generations before it. Broader scale of males could and should be used for breeding.

## EFFECTIVE POPULATION SIZE

The effective population size is the number of individuals that an idealised population would need to have, in order to behave in a similar manner to the real population of interest.

In some simple cases, this effective population size is equal to the number of breeding individuals in the real population.

Idealised populations are based on unrealistic simplifications such as random mating, simultaneous birth of each new generation, constant population size, and equal numbers of children per parent.

The census population size (N) of a real population is usually larger than the effective population size.

[https://en.wikipedia.org/wiki/Effective\\_population\\_size](https://en.wikipedia.org/wiki/Effective_population_size)

Finnish Kennel Club's DogNet evaluates the effective population size with following formula:

$$N_e = \frac{4 * N_u * N_n}{2 * N_u + N_n}$$

u = males used for breeding and n = females used in breeding per generation. This formula still gives an over-

positive estimation of the effective population size, because it predicates that all males and females are not related to each other, and that they have similar amounts of offspring.

## EFFECTIVE POPULATION SIZE 1965-2012

Generation	males	females	Effective size
1965-68	4	12	9
1969-72	19	33	35
1973-76	14	17	21
1977-80	14	16	20
1981-84	19	24	29
1985-88	17	16	20
1989-92	25	29	36
1993-96	25	30	37
1997-2000	32	31	43
2001-04	34	37	47
2005-08	43	44	58
2009-12	36	44	54

Calculated from each generation's population sizes with formula  $4 * N_u * N_n / (2 * N_u + N_n)$

Effective population size has been constantly growing until the latest generation. Result of the generation 2009-2012 is surprising, as importing breeding stock and using foreign males has become easier.



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## MOST USED 20 MALES DURING LAST 10 YEARS

#	MALE	BORN	DURING COMPILATION OF STATISTICS				IN 2ND GENERATION		TOTAL	
			LITTERS	PUPPIES	%-VALUE	CUMULATIVE %	LITTERS	PUPPIES	LITTERS	PUPPIES
1	SINI-MININ DON HUAN	2005	5	39	4,84 %	5 %	10	75	5	39
2	LILLA ENEBYS HARRY	imp SWE 2007	7	29	3,60 %	8 %	4	15	7	29
3	SINI-MININ BIG BOY	2003	4	26	3,23 %	12 %	0	0	4	26
4	PACCO VOM AWARENRING	imp AUT 2006	4	25	3,11 %	15 %	2	8	4	25
5	SINI-MININ MAFIOSO	2009	4	25	3,11 %	18 %	1	7	4	25
6	CAMARO CAMUS DW HARMONY STAR	imp CZ 2006	4	25	3,11 %	21 %	1	5	4	25
7	XITAMIZ VOLCANO	imp SWE 2008	3	19	2,36 %	23 %			3	19
8	CERIINAN IVAR	2005	3	19	2,36 %	26 %	3	12	3	19
9	CERIINAN GILBERT	2004	4	19	2,36 %	28 %	3	14	4	19
10	CLEFELL'S OSIRIS	2007	3	18	2,24 %	30 %	5	15	3	18
11	LEGACY'S MIDAS TOUCH FOR CLEFELL'S	imp US 2008	2	17	2,11 %	32 %	1	7	2	17
12	CLEFELL'S GENTLEMAN	2001	2	16	1,99 %	34 %	6	44	3	23
13	CERIINAN ARNOLD	2001	2	16	1,99 %	36 %	7	33	3	23
14	CHERPIN MASSIMO	2003	2	15	1,86 %	38 %	0	0	2	15
15	RIVENDELLS MIDNIGHT EAGLE	imp SWE 2010	2	15	1,86 %	40 %			2	15
16	KARL DRYM'S DREAM KING BLACK	imp CZ 2012	2	15	1,86 %	42 %			2	15
17	CERIINAN PRIMAS	2009	2	15	1,86 %	44 %			2	15
18	ARON ARMING HARMONY STAR	imp CZ 2003	2	14	1,74 %	46 %	9	52	5	22
19	XITAMIZ OTIZ	*SWE 2004	2	12	1,49 %	47 %	2	5	2	12
20	ALBION BEMUS	imp POL 2005	2	12	1,49 %	49 %	1	6	2	12

*DogNet: Sires used in breeding, reg. years 06-15*

21 males have produced 50% of all puppies of the time span. Two of the sires have more litters than is allowed in Pinsert ry's breeding criteria (limit is 4 litters within Finland). Half of the most used sires are either imports (imp) or foreign (\*) males. It can be seen from the table above that Pinschers usually have big litters, so it would be essential to think if there is a real need of using a male that already has couple litters, or could there be for example a sibling or other close relative that would be more reasonable choice.

## MOST USED 20 BITCHES DURING LAST 10 YEARS

#	BITCH	BORN	DURING COMPILATION OF STATISTICS			IN 2ND GENERATION		TOTAL	
			LITTERS	PUPPIES	%-VALUE	LITTERS	PUPPIES	LITTERS	PUPPIES
1	SINI-MININ MOCCA	2009	3	30	3,73 %	4	20	3	30
2	LILLA ENEBYS DREAM FOR SINI-MININ	imp SWE 2006	3	24	2,98 %			3	24
3	RATTENJÄGER MINNE FÜR MEGAMAGEE	imp NOR 2007	2	21	2,61 %	2	14	2	21
4	DOGIWOGIN KISMET	2007	4	19	2,36 %			4	19
5	DOGIWOGIN CARKKI	2003	2	19	2,36 %	1	5	2	19
6	RIVENDELLS IMSA	imp SWE 2008	2	18	2,24 %			2	18
7	NORRSTRÖM NIKKA	imp SWE 2009	2	17	2,11 %			2	17
8	DOGIWOGIN DEAR DIVA	2004	2	17	2,11 %	0	0	2	17
9	OF LEIJLIDEN PIA PARANT	2004	2	16	1,99 %	2	13	2	16
10	IDACO'S IVETTE	2003	2	16	1,99 %	4	15	2	16
11	YARRACITTA LOISTOLYYLI	2007	2	15	1,86 %	1	8	2	15
12	RIVENDELLS CINIMINI	imp SWE 2005	2	15	1,86 %	1	4	2	15
13	XITAMIZ VEZPERA VIOLETTE	imp SWE 2008	2	15	1,86 %	1	7	2	15
14	CHERPIN RENEE	2006	2	14	1,74 %	2	11	2	14
15	SINI-MININ BISSE	2003	3	13	1,61 %	8	56	4	19
16	DOGIWOGIN CELLERI	2003	2	13	1,61 %	2	7	2	13
17	XCLUSIVE VOM CAMP ACHENSEE	imp AUT 2007	2	13	1,61 %	9	71	2	13
18	HICKSON JERTA OF JAFFA	imp SWE 2010	2	13	1,61 %			2	13
19	RIA'S SOMMERWIND'S LADY NELLY	imp GER 2011	2	12	1,49 %			2	12
20	ROWAN-ALLEY'S LADY OF THE LAKE	2002	2	12	1,49 %	0	0	2	12

*DogNet: Dams used in breeding, reg. years 06-15*

One bitch has more litters than is allowed in Pinsert ry's breeding criteria (limit is 3 litters). Overall bitches are being used more composedly than males, which is excellent. In small population, one bitch should not have many litters for future breeding, to avoid one individual's influence become too high when it's second generation offspring comes into breeding.

## RELATIONSHIPS BETWEEN MOST USED BREEDING DOGS

Closest relationships between sires:

- 1. *Sini-Minin Don Huan* is 3. *Sini-Minin Big Boy's* sister's son and sire to 5. *Sini-Minin Mafioso*.
- 6. *Camaro Camus Harmony Star* and 18. *Aron Arming Harmony Star* are from same dam.
- 12. *Clefell's Gentleman* is sire to 10. *Clefell's Osiris*.
- 17. *Ceriinan Primas* is 8. *Ceriinan Ivar's* sister's son.
- 9. *Ceriinan Gilbert* is 13. *Ceriinan Arnold's* sister's son.

Closest relationships between dams:

- 1. *Sini-Minin Mocca* is daughter of 17. *Xclusive v Camp Achensee* and also most used sire's (1. *Sini-Minin Don Huan*) daughter. Mocca is also sister to male 5. *Sini-Minin Mafioso*.
- 5. *Dogiwogin Carkki* and 16. *Dogiwogin Celleri* are full sisters.
- 10. *Idaco's Ivette* is full sister to 14. *Cherpin Renee's* sire and to 18. *Hickson Jerta Of Jaffa's* dam.

These relationships portray quite well the breed's small gene pool and how mixed together the pedigrees are, especially when quite many of the dogs mentioned are imports. Relationships further back in the pedigrees is not reasonable to write down as the list would be very confusing because of the reasons mentioned.

## AMOUNTS OF DOGS AND FEMALES USED FOR BREEDING

As can be seen from tables presented, the problem setting the limits of allowed litter amounts to breeding dogs is caused by small population. A male or female can become high-ranked in "most used dogs"-listing with only couple litters.

By screening the statistics, ideal litter amounts could be 3 litter for each male and 2 litters for each female. However, in practice these amounts are so low that breeders would feel it's too much limiting their freedom to plan their breeding programs. It would also put dogs that for some reason have left small litters to very unequal situation compared to dogs that have managed to leave bigger litters.

Males are allowed to have four (4) litters in their lifetime within Finland, and for females three (3) litters. Litters where parents have more than allowed amount of litters, are not taken into the Breed club's puppy list. However, this is not a rule that would prevent the litter to be registered. Most breeders have understood that there are real reasons for this rule and why The Breed club has seen a need for it.

The Breed club does not grant exceptions from it's standing breeding rules, because when that was the normal procedure, breeders usually felt that they have treated unequally from The Breed club's part. That's why the rules are solid and other exceptions cannot be made than what is set in the rules already.



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### 4.1.3 SUBPOPULATIONS OF THE BREED IN OTHER COUNTRIES

The Breed has become more popular in various countries during the last decade. Other big Pinscher countries along with Finland are the breed's homeland Germany and Sweden & USA. In the comparisons below we also took Norway, where the population is very small but genetically very similar to Finland and Sweden due to many imports from these countries.

In 2010's the breeding, importing and exporting between different countries has become very active. There are established populations in many countries and usually several breeders. These countries are at least Russia, Czech Republic, United Kingdom and Australia.

#### GERMANY

Germany is homeland of the German Pinscher. Registration amounts are more than doubled from year 2001 to year 2014. In year 2014 there were 39 breeders who bred at least one litter.

Many exports have been made from other countries to Germany lately. There is common that certain males have quite many litters, but also the population is bigger. In Germany the breeding rules are quite strict and not many "pet male" owners are interested validating their males for breeding. Breeding dogs must be Hip x-rayed, eye examined, their vWD- and dilute-status must be known, and the dogs must also pass a breeding test, "Zuchtzulassung" which consists from evaluating the structure and also temperament.

One male can easily have over 10 litters in Germany. Also German breeders usually use one bitch many times, and they don't have the breeding-terms system which is quite common in Nordic countries.

#### SWEDEN

Sweden has been one of the most active Pinscher countries for a long time. Registration amounts have been constantly growing through 2000's, and in 2010's there is seen similar effect as in Finnish registrations; after more active year there is usually a slower one etc.

Swedish subpopulation is very similar than in Finland. In 1980's there were many exports from Finland to Sweden. Could be said that Sweden has the most diverse population structure as they have imported dogs almost from every other country.

#### USA

The old US subpopulation was based mainly to French and to some German and Czech exports in 90's and 2000's. Lately breeders there have been importing dogs from all parts of Europe.

#### NORWAY

The Norwegian subpopulation is much smaller than in other Nordic countries, but the genetic base is very similar due to imports from Sweden and Finland. Interesting fact is that from all Norwegian Pinscher registrations between 2002-2012, as much as 31,9% percent were imports.

#### OTHER COUNTRIES

##### UNITED KINGDOM

"New wave" in British Pinscher breeding started in 2010's when couple dogs were exported from Finland. Quite quickly after that there became more interested breeders and litters are being born again every year. Actual statistical info from UK is not available.

##### RUSSIA

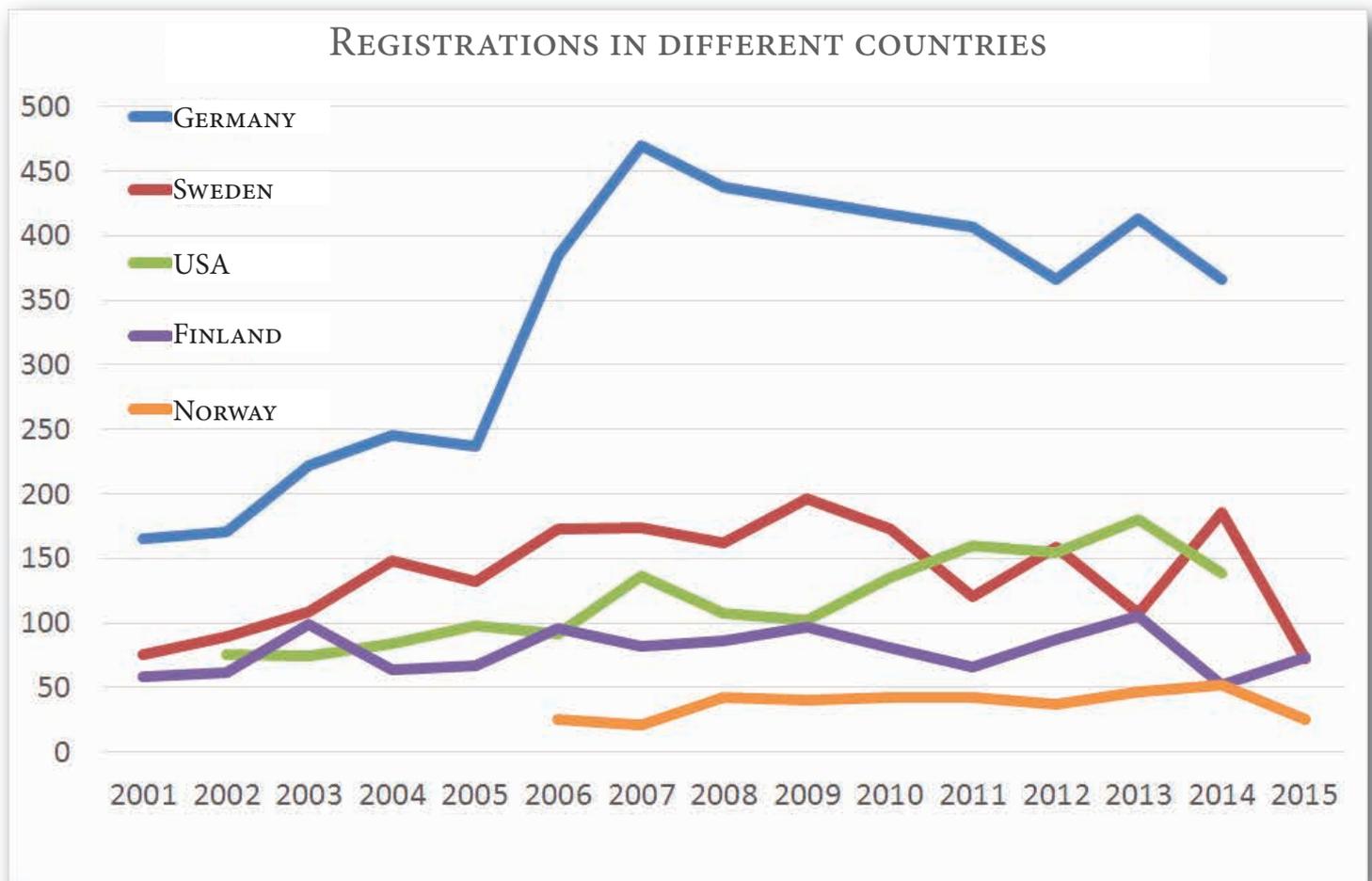
Russian Pinscher breeding has increased with quite a speed after year 2010. Many dogs from various countries has been exported there and Russian Pinschers are also being exported to other countries worldwide.

Statistics from Russian Kynological Federation is not available.



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Yearly registration amounts in Germany are significantly bigger than in other countries. During the best year 2007, as many as 470 German Pinschers were registered there.



#### 4.1.4 SUMMARY OF POPULATION STRUCTURE AND GENE POOL

##### GENE POOL

Same dogs are found in pedigrees all over the world. Increased importing and exporting has dissolved inbreeding coefficients, but also because of active breeding material exchange causes all subpopulations to become filled with similar pedigrees over time. More unique pedigrees can still be found from here and there but with those the case is that it's difficult to get proper information about the features that are inherited from those lines.

##### MOST CRUCIAL THINGS DECREASING THE GENE POOL

- Massive use of certain males (in other countries; in Finland the situation is better) and the fact that many times the breeding individuals come from same litters, and at the same time many litters are totally left outside of the breeding.
- Preferring "top dogs" (especially males) in pedigrees, which decreases the diversity when not so successful dogs (meaning show merits) are left outside from breeding.

##### WAYS TO KEEP THE GENE POOL DIVERSE

- Only few litters per breeding individual
- Using sibling or close relative of popular sire instead of the popular sire himself
- Double matings make it possible to get offspring from two different males to one litter
- Carefully planned and screened crossbreeding projects

## 4.2 TEMPERAMENT, BEHAVIOR AND WORKING FEATURES

### 4.2.1 WHAT BREED STANDARD STATES ABOUT TEMPERAMENT, BEHAVIOR AND ORIGINAL PURPOSE

The Breed standard describes German Pinscher's temperament very shortly: "His lively, spirited, self assured and evenly tempered nature combined with intelligence and endurance makes him an agreeable family, watch and companion dog." As disqualifying faults is mentioned: "Aggressive or overly shy dogs. Any dog clearly showing physical or behavioural abnormalities shall be disqualified".

In it's original purpose as independent yard guard and ratter, Pinscher has needed all the features mentioned above. Although very few Pinscher is allowed to work in it's original purpose nowadays, those features are not in conflict to what Pinscher's character needs to be today in it's purpose as a companion dog.

### 4.2.2 DIVIDING INTO SHOW- AND WORKING LINES ETC.

There is not dividing into different lines based on purpose in German Pinschers. Only "different line" is Crossbred line as mentioned earlier, but it has purposely been integrated into the population. Crossbred dogs have same behavioral and temperament features as purebred Pinschers.

### 4.2.3 TEMPERAMENT AND BEHAVIOR IN EVERYDAY SITUATIONS

The Breed Club screens temperament and behavior of the breed with surveys directed to dog owners. Also Finnish mental test and mental descriptions (MH) are important tools for collecting information.

Last health- and temperament surveys were done in year 2004 and 2010.

Almost all owners told that their Pinscher's primary purpose were to be a family member, that were purchased as companion, in many cases also for dogsports and in some rare cases for guarding purposes.

About half of responded owners told that they are involved to some of following hobbies with their dog(s): agility, obedience, tracking or dog shows. Only about 10% had participated to official trials.



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Owners described their dogs usually with following features: lively, happy, energetic, open, loves people, stubborn, comfort- and attention loving, and very devoted to the family.

Especially under 3 year old dogs were described as very lively and active, quick to learn but also stubborn and short tempered. From over 3 year old dogs were usually mentioned that with age they had calmed down and gained self confidence with age.

#### TEMPERAMENT SURVEYS

In the surveys made in 2004 and 2010 it was made clear that about 80% of Pinschers are living in cities, and many of them had contact with children, so the breed should get along in this kind of surroundings.

At the breeder's meeting held in 2005 breeders and dog owners pointed out that Pinscher is not a suitable dog for every home, and that more efforts must be put in temperaments in breeding, but also informing and educating puppy owners before they purchase a German Pinscher.

FINNISH MENTAL TEST

*Mental Test results can be used to define and describe the dog's character and qualities; and to evaluate how suitable the dog is for training. It is also a way to evaluate dog's character for breeding use.*

*Mental test is always judged by two judges who have a special training for this job.*

*Dogs that are tested must be over 2 years and under 7 years old. Usually the older they are, the more confident they are and the "better" the result. But the younger they are when tested, the more honest is the result in how it describes the inherited character more than the trained habits of the dog.*

*This test was originally developed for utility dog breeds (German sheepdog, dobermann etc) to evaluate their trainability and capability to function as working dogs.*

*It doesn't mean that the more points, the better dog you have, as each breed has different kinds of preferred features of character.*

<http://oivakoira.com/mentaltest.html>

IDEAL TEMPERAMENT PROFILE CONTEMPLATED FOR GERMAN PINSCHER BY THE BREED CLUB

*To the table below is marked the desired features with green highlight. The unwanted features has been marked with orange highlight. The non-highlighted features are considered neutral.*

Functional capacity	3 high	-	Temperament	3 high	25%
	2 good	-		2 moderate	30%
	1 moderate	44%		1 very high	38%
	-1 low	46%		-1a disturbingly high	5%
	-2 inadequate	10%		-1b slightly negligent	1%
	-3 unable to function	-		-1c impulsive	3%
Tendency to react aggressively	3 moderate, no post-attack aggressiveness	29%	-2 negligent	-	
	2 high, no post-attack aggressiveness	2%	-3 apathetic	-	
	1 low, no post-attack aggressiveness	69%	Mental hardness	3 moderate	9%
	-1 low with post-attack aggressiveness	1%		2 hard	-
	-2 moderate with post-attack aggressiveness	-		1 tendency to softness	70%
	-3 high with post-attack aggressiveness	-		-1 very hard	-
Desire for defence	3 moderate and controlled	27%		-2 soft	21%
	2 high and controlled	3%		-3 very soft	-
	1 low	42%	Accessibility	3 kind, accessible, open	52%
	-1 reluctant	29%		2a accessible, slightly reserved	46%
	-2 very high	-		2b accessible, tendency to reserved behavior	-
	-3 uncontrolled	-		1 flattering	-
Desire to fight (without aggression)	3 high	-		-1 reserved	1%
	2 moderate	26%		-2 aggressive	-
	1 very high	-	-3 insidious	-	
	-1 low	48%	Shooting	+++ secure to shooting	76%
	-2 inadequate	25%		++ not familiar with shooting	-
	-3 reluctant	1%		+ irritated while shooting	-
Nerves	3 calm and firm	-		- disposed to shooting	24%
	2 moderately calm	-		--- fear of shooting	-
	1a slightly restless	92%			
	1b tendency to nervousness	-			
	-1 slightly nervous	8%			
	-2 nervous	-			
-3 highly nervous	-				

*There is also marked the percentages of seen features in all tested German Pinschers during years 2008-2015.*

**Functional capability** is the dog's motor, ability to control its actions regardless of fear. In other words, the dog can work in a right way in spite of its fear.

For **Functional capability**, 46 % of Pinschers have result -1, low and 44% have +1 moderate. Ideal result is +1 moderate.

**Tendency to aggressive behaviour** is a quality that makes the dog react aggressively when it feels threatened.

For Tendency to react aggressively, 69% of tested Pinschers got result +1 low without post-attack aggressiveness, and 29% got result +3 moderate without post-attack aggressiveness.

In today's society result +1 and +3 would be ideal.

**Desire for defence** means the dog's inbred tendency to attack or with an attempt to attack actively to defend itself, its herd (the owner) or its territory.

Result for this part is usually +1, low(42%) or +3 moderate and controlled (27%), which both are suitable in today's society. Also -1 reluctant (29%) is suitable for a companion dog.

**Desire to fight** is the inbred tendency of the dog to enjoy fighting without it being based on aggression. Desire to fight in Pinschers is usually -1 low (48%) or +2 moderate (26%). When looked at the Breed standard, +2 moderate is the ideal result for Pinscher, and it is not in conflict to what is desired today.

**Nerves** mean the weakness or strongness of a dog's nerves when it ends up in powerful and changing conditions of tension. Result for Nerves is usually +1 bit restless (92%).

Ideally it also should be +1 bit restless or desirably +2 balanced and firm but that is a result that Pinschers very rarely get. To Pinschers that get result -1 slightly nervous (8%) should be considered very critically before used in breeding, because it is a feature that can cause the dog to take pressure from quite normal situations in everyday life.

**Temperament** means liveliness of behaviour, the fastness of observation (attentiveness) and ability to adapt to new situations and surroundings. Ideal result for Pinscher is +3 high. In statistics, now 38 % of Pinschers are +1 very high and 5% of Pinschers are -1a disturbingly high. Share of +2 moderately high is 30%.

When planning breedings, two disturbingly high temperament dogs should not be bred together, and should be carefully considered if it's a good idea to breed +1 very high to a dog with result -1 disturbingly high either.

**Mental hardness** means the dog's tendency to remember or not to remember unpleasant experiences. 70% of tested dogs have the ideal result of +1 tendency to softness. 21% have result -2 soft and 9% got +3 moderately hard.

When using dogs that have result -2 soft for breeding, much thought should be put into choosing a partner; amount of -2 soft dogs has been increasing. Too much softness makes dog more exposed to remember the unpleasant situations in life.

**Accessibility** shows how the dog approaches to the unfamiliar people. For accessibility the ideal result is +3 kind, accessible and open, which 52% of tested Pinschers have. For German Pinscher also result +2a (accessible, tendency to reserved behavior) and +2b (accessible, slightly reserved) are approved considering their Breed standard.

In **reaction for shooting** part of the test 24 % of tested dogs got negative result (either disposed or fear of shooting). This percentage is really high; it means that almost every fourth dog reacts negatively to shooting. Noise sensitivity can cause major problems to the dog's everyday life.

Dogs that have result -- fear of shooting should be considered very critically if there is a need to use that dog for breeding at all.

It is impossible to leave all dogs, that have reacted to shooting, out from breeding population. But because of the high percentage of reactions, breeding dogs should be tested with Finnish mental test or Mental description so breeder (and puppy buyers) can be sure that dogs that have reacted are only bred with dogs that do not have reaction for shooting. Otherwise there is no solution for making the percentage smaller and breed's situation better.



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In the table below can be seen a comparison between German Pinscher's test results from period 2001-2007 and 2008-2015, for evaluating how temperaments have developed.

There were 76 tests during 2001-2007 and 159 tests during 2008-2015.

FEATURE	SCORE	2001-2007	2008-2015
CAPABILITY TO FUNCTION	2, good	2,7%	-
	1, a) moderate / b) moderately low	60%	43,5%
	-1, low	36%	46,1%
	-2, inadequate	1,3%	10,39%
TENDENCY TO AGGRESSIVE BEHAVIOR	3, moderate without post-attack aggressiveness	14,7%	28,6%
	2, high without post-attack aggressiveness	1,3%	2%
	1, a) low without post-attack aggressiveness / b) no tendency at all	84%	68,8%
	-1, low with post-attack aggressiveness	-	0,7%
DESIRE FOR DEFENCE	3, moderate, controlled	24%	27,3%
	2, high, controlled	-	2,6%
	1, low	61,3%	41,6%
	-1, reluctant	14,7%	28,6%
DESIRE TO FIGHT	3, high	2,7%	-
	2, a) moderate / b) moderately low	30,7%	26%
	-1, low	52%	48,1%
	-2, inadequate	14,7%	25,3%
	-3, reluctant	-	0,7%
NERVES	2, balanced and firm	2,7%	-
	1,a) bit restless / b) tendency to nervousness	88%	92,2%
	-1, bit nervous	9,3%	7,8%
TEMPERAMENT	3, high	48%	25,3%
	2, moderate	24%	29,9%
	1, very high	24%	37,7%
	-1, a) disturbingly high / b) bit negligent, c) impulsive	4%	8,4%
	-2, negligent	-	0,7%
MENTAL HARDNESS	3, moderately hard	12%	9,1%
	1, tendency to softness	76%	70,1%
	-2, soft	12%	20,8%
ACCESSIBILITY	3, accessible, open and kind	73,3%	51,6%
	2, a) accessible, tendency to reserved / b) accessible, bit reserved	25,3%	46,1%
	1, flattering	1,3%	-
	-1, a) obviously reserved, doesn't try to bite / b) obviously reserved, tries to bite	-	1,3%

*Breeding committee's mental test data*

There is obvious changes in the tables from first period to second. Capability to function has gone worse, result +1 moderate has decreased almost 15% from first period, and result -2 inadequate has increased really much. Percentage of +3 moderate tendency to aggressive behavior has doubled. In desire to defence, percentage of -1 reluctant has doubled.

In Desire to fight, -2 inadequate has increased with 10%. But when it comes to Nerves, situation has got bit better, but then again there has been more interrupted tests in second period.

In Temperament the share of ideal +3 high has decreased to half and not wanted result -1 disturbingly high has doubled. Also the share of -2 soft result for Mental hardness has almost doubled.

When it comes to accessibility, situation is still good as slight reserved behavior is ok for a Pinscher.

Also the results with noise sensitivity has gone for worse from first period to second. There are 8% more dogs that react negatively to shooting than in the first period.

Every fourth dog from all tested reacted negatively to shooting.

RESULTS FOR SHOOTING TEST		2001-2007		2008-2015	
+++	No reaction	60%	total 84%	45,5%	total 76%
++	Unfamiliar with shots	24%		30,5%	
-	Disposed to shooting	13,3%	total 16%	20,8%	total 24%
---	Fear of shooting	2,7%		3,3%	

*Breeding committee's mental test data*

In period 2001-2007 there was only one interrupted test (1,3%). During the period 2008-2015 there were five interrupted tests (3%). Test is in most cases interrupted because either the judges or owner think that dog's mental qualities aren't strong enough to take the pressure of the test.

Considering these results, screening Pinscher's temperaments with official test is very important for collecting information. Especially breeding stock should be screened, and also their offspring for being able to know what the dogs have produced.

Every dog whose test result is not ideal cannot be closed out from breeding, because the population is too small for very strict elimination of faults. Long-term breeding plans for temperaments is also inevitable.

*In the table below is presented all Finnish mental test results from **all Pinschers that were used for breeding** during years 2008-2015. There were 59 test results from 57 dogs. During the time period 2 of the dogs had interrupted test and also 2 of the tests were re-runs.*

CAPABILITY TO FUNCTION	2, Hyvä	1,8%
	1, a) Kohtuullinen / b) kohtuullisen pieni	52,6%
	-1, Pieni	38,6%
TENDENCY TO AGGRESSIVE BEHAVIOR	-2, Riittämätön	7 %
	3, Kohtuullinen ilman jäljellejäävää..	21 %
DESIRE FOR DEFENCE	1, a) Pieni ilman.. / b) Ei osoita lainkaan..	79 %
	3, Kohtuullinen hillitty	42,1%
	-1, Haluton	19,3%
DESIRE TO FIGHT	2, a) Kohtuullinen / b) Kohtuullisen pieni	39,6%
	-1, Pieni	49,1%
	-2, Riittämätön	19,3%
NERVES	1, a) Hieman rauhaton / b) Herm. pyr.	91,2%
	-1, Vähän hermostunut	8,8%
TEMPERAMENT	3, Vilkas	28,1%
	2, Kohtuullisen vilkas	35,1%
	1, Erittäin vilkas	31,6%
	-1a, Häiritsevän vilkas	1,8%
	-1, b) Hieman välinpit. / c) Impulsiivinen	3,5%
MENTAL HARDNESS	3, Kohtuullisen kova	14%
	1, Hieman pehmeä	66,7%
	-2, Pehmeä	19,3%
ACCESSIBILITY	3, Hyväntaht, luoksepäästävä, avoin	57,9%
	2, Luoksep., aavistuksen (a) / hieman (b) pid.	40,4%
	-1, Selvästi pidättyväinen	1,8%

*Breeding committee's mental test data*

REACTION TO SHOOTING		
Secure	49,1%	total 79%
Unfamiliar	29,8%	
Disposed	17,5%	total 21%
Fear	3,5%	

#### **Comparison to all mental test results during 2008-2015:**

*Dogs that have been bred are bit more capable to function and have lower tendency to aggressive behavior than all tested dogs.*

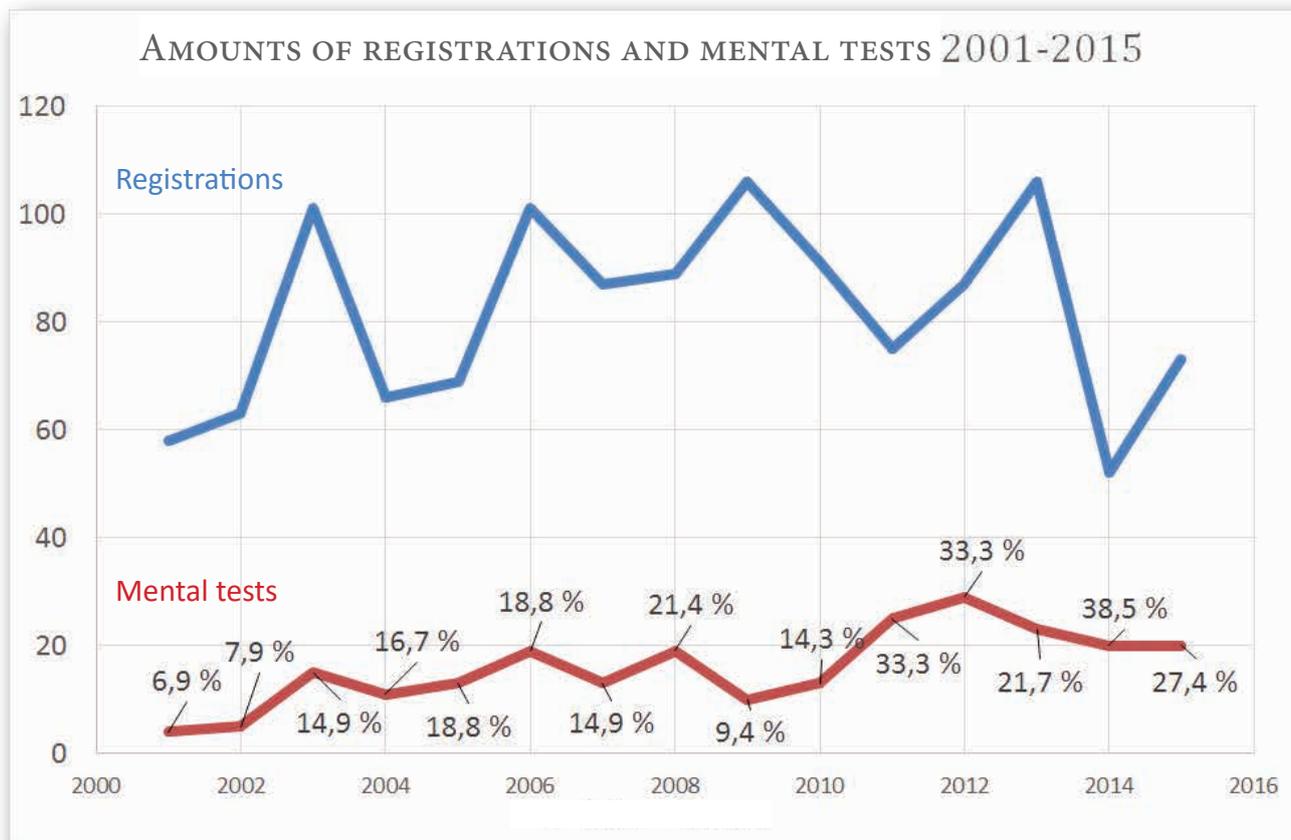
*They also have more desire to defence and fight than all tested dogs.*

*About nerves and mental hardness dogs used for breeding are equivalent to all tested dogs.*

*Dogs used to breeding are more accessible dogs which tolerate noises better than all tested dogs.*

## MENTAL TESTING AMOUNTS

Really good number of Pinschers are mentally tested every year. During last 5 years, 20% of same year's registrations have been mental tested every year.



Breeding committee's mental test data & DogNet's annual statistics

## AMOUNTS OF FINNISH MENTAL TESTS AND MENTAL DESCRIPTIONS OF BREEDING DOGS

During years 2011-2015 (last 5 years) 39 males have been used for breeding. 16 of these (41%) do have either mental test or mental description result. Results from Sweden have been counted in as well.

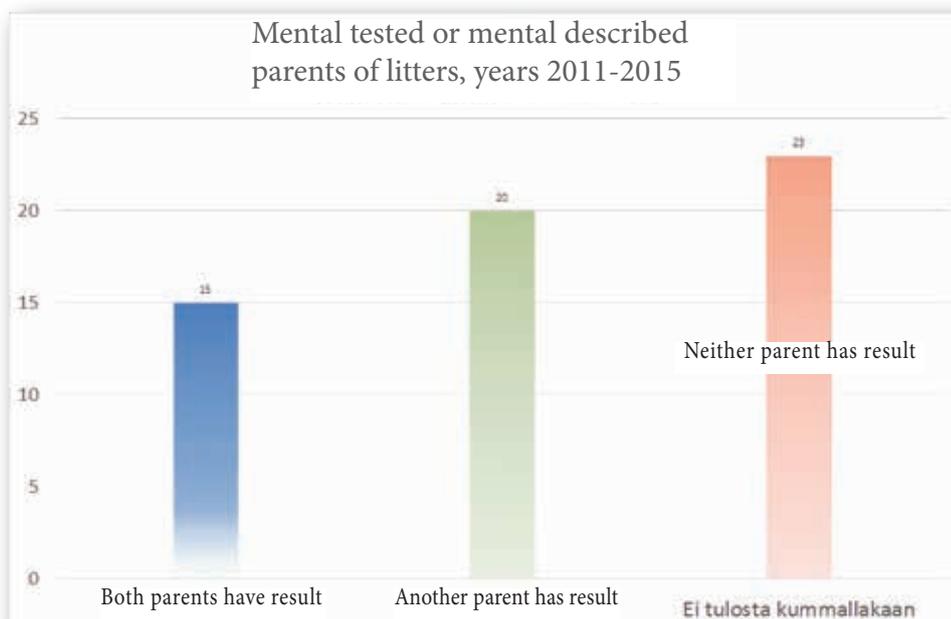
During the same period there were 46 bitches used, and 20 of these (43%) also has Mt- or MH-result.

Considering the breeding material, from bigger portion of them mental information should be available. Now there is no objective info from 58% of breeding animals. Finnish Kennel Club's DogNet-data provides an easy way for making sure which breeders do screen their breeding stock's mental features.

During years 2011-2015 there were 58 litters born. Only 15 litter's (26%) both parents have either MT- or MH-result.

20 of the litters have another one of parents tested (34% of litters).

There are 23 (40%) litters with non-tested parents.



Breeding committee's mental test data

## MENTAL DESCRIPTION - MH ("MENTALBESKRIVNING HUND")

*Mental description literally describes dog's reactions during the situations. MH provides information for the dog's owner and also for the breeder. Unlike in Finnish mental test, there aren't points given.*

*"The test takes about 45 minutes and is so stressful to the dog that mental defects are likely to show up during testing. The test has fairly good reliability and validity."*

[http://vilavallarens.50megs.com/MH\\_testE.htm](http://vilavallarens.50megs.com/MH_testE.htm)

During 2009-2015, 17 Pinschers have been Mental described. Results for shooting part were as follows:

- 1 Stays mainly calm. Fast reaction and after that inattentive. - **5 dogs**
- 2 Annoyance to shots increases during activity /passivity. After that inattentive. - **1 dog**
- 3 Shows interest to the gun-man, audience etc. but returns to activity / passivity. – **2 dogs**
- 4 Interrupts activity, locks attention towards the gunman or audience. Difficulties to return to play / passivity - **4 dogs**
- 5a Anxious, fearful / tries to escape. – **4 dogs**
- 5b Owner withdraws/ interrupts test before shooting – **1 dog**

"Scoring" of MH is linear, so usually 1 describes the most passive reaction, 5 most active reaction. Pinscher ry will do more specific summary of MH's when there are at least 30 results available. Ideal profile for MH will be done during year 2016 or 2017.

## BREEDING EVALUATION

Pinscher club's breeding evaluation is evaluation of conformation, and therefore show judges who do the evaluation are not obliged to evaluate the temperament of the dogs more than very superficially. Breeding evaluation form gives following options about temperament: good, friendly, moderately reserved, reserved, aggressive, not accessible, restless, shy. Judge can also write other comments if they feel the need.

During years 2007-2015 total of 80 German Pinschers has been in Breeding evaluation. Seven of them (8,8%) got comment "reserved", and from these seven two have also comment "not accessible". Also one dog has a mention "not accessible, tries to bite".

Two dogs have comment "restless" added to with comment "good". One has comment "badly mannered" with comment "good".

Rest 69 dogs (86%) have comment(s) good, excellent and/or friendly.

## DOG SHOWS

Behavior in showrings has not been statistically evaluated mainly because mental testing and behavior surveys are being done within the breed.

Mostly Pinschers behave well in showrings. One-time cases where dogs have been disqualified because of growling or trying to bite happen occasionally; usually it's a male Pinscher. Some shy dogs or dogs that have problems with slippery floors are seen now and then. Judges should take notice to this kind of behavior and lower the prize and mention it in the written critique more often.

## DIFFERENCES BETWEEN SUBPOPULATIONS IN DIFFERENT COUNTRIES

### GERMANY

There aren't any statistics or information available from temperament or behavior of Pinschers in Germany. The Breed Club PSK has set certain criteria for breeding dogs. Dogs get their breeding permission after they have done "Zuchtzulassung", breeding test where conformation and temperament are evaluated. Temperament evaluation concentrates mainly to social behavior. PSK has not published any summaries from evaluations.



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## SWEDEN

Many Pinschers are Mental described in Sweden.

Some main points from Swedish "RAS" (breed-specific breeding strategy) from year 2006:

*"Small portion of dogs (< 10%) have shyness or aggressivity towards other dogs and people. About 65% of dogs have shown tendency to guarding habits, 32% has hunting instincts and 20% have tendency to escaping. More than one in four dogs are afraid of noises, like shooting, thunders torm or fireworks. 16% of dogs have problems being alone.*

*It is desired that owners and breeders continue to take their dogs to Mental descriptions, derirably more than earlier, so that we can have better overall picture of the breed.*

*Goal: to decrease amount of shyness.*

*Strategy: Mental describing more dogs. Dogs that are used in breeding must be mentally fully developed; males from 2 years forward and females from third heat forward. "*

Only restriction considering temperaments in Swedish Pinscher club's breeding rules is that if dog has had only 2nd prize ("sufficient") from shows, it must have been Mental described and from shooting test it must have result 4 or better.

*Swedish Mental description statistics 2007-2015, according to dog's year of birth:*

ANNUAL STATISTICS	2007	2008	2009	2010	2011	2012	2013	2014	2015
Puppies born	163	165	176	177	106	180	75	178	65
MH-described	26	49	29	38	31	26	16	13	-
from wich - males	17	24	12	20	16	9	9	5	-
- females	9	25	17	18	15	17	7	8	-
Describer interrupter the test	-	1	2	1	1	-	1	-	-
Owner interrupred the test	1	1	2	2	1	-	1	-	-
Inappropriate behavior	-	-	-	-	-	-	-	-	-
Owner withdraws from shooting test	1	1	1	1	1	1	-	-	-

## NORWAY

Norwegian dogs go to MH descriptions in Sweden, because MH descriptions are rarely held in Norway.

There are not any requirements for breeding dog's temperament in Norwegian Pinscher club's breeding rules. There aren't any statistics available from Norwegian pinscher's MH description results.

Norwegian breed club's breed-specific breeding strategy mentions about temperaments as follows:

*"Short- and long term goals:*

- To compile statistics from mental test results, encourage breeders to take their breeding dogs and dogs bred by them to be tested so that the present situation about the population's situation can be observed*
- To keep Pinscher's mental features suitable for today's purposes*

*Priorities and strategy:*

- Pinscher breeding must sustain Pinscher's original characteristics, as well as maintain harmonious temperament which is suitable for family dog of today"*

*Source: Norsk Pinscherklubb RAS*

## USA

In Usa, Dogs in Working group (like German Pinschers) can go to Temperament Test, and after passing the test dog gets a TT-title behind it's name.

Temperament test concentrates to measure different features like mental balance, shyness, friendliness and also tendency to protection when the dog is facing threatening situation.

Dog won't pass the test if it shows any aggression without provocation, or panic that the dog cannot overcome, or strong avoiding during the test.

*Until February 2013, 28 German Pinschers have participated to Temperament test:*

Breed	Tested	Passed	Failed	Passing %
GERMAN PINSCHER	28	25	3	89.3%

*ATTS Breed Statistics as of February 14, 2013*

German Pinscher Club of America has not published more specific summaries about temperaments in USA. Club's Code of ethics soed not have any rules considering breeding dog's temperaments.

## DIFFERENCES BETWEEN MALES AND FEMALES

According to mental test results:

- females have better capacity to function
- males have better desire to fight
- males have higher temperament
- males are not as accessible as females
- males have more noise sensivity
- no differences in tendency to aggressive behavior, desire for defence or nerves

In everyday life owners experience more problems with males, as they tend to test their boundaries more physically. Sometimes also male's sexual activity is seen as a problem. Some owners also experience their males to be more reserved towards people.



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#### 4.2.4 WORKING AND TRIAL ABILITIES OF THE BREED

##### BREED'S ORIGINAL PURPOSE

German Pinscher was originally a ratter and a yard guard.

##### PRESERVING OF THE WORKING ABILITIES

Most Pinschers are still able to work as a vermin exterminators, but then again some dogs don't have any kind of drive towards vermin. Very few Pinscher has the privilege to work as a ratter keeping yards vermin-free, so in breeding this ability is probably not very high priority.

Many Pinschers are still able to work as a guard. However they usually aren't unmanageable barkers, but more like "door bells". Still some owners consider guard barking as a problem. Breeders should pay more attention to educate the possible puppy buyers about the breed's original purpose and breed-specific behavior, so it won't become as a surprise to new owners.



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##### COMPARISON TO BREED'S HOME COUNTRY AND OTHER IMPORTANT COUNTRIES

Other countries than Sweden haven't published any summaries about temperament, so reliable comparison to other countries is very hard to make. The goals set in Swedish Breed-specific breeding strategy "RAS" are similar to the goals set in Finland; still more information by testing more dogs and aim to reduce the amount of shyness and sensitivities.

Considering temperaments the German Pinscher is in transformation; very few owners need a ratter or a yard guard, and the aim is a dog that is well fitting to today's society and city-living. The hard part is to eliminate the guarding and hunting features without taking out the needed features like capability to function, desire to fight (which is like a motor to a dog) and without making the dogs too soft or shy.

##### TRIALS, COMPETITIONS

During years 2012-2015 Pinschers have been competing as follows:

	2012	2013	2014	2015
<b>Agility</b>	361 starts	390 starts	296 starts	258 starts
<b>Rally-obedience</b>			15 starts	53 starts
<b>Obedience</b>	16 starts	18 starts	18 starts	20 starts
<b>MEJÄ</b>		2 starts		
<b>PAKK</b>			1 start	

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##### *Pinschers competing in Agility:*

SIZE CLASS	2012	2013	2014	2015
<b>Maxi</b>	13	10	11	8
<b>Medi</b>	8	8	7	6
<b>Total</b>	21 dogs	18 dogs	18 dogs	14 dogs

##### *Pinschers competing in Obedience:*

	2012	2013	2014	2015
<b>Total</b>	7 dogs	8 dogs	3 dogs	5 dogs

DogNet - trial statistics

Rally obedience became Finnish Kennel Club's official trial in year 2014. That year there were 6 Pinschers competing, and year 2015 there were 16 competing Pinschers.

## ORIGINAL, BREED SPECIFIC BEHAVIORAL NEEDS AND HOW TO FULFILL THEM

Original purpose as a ratter and independent yard guard has required Pinscher to be alert, quick in its reactions and capability to function and "ability to stand on it's own feet" without help or support from the owner. It also had to be active and agile dog.

Pinscher still needs lots of exercise and stimulus. Pinschers get very attached to their family and wants to be a part of it's "pack's" everyday life. It is quite easy to offer activities to a Pincher as they like to do different things with their owners.

### 4.2.5 BEHAVIOR IN HOME AND REPRODUCTION BEHAVIOR

#### PROBLEMS WITH BEING ALONE

In Breed Club's survey owners were asked about behavioral characteristics of their Pinschers that cause problems in everyday life. 33% of owners answered to this question. Most significant problem mentioned was separation anxiety (10% of the dogs). Only few owners described the problem more specifically: howling, crying, overall anxiety and heaving when left alone.

#### REPRODUCTION BEHAVIOR

Several owners told about hypersexuality in young males, and many males had been castrated because of it. Breeders haven't reported about libido problems in breeding males.

#### SOCIAL BEHAVIOR

##### **Behavior with children**

Most owners told their dogs are bit reserved or shy towards unfamiliar small children, especially if children try to approach the dog. If child is not interested in the dog, most of the dogs are not concerned about the child either.

Usually pinschers were mentioned to love their own family's children. Some owners who have kids told that the dog might growl to the kids if they approach the dog while it is laying on the couch, or that the dog tries to dominate children.

Owners who didn't have contact with kids told that either their dog gets along well with children or the dog might act unpredictable, but owner knows this and is prepared for it. Some owners told that their dog is scared or aggressive towards children because of bad experiences with them as a puppy.

##### **Behavior with other dogs**

Pinscher's behavior to unfamiliar dogs somewhat depends on the age. Usually under 2-year old Pinschers are happy to meet other dogs and behave well, some may be bit shy. After becoming adults Pinschers usually become more picky, and old friends stay as friends but behavior towards new dogs may become more reserved. Some owners told about problems related to growling, barking or aggressiveness towards other dogs. Still most Pinschers behave well when they meet unfamiliar dogs.

##### **Fears and noise sensitivity**

About 20% of the owners told their dogs are sensitive to loud noises. Most of the owners didn't mention about which kind of noises their dogs specifically reacts, so it is unclear if all owners are aware about what does noise sensitivity exactly mean. Another 20% of the owners told their dogs may get scared about sudden noises but recover quickly. However, about 40% of owners told their dogs gets scared of loud noises. Some of owners told that the behavior started already as a puppy, and some told the problem started later on in different ages but definitely getting worse with age.

From Pinschers that were born year 1996 or earlier, almost half were mentioned to be sensitive to noises.

Some owners also told that their dogs have fear of slippery floors.

#### STRUCTURAL OR HEALTH MATTERS THAT CAN AFFECT TO BEHAVIOR

Any sickness or pain can lead Pinscher (or any dog) to aggressive behavior. German Pinscher's structure is in all ways very moderate and basic canine structure so it doesn't expose the breed to specific sicknesses or problems that would lead dog to be in pain.

*German Pinscher has moderate, healthy basic canine structure.*



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#### 4.2.6 SUMMARY OF THE MAIN ISSUES CONSIDERING BEHAVIOR AND TEMPERAMENT AND HOW TO IMPROVE THE SITUATION

##### MAIN ISSUES

Owners were asked to tell about the main behavioral issues that cause most problems in everyday life with their dogs. 33% of the owners answered to this question. The main issue was separation anxiety (about 10%), also guarding, reserved behavior towards strangers, barking at doorbell and visitors (about 10%), and overall shyness towards different things (also about 10%).

Other singularly mentioned problems mentioned were unpredictable behavior towards people, aggressive behavior toward other dogs, destroying things after puppy age, whining, not wanting to go out in rainy weather, hyperactivity, stubbornness, biting own family members (young dogs), growling to or biting own family's children and fear of slippery floors.

Also noise sensitivity or fear toward loud noises is one of the main problems in German Pinscher temperaments, that needs careful concentration from breeders.

##### REASONS TO PROBLEMS AND RESOLUTIONS

###### POSSIBLE REASONS

Mental softness, lack of desire to fight and lacking capability to function are becoming more common; while weeding out unwanted characteristics from Pinscher's temperament, are we throwing out some very needed features also?

Concentrating to conformation in breeding: Showdog breeding favors passive, not very curious and lively temperament? (Svartberg 2006)

It has been proved that fears have quite high heritability degrees. For German Pinschers fear for loud noises is common problem, so getting totally rid of it is probably not possible. Because of the small gene pool there is no possibility to leave every noise sensitive dog out of breeding. Also, even if individual itself doesn't show any sensitivity to noises, it can produce tendency to it for it's offspring. Noise sensitivity/fear also usually shows up and starts bothering the dog with age, when it possibly has been used for breeding already.

##### WAYS TO REDUCE PROBLEMS

Objective evaluation of the breeding animals; dog's temperament should also be evaluated with some official description, not only health (with examinations) and conformation (show results).

Avoiding to make breeding combinations with dogs that have similar temperament or behavioral problems.

For breeding, preferring dogs that are mentally as stabile and balanced as possible.

Very critical consideration of using dogs that show sensitivity or fear towards people, slippery floors or noises. Choosing the mentally best possible partners for those dogs if must be used in breeding.

Better information from breeder to puppy buyers about the breed origin and original characteristics, such as natural tendency for guarding behavior, and also the need for activity.

Better information from the Breed Club to breeders about the importance of official evaluations of temperaments.



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## 4.3. HEALTH AND REPRODUCTION

### 4.3.1 HEALTH PROBLEMS INCLUDED INTO FINNISH KENNEL CLUB'S PEVISA-PROGRAM

First PEVISA-program (*Health programme for canine genetic diseases and defects*) for German Pinschers was approved 1.1.2007 and it was valid until 31.12.2011:

"At the time when the mating happens, parents of the litter must have hip certificate and valid eye examination certificate. At the time of mating the latest eye examination must have been done less than 8 months ago. There are no limitations for hip- or eye results."

Second PEVISA-program is valid during 1.1.2012 - 31.12.2016 and it has same rules as the first one.

For next PEVISA-season starting from beginning of year 2017, the Breed club applies that the eye examination would be valid for 12 months, not only 8 months. Hip rule would be accordingly as before.

### HIP DYSPLASIA

*Canine hip dysplasia is a developmental orthopedic disease. When a dog has dysplasia, it has an abnormal development of the ball-in-socket joint that makes up the hip. In a dysplastic hip, the ball (the head of the femur, or thighbone) and the socket (the acetabulum, a portion of the pelvis), do not fit together snugly. The result is a painful and damaging friction. When a dog bears its weight on the joint, the friction strains the joint capsule, which is a fibrous tissue that surrounds the joint and produces joint fluid. The straining then damages the cartilage and leads to the release of inflammatory proteins within the joint. Thus begins the cycle of cartilage destruction, inflammation, and pain the symptoms we associate with arthritis.*

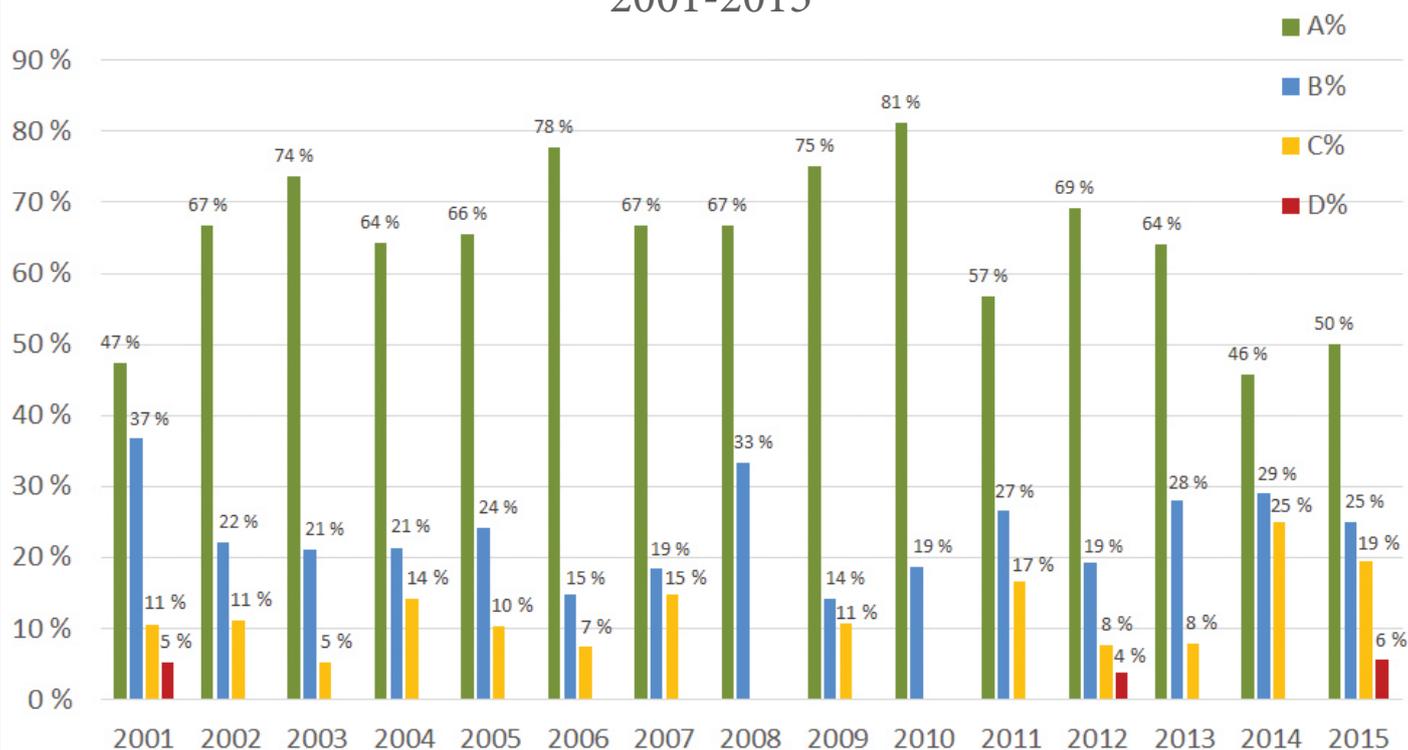
<http://www.workingdogs.com/vchipsoidysplasia.htm>

#### FCI Hip Grading:

<b>A</b> No signs of hip dysplasia	<i>The femoral head and the acetabulum are congruent. The craniolateral margin has sharp outlines and rounded ends. The joint space is narrow and even. The acetabular angle according to Norberg is approx. 105 degrees (as a reference). In the case of excellent hip joints, the craniolateral acetabular rim encircles the femoral head somewhat farther than laterocaudally.</i>
<b>B</b> Nearly normal hip joints	<i>The femoral head and the acetabulum are either slightly incongruent, and the angle to Norberg is approx. 105 degrees, or the center of the femoral head lies in a medial position with respect to the dorsal margin of the acetabulum, and the femoral head and the acetabulum are congruent.</i>
<b>C</b> Light hip dysplasia	<i>The femoral head and the acetabulum are incongruent, the acetabular angle according to Norberg is about 100 degrees, and/or the craniolateral rim of the acetabulum is slightly flattened. There may be irregularities or no more than slight signs of osteoarthrotic alterations of the margo acetabularis cranialis, caudalis or dorsalis or on the femoral head or neck.</i>
<b>D</b> Moderal hip dysplasia	<i>Obvious incongruency between the femoral head and the acetabulum with subluxation. Acetabular angle according to Norberg greater than 90 degrees (as a reference only). Flattening of the craniolateral margin and/or osteoarthrotic signs.</i>
<b>E</b> Severe hip dysplasia	<i>Marked dysplastic alterations of the hip joints, such as luxation or distinct subluxation, acetabular angle according to Norberg less than 90 degrees, obvious flattening of the margo acetabularis cranialis, deformation of the femoral head (mushroom-shaped, flattened), or other signs of osteoarthrosis.</i>

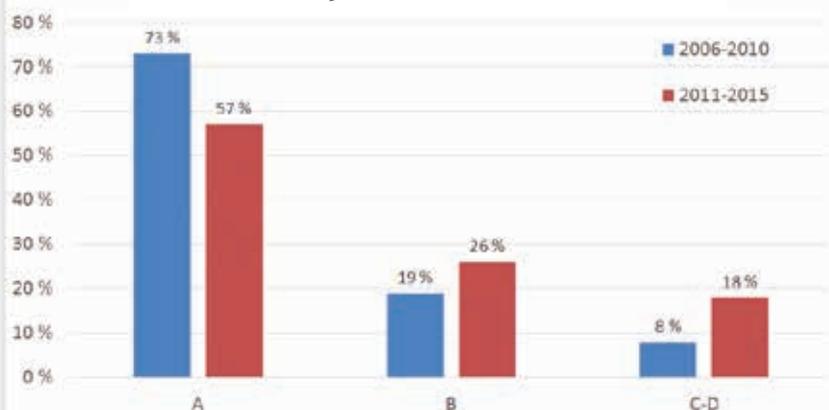
[http://www.angelfire.com/fl5/drool\\_gang/dysplasia.htm](http://www.angelfire.com/fl5/drool_gang/dysplasia.htm)

## HIP RESULT PERCENTAGES IN FINLAND 2001-2015



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### DEVELOPMENT OF HIP RESULTS BETWEEN TWO LATEST 5-YEAR PERIODS IN FINLAND



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### DEVELOPMENT IN HIP RESULTS BETWEEN TWO LATEST 5-YEAR PERIODS IN FINLAND:

<b>2006-2010 (5y):</b>	<b>2011-2015 (5y):</b>
A: 73% (87 RESULTS)	A: 57% (80)
B: 19% (23)	B: 26% (36)
C-D: 8% (9)	C-D: 18% (25)

On average, there are about 30 Pinschers hip examined annually. Previously the percentage of affected results (grades C and D) has usually been around 10%, but in latest 5-year period the percentage for affected results has increased to 18%.

### HIP RESULTS AND BREEDING

Percentage of affected hip results has been significant and hip situation must be screened carefully. If the situation continues developing to worse direction, the Breed club must consider setting stricter breeding criteria. At this moment Breed club's breeding criteria allow to use dogs with hip result A, B and C for breeding (C-hip dog must be paired only with A- or B-hip partner). Dogs with D-hips are not allowed to be used by the Breed club and litters from D-hip dog won't be accepted to Breed club's puppy list. However it is still possible to register puppies from D-hip dog to Finnish Kennel Club's (FCI) registry, because there is no limitations in the breed's PEVISA-program. Finnish Kennel Club has restricted using E-grade (worst grade) from breeding in all breeds.

## HIP DYSPLASIA IN OTHER COUNTRIES

### Germany

Hip examination is required for every breeding dog in Germany, and only dogs with result varying from A1 to B2 are allowed to be bred.

There are 251 hip results in German data from years 2010-2015, from which 81,7% are A1-A2, 14,7% B1-B2 and 3,2% of affected (C, D, E).

### Sweden

Swedish data is presented by the year of dog's birth, not by examination year. In chart below is shown results from dogs born during years 2006-2013. Data has 334 results: 52,4% A, 36,5% B and 11,1% dysplastic (C,D).

### Norway

Norwegian data from years 2006-2015 has 146 hip results. 75,2% A, 17,1% B and 7,5% of dysplastic (C,D).

It is worth to notice that in Germany and Norway where it is forbidden to use affected dogs (C,D) for breeding, the percentage of affected is clearly lower than in Finland and Sweden, where dysplastic dogs can be used (*see below*).

DIFFERENT HIP GRADINGS			
OFA	FCI	SV (Germany)	BVA (UK/Australia)
Excellent	A-1	Normal	0-4 (no > 3/hip)
Good	A-2	Normal	5-10 (no > 6/hip)
Fair	B-1	Normal	11-18
Borderline	B-2	Fast Normal	19-25
Mild	C	Noch Zugelassen	26-35
Moderate	D	Mittlere	36-50
Severe	E	Schwere	51-106

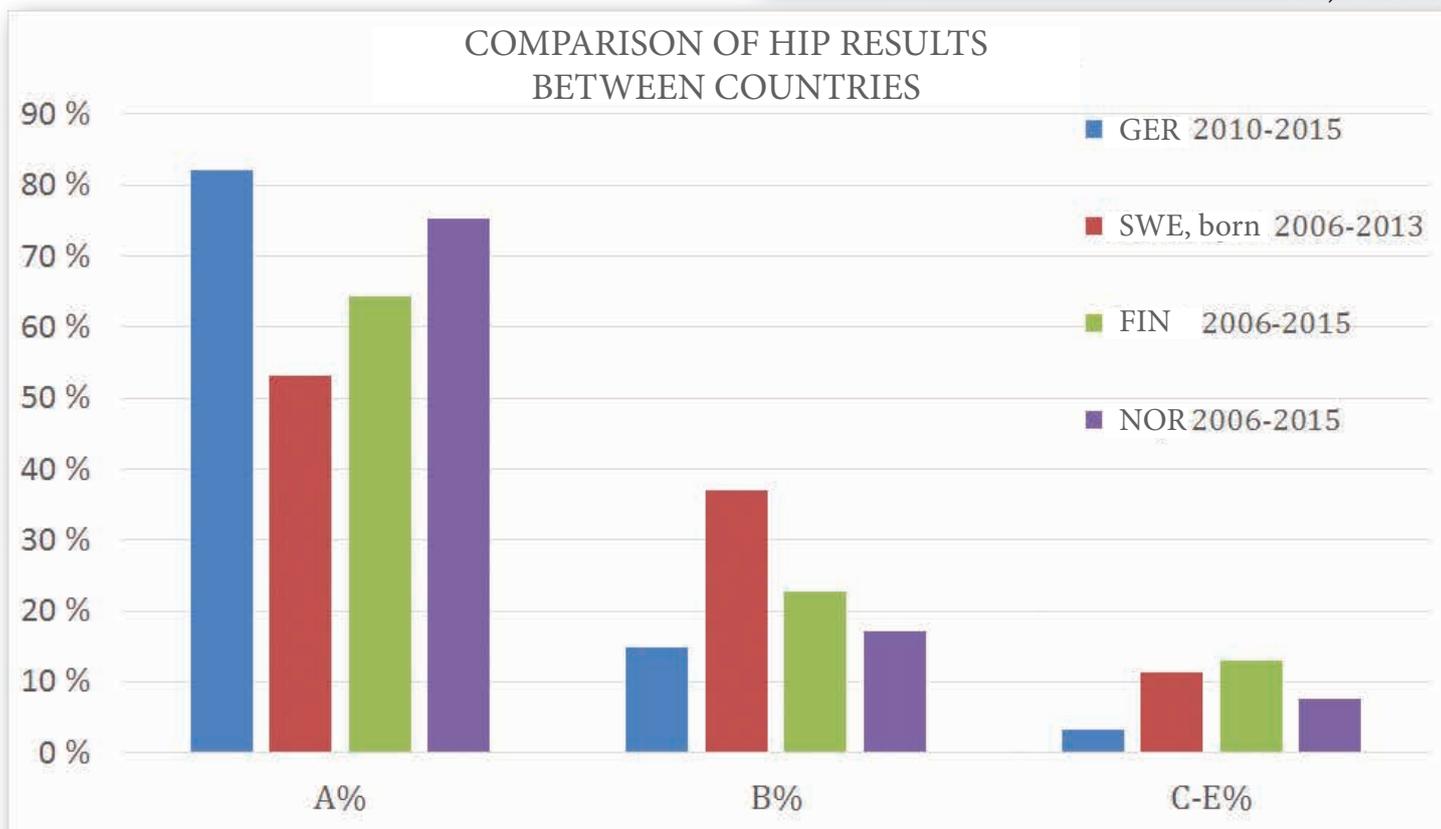
### United States

American kennel Club or GPCA don't have any statistics because in US owners can choose if they publish the result or not. Rough statistics from OFA data:

Breed	Born 2006-2010		
	Evaluations	Percent Excellent	Percent Dysplastic
GERMAN PINSCHER	134	16.4%	3.0%

OFA, Jan. 2016

COMPARISON OF HIP RESULTS BETWEEN COUNTRIES



Sources: DogNet, SKK Hunddata, NKK data

Only in Germany it is required that puppies' parents hip result is A or B so puppies can be registered. In Finland Finnish Kennel Club has restricted registering puppies whose parents has hip grade E; this is for all breeds, not only Pinschers. Swedish and Norwegian Breed clubs recommendation is to use only dogs with A-or B-grade hips, and in Finland the Breed club's recommendation is not to use dogs with D-hips.

There are no recommendations considering hips in USA.

## EYE DISEASES

With eye examination requirement with Pinschers the main issue is to prevent Hereditary Cataracts (HC). As mentioned in the Breed club's breeding criteria, eyes must also be free from following diseases: RD, PRA and PHTVL/PHPV. Only exception is with PHTVL/PHPV grade 1; another parent of litter may have grade 1, but other must be healthy.



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### HEREDITARY CATARACT (HC)

*Cataract: any inherited or non-inherited, congenital or acquired, non-physiological opacity of the lens and/or its capsule. The defect may result in blindness if complete and bilateral. All bilateral or unilateral cataracts and especially cortical cataracts are presumed inherited eye diseases except in cases known to be associated with trauma, other causes of ocular inflammation, metabolic disease, nutritional deficiencies, persistent pupillary membrane, persistent hyaloid artery or old age.*

<http://ecvo.org/images/ecvo-manual/5-Definitions%20130304.pdf>

In Finland the Breed club has followed the development of hereditary cataracts in Pinschers since 1990's. The Club started a prevention program immediately after first findings.

In year 2009 the Breed club compiled an extensive eye statistics consisting all eye examination results from years 1998-2009. There were 371 examined dogs. All results were divided to three groups: dogs examined at 1-5 years of age, examined at 5-9 years of age and examined at 9 years or older. Statistics shows that usually Pinschers get affected with Hereditary cataracts around 6 years of age. In first age group the percentage of affected was 12%, and in second age group as high as 22%.

The inheritance of German Pinscher's hereditary cataract is still unknown despite of many laboratories' attempts, but Finnish Breed club has managed to collect large amount of information about it by following the development in

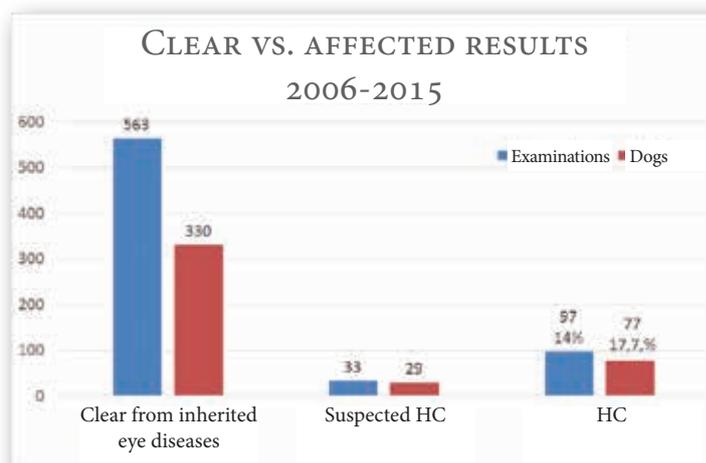
several dogs that have been examined annually by the Breed club.

The cataract type in Pinschers very rarely causes the dog to go blind. It usually causes some cloudiness to the lens, but it rarely develops so much that it would affect to the dog's eyesight. In Pinschers these cloudy formation can even disappear with time. Total cataracts are known in Pinschers only as very rare cases.

Pinschers with HC diagnose haven't been used in breeding yet (only one case to date), although the Breed club's criteria allowed after 2013 to use dog with HC once.

However, there are several dogs that have been diagnosed with hereditary cataract after breeding use. Problem is that usually HC-findings occur in older age, when the dogs have been used already.

It is recommended to still do eye examination when the dog is 6-8 years old, after the breeding use.



DogNet, Health statistics – eye statistics 2006-2015

## Cataract vs. clear results 2006-2015 (10years)

Diagnose	Results	Dogs
<b>No hereditary eye diseases</b>	<b>563</b>	<b>330</b>
Cataract without further localisation, suspect	28	24
Cortical cataract, suspect	5	5
Cataract without further localisation, found	15	12
Cortical cataract, found	40	30
Nuclear cataract, found	3	3
Posterior polar cataract, found	33	26
Total cataract, found	2	2
Other insignificant cataract, found	4	4

*DogNet, Health statistics – eye statistics 2006-2015*

**PHTVL/PHPV** (persistent hyperplastic tunica vasculosa lentis/persistent hyperplastic primary vitreous)

*Presumed inherited, congenital eye disease which results from failure of regression of the embryologic vascular network, surrounding the developing lens and primary vitreous. The latter fails to regress within the first 2-3 weeks after birth. The defect is currently graded in 6 levels of severity, in which grade 1 is characterized by uni- or bilateral small, yellow to brown dots mainly centrally, retrolentally on the posterior capsule of the lens. These are stationary and do not affect vision. The more severe forms (2-6) usually occur bilaterally and cause visual impairment or blindness.*

<http://ecvo.org/images/ecvo-manual/5-Definitions%20130304.pdf>

**PHTVL/PHPV-diagnoses (and clear diagnoses) during 2006-2015:**

Diagnose	Results	Dogs
<b>No hereditary eye diseases</b>	<b>563</b>	<b>330</b>
PHTVL/PHPV, open diagnosis	7	7
PHTVL/PHPV, grade 1 of sickness	21	14
PHTVL/PHPV, grade 2-6 of sickness	8	6

*DogNet, Health statistics – eye statistics 2006-2015*

PHTVL grade 1 is diagnosed to couple dogs annually in Finland. In 2000's the amount of Grade 1 was significantly higher than in 2010's.

Dogs with PHTVL/PHPV grade 1 are allowed to be used in breeding in Finland, but the partner must have clear eye result.

Dogs with grade 2-6 should not be used in breeding.

## OTHER EYE DISEASES IN GERMAN PINSCHERS

Some other eye diseases has also been diagnosed in Pinschers, mostly Distichiasis (eyelashes in abnormal location of the eyelid) in 16 Pinschers. Other diseases, like Atresia of lacrimal punctum and corneal dystrophy has been found only insignificant amounts.

## EYE DISEASES AND BREEDING

Breeding dog's eyes must have been examined for following hereditary diseases: HC, RD, PRA, PHTVL/PHPV, and examination must have been done maximum of 8 months prior the breeding according to the breed's PEVISA-program. Eyes must be clear from diseases mentioned, only exception is PHTVL/PHPV grade 1. When using frozen semen from already deceased dogs, eye examination must have been valid at the time of when the semen has been stored.

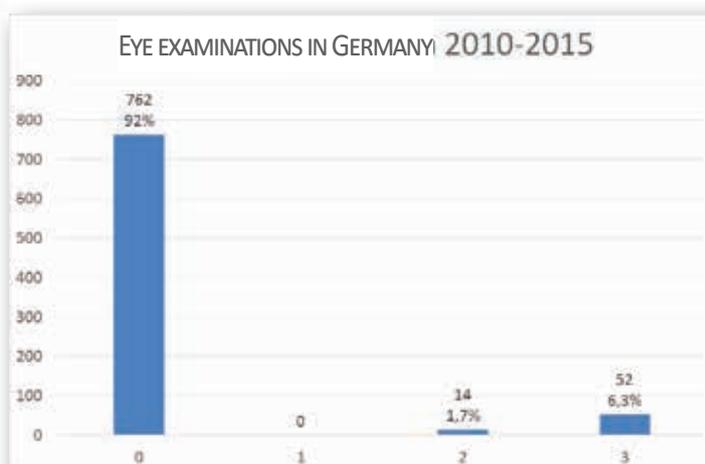
According to the Breed club's standing breeding criteria in year 2016 allows using a dog that has some eye disease but only once, and the partner must be clear from eye diseases. Breed's valid PEVISA-program only demands that eye examination has been done, without any limitations considering the result.

## EYE DISEASES IN OTHER COUNTRIES

### Germany

The breed's Parent Club PSK uses following codes about eye examination results:

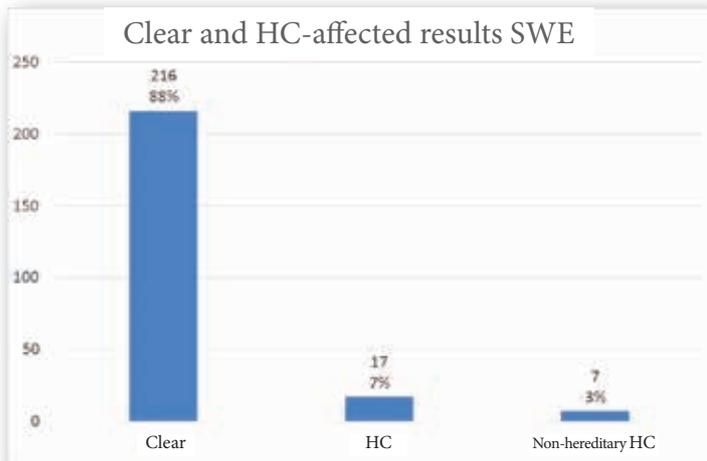
- 0 - No inherited eye diseases, valid for 12 months
- 1 - suspect of inherited eye disease, valid for 12 months
- 2 - tentatively not clear, re-examination after 12 months
- 3 - not free from inherited eye diseases



*PSK.de, January 2016*

## Sweden

SKK Breeding data gives the statistics by the birth year of dogs. Below is a chart of Clear and Cataract results from Pinschers that were born during 2003-2010.

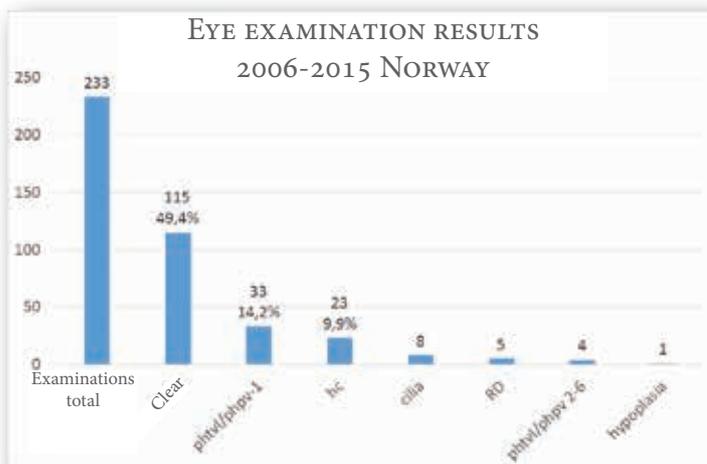


SKK Avelsdata, January 2016

## Norway

Eye situation in Norway differs from Finland and Sweden considering amount of PHTVL/PHPV-findings quite significantly.

Besides HC- and PHTVL/PHPV-findings there are mainly only few cases of other findings.



NKK, Jan. 2016

## USA

There aren't reliable eye statistics available from USA, because it is voluntary to publish the results. In USA breeding dogs are eye examined and hereditary cataract is a known issue there too.

### 4.3.2 OTHER SIGNIFICANT DISEASES IN THE BREED

Other significant diseases or issues with German Pinschers are post-vaccinal reactions and ear margin vasculitis. About every fourth Pinscher puppy gets neurological symptoms after first distemper shot and almost half of puppies suffer from splitting eartips, known as

ear margin vasculitis. These problems are so common within the breed that most likely it is impossible to totally weed them out of the population.

### EAR MARGIN VASCULITIS

*Ear Margin Vasculitis is a condition of ear (pinnae) margins, (tips, edges) where the tiny vessels on the edges of the ears suffer insult, and can lead to ischemia (blood starved) areas, which can lead to necrotic areas (tissue death). If this process is not interrupted with treatment, the ear edges can turn black, hard, and leathery. Once this stage has been reached, cracking and bleeding can occur, requiring immediate treatment.*

*Some potential causes follow:*

*Cold can constrict the tiny blood vessels and result in this effect on the edges of natural and cropped ears. This can result with the development of necrotic areas on the ear leather.*

*GPCA website, <http://www.german-pinscher.com/EyesEarshealth.htm>*

This problem is especially bothering young pinschers under 2 years of age. In Health survey 2010, 47% of young Pinschers suffered from this condition and 13% of them continued having it in adulthood.

The cause or reason of this problem is unknown but it is suspected to be an autoimmune problem. Some other breeds suffer from it also but the Breed club's breeding committee doesn't have any systematic info about it in other breeds.

This problem is at its worst stage during autumn and winter. Treatment is to cover the ears, plastering and treating cracked eartips with lotions and oils.

In very rare cases the dog's eartips has had to be amputated because the problem has been so severe.

The Breed club does not have any breeding criteria regarding ear margin vasculitis.

### POST-VACCINAL REACTIONS

Neurological symptoms after first distemper shot has been known in Pinschers since 1980's. The symptoms are breed-specific and not known in other breeds, so therefore it most likely is a hereditary problem.

Post-vaccinal reactions are very common within the breed and there isn't knowledge about what actually causes the problem. Breeders and puppy owners have to stress about will their puppy get complications or not. Usually complications are moderately mild causing tiredness, shivering and nausea.

In most severe cases puppies had been treated long

periods in the veterinary hospital and symptoms may have been life threatening. Couple cases are known when puppies have died despite of veterinary care, one in Finland and some cases in Sweden. This is an international problem within the breed.

Two individuals who haven't had post-vaccinal reactions can produce a litter where some of the puppies have reactions, and a dog that has had reactions itself can produce litters without any puppies with symptoms. There is no (public) knowledge about inheritance when two dogs with reactions have been paired, because it is forbidden in Finland.

In the Breed club's surveys the percentage of reacted dogs are as follows:

- 1992 survey: 33% from all answers
- 2000 survey: 18% from all answers
- 2004 survey: 25% from all answers
- 2010 survey: 17,9 % from all answers
- 2013 survey: 31,9% from all answers

With mild symptoms the treatment is cortisone tablets at home, and in more severe cases puppy must be taken to veterinary care to get cortisone and B-vitamin.

In breeding it must be noted that even a dog with mild symptoms must be paired with a dog that did not have any symptoms. The Breed club is constantly following the situation with surveys and in litter follow-ups that every breeder must return from their litter when their puppies are 8 months old.

## AUTOIMMUNE PROBLEMS

For the time being, Pinschers don't have autoimmune problems in large amounts, but very narrow gene pool doesn't help avoiding those problems.

There has been cases of **SLO** (*Symmetric Lupoid Onychodystrophy*) in more than couple dogs. It damages dog's nails. Some of the affected dogs are close relatives. The Breed club's Breeding committee knows around 10 cases of dogs with this disease.

Additionally there has been reported cases of other autoimmune diseases, for example Masticatory Myositis. It would be very important to report autoimmune cases to the Breeding committee, for following them closely and to take action immediately when it seems that the breed is getting in serious problems.

Also, post-vaccinal reactions and ear margin vasculitis are suspected to be autoimmune-related problems.

## POST-VACCINAL REACTION SURVEY 2013

*Owners answered from 135 different Pinschers. From those, 43 had reactions(31,9%), and 92 didn't have any. 13 of all dogs were imports and it should be noted that none of them had reactions. However, as many as 23 dogs that did have had reactions, another parent was imported dog, and three dogs that had reactions both parents were imports.*

*From all 43 dogs that did have reactions, only two's parent were known to have had reactions. 18 reacted dogs had parents with no reactions.*

*Five dog's from all dogs without reactions (92 dogs), had a parent with reactions. 53 non-reacted dogs had non-reacted parents.*

*All reacted dogs in the survey did have their reactions after the first distemper shot that was given at 12 weeks of age. One puppy got new reactions from booster that was given 1 month after the first one.*

*Mostly the symptoms started either 7-10 days after the vaccination (20 dogs) or 11-14 days after (16 dogs).*

*The results of the survey strenghten the old pattern that usually symptoms start 7 to 14 days after the vaccination. One dog got symptoms during days 4-5 after the vaccine and one during days 5-7. Three dogs got symptoms during first day after the vaccine.*

*Those three dogs that were told to have their reactions during one day after the vaccine, got the usual breed-specific symptoms (increased swallowing, shivering etc.), and werent specifically related to each other. One of them was from same litter than one dog that got symptoms during 4-5 days after the vaccine.*

*Mainly the symptoms have been treated with cortisone, either at home (tablets) or at veterinary care by injection. In most cases treating at home was enough, and couple dogs did not need any kind of treating to their very mild symptoms. One puppy died despite of veterinary care.*

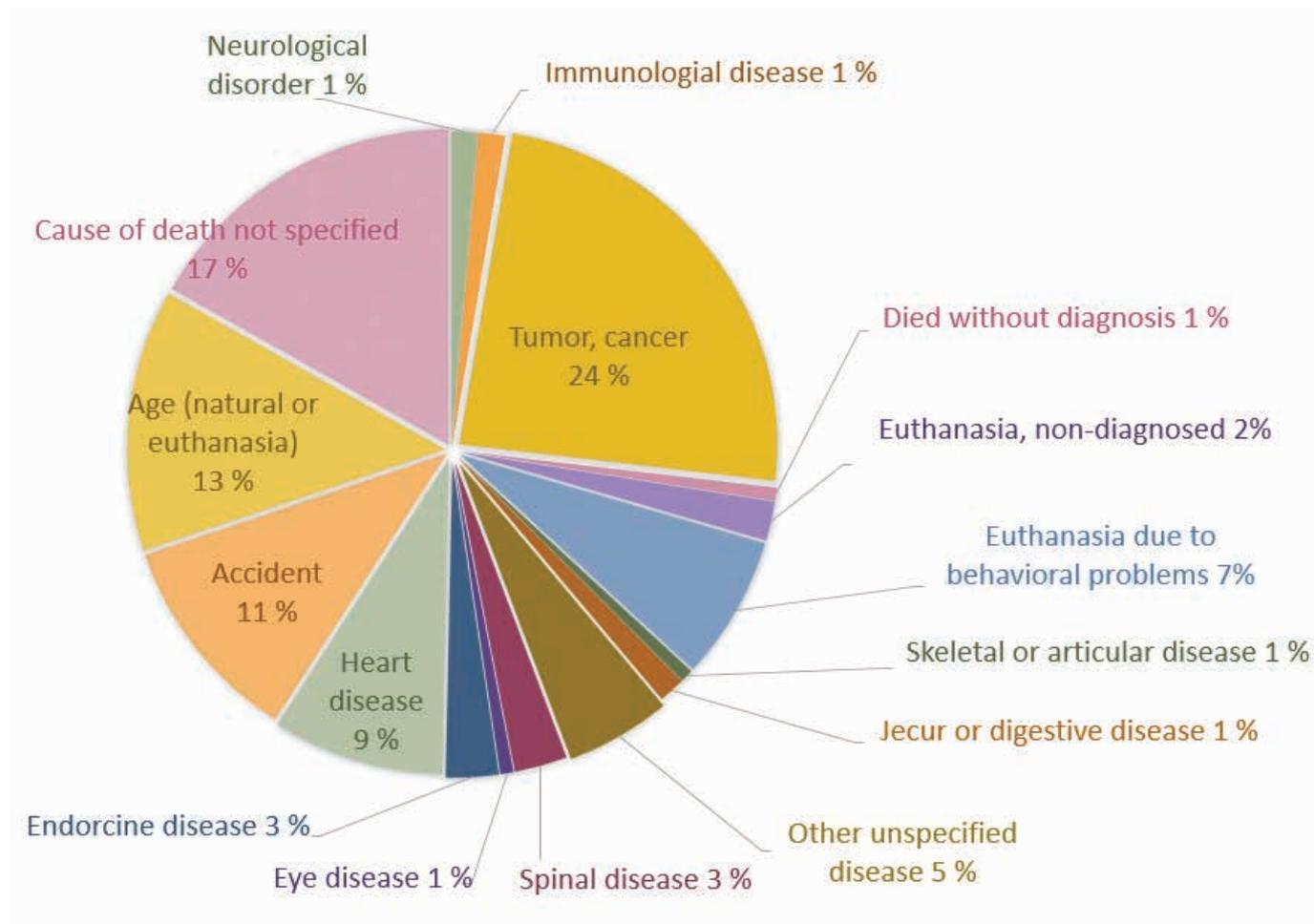
*Owners told also about other veterinary treatments: B-vitamin as injection, sedatives (diazepam) and anti-nausea drugs. Some dogs had to be sedated to make the cramping to end. Some dogs got also antibiotics.*

*Antibiotics as only treatment (with wrong diagnose) has not helped, and owners have had to go get cortisone and B-vitamin later on for their dog.*

*Some symptoms have been diagnosed wrongly as epilepsy, gastric inflammation or distemper. Breeders have a big responsibility to educate their puppy owners about possible post-vaccinal reactions, and preferably give written instructions about post-vaccinal reactions that puppy owners can give to their veterinarian if they have to go to get veterinary care for their puppy.*

*Finnish German Pinscher Club's Post-vaccinal reaction survey 2013*

### 4.3.3 MOST COMMON CAUSES OF DEATH ACCORDING TO FINNISH KENNEL CLUB'S DOGNET-DATA



*DogNet, cause of death statistics 2001-2015, Jan. 2016*

Statistics from 2001-2015 contains info of 149 Pinschers. According to data, Pinschers usually die because of some kind of cancer (36 cases), but their average age at the time of death is high, 11years 3months. Pinschers that die at young age usually have been put down due to behavioral problems (11 cases, avg. age 3,5y) or they have died in accidents(16 cases, avg. age 5 years 7 months).

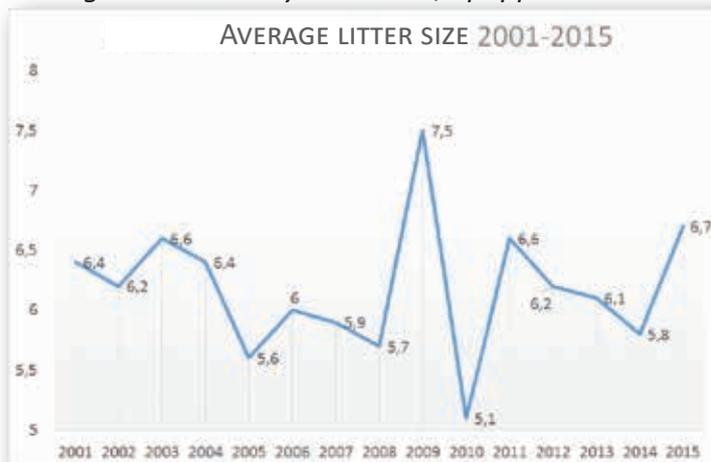
Cause of death	Average life span	Cases
Neurological disorder	2 years 11 months	2
Immunological disorder	5 years 11 months	2
Tumor, cancer	11 years 3 months	36
Dead without diagnosis of illness	10 years 5 months	1
Euthanasia, non-diagnosed	9 years 2 months	3
Euthanasia due to behavioral problems	3 years 6 months	11
Skeletal or articular disease	11 years 3 months	1
Jecur or digestive disease	10 years 11 months	2
Other unspecified disease	10 years 2 months	8
Spinal disease	8 years 5 months	4
Eye disease	2 years 4 months	1
Endocrine disease	11 years 6 months	4
Hear disease	8 years 6 months	13
Accident	5 years 7 months	16
Age (natural or euthanasia)	13 years 7 months	20
Cause of death not specified	7 years 11 months	25
<b>Altogether</b>	<b>9 years 2 months</b>	<b>149</b>

*DogNet, cause of death statistics 2001-2015, Jan. 2016*

#### 4.3.4 REPRODUCTION

##### AVERAGE LITTER SIZE

*Average litter size stays around 6,5 puppies:*



*DogNet, litters 2001-2015, Jan. 2016*

##### MATING PROBLEMS

Breeders haven't reported more than single cases of problems in matings. Breed reproduces naturally.

##### PROBLEMS IN GESTATION

Mostly females become pregnant well. In some single cases bitches don't get pregnant, but not in worrying amounts.

##### BIRTHING PROBLEMS

Mostly Pinschers give birth naturally. In very few cases c-section is needed, and in those cases there are usually 1 or 2 very large puppies.

##### PROBLEMS IN TAKING CARE OF PUPPIES

Breeders haven't reported about problems with their females taking care of their puppies.

##### PUPPY MORTALITY RATE

*"According to different sources, puppy mortality rate ranges between 9 – 26 %. Animals like dogs, that have multiple offspring at once, it is quite normal that one or two puppies might die. Usually puppies deacease during the first week after being born. There are many reasons for puppy deaths and it is not always possible to tell what was the reason."*

*(free translation from DVM, PhD Nina Menna, "Dog 's reproduction"  
<http://www.spi.fi/binary/file/-/id/124/fid/622/>)*

Some puppy mortality is occurring in Pinschers also, but the percentages stay well within the range mentioned above that is considered normal.

##### CONGENITAL PROBLEMS AND MALFORMATIONS

Breeders have reported about some problems in litter follow-ups. Reasons for died puppies have been mentioned for example "weak puppy" (birth weight significantly small or weak vitality), and some cases of undeveloped intestines or born with open stomach or skull or cleft palate.

#### 4.3.5 ANATOMICAL FEATURES THAT EXPOSE TO DISEASES OR PROBLEMS IN REPRODUCTION

Pinscher has very basic canine structure without any exaggerated features. Therefore the breed is not disposed to diseases or reproductional problems because of it's sturcure.

#### 4.3.6 SUMMARY OF THE MOST CRUCIAL PROBLEMS IN BREED'S HEALTH AND REPRODUCTION

##### MOST ESSENTIAL PROBLEMS

At this moment the most essential problems affecting to the dog's life and well-being are ear splitting and also post-vaccinal reactions in puppy age. Also the hip dysplasia situation should not get any worse. Ear margin vasculitis has been suspected to be autoimmune problem and especially post-vaccinal reactions as breed-specific problem speak for big problems in the breed's population size and in lack of genetic variation.

##### POSSIBLE REASONS FOR PROBLEMS

Small population size and lack of genetic variation exposes the breed to homozygosity of genes and therefore to diseases to show up. The whole German Pinscher population is based to 5 individual dogs in 1950's. Even though there actually isn't popular sire syndrome in Nordic countries anymore and the amounts of offspring are moderate, all dogs are still related at least in further generations. There aren't any other ways for getting new genetic material into the breed but crossbreedings.

##### PREPARING FOR AND PREVENTING PROBLEMS

Some German Pinscher breeders have invested in different genetic test projects in many countries for getting help for the breed before it is in serious problems.

### Project for Hereditary Cataract, Finland

In mid 2000's the Finnish Breed club started a project for creating a gene test for Pinscher's HC with Animal Health Trust-laboratory. The Breed club organized and collected dozens of gene swabs from Pinschers that were chosen to the project for their own eye status or partially for their kinship to other either clear or affected dogs. Several dogs were invited to eye examinations that the Breed club paid. However, the project had to be cancelled due to funding problems; the laboratory needed funding and the small Breed club could not participate to funding.

### Post-vaccinal reaction project, Finland

During early 2010's the Finnish Breed club actively collected gene swabs for Hannes Lohi's Canine study group, when they showed interest in the genetic base of the breed's post vaccinal reactions. At this moment the project is still in progress.

### PRAA (Persistent Right Aortic Arch) and HC, Germany

There is active study going on in Hannover University in Germany for German Pinscher's hereditary cataracts as well as Pinscher's PRAA (Persistent Right Aortic Arch, causes megaesophagus-like symptoms). According to the Breeding committee's non-specified information (no names mentioned), there has been born over 30 Pinscher puppies with PRAA/megaesophagus in different countries. Some puppies have been pathologically examined and all of them had specific form of PRAA, PRAA-SA-LA, that is not known much in other breeds.

### Genetic diversity, Germany

German breeders have lately interested doing DLA-testing to their dogs. Results have been presented at annual Breeder's Meeting in Germany.

### Hereditary Cataract, USA

German Pinscher Club of America (GPCA) is working with Optigen to collect samples from Pinschers.

### Heart diseases, USA

At least in early 2010's GPCA actively collected heart ultrasound examination reports for screening the heart situation. Reports from some Finnish dogs were also sent to GPCA Health committee. There has not been any summaries published about the results.

Problems with getting new genetic tests for this breed is probably that the breed population is so small, so it is not the easiest one to do study on. There is only limited amount of samples and at least there probably will become problems with funding the projects.

### GENETIC DIVERSITY; MYDOGDNA-HEALTH SCREENING

In late 2000's the Finnish Breed club made the decision to start genetic diversity screening with Genoscooper-laboratory's DLA-haplotype testing. The laboratory stopped offering the test soon after, and only some Pinschers were tested with private funding.

From beginning of year 2015 The Breed club decided to start a diversity project using MyDogDNA-health passes, that include around 100 genetic tests for diseases, color genes etc and also provides genetic mapping for all breeds. Finnish German Pinscher Club pays half of the price of each test for getting 30 Pinschers tested.

### Situation in January 2016:

During year 2015 the Breed club financially supported a MyDogDNA-passes for 15 Pinschers, and 8 Pinscher's owners that paid the passes themselves kindly gave their dog's results for the Breed club's use. The main goal is to examine the breed's genetic diversity, but at the same time we get some interesting and fun info about other, minor genetic details such as colors and coat type.

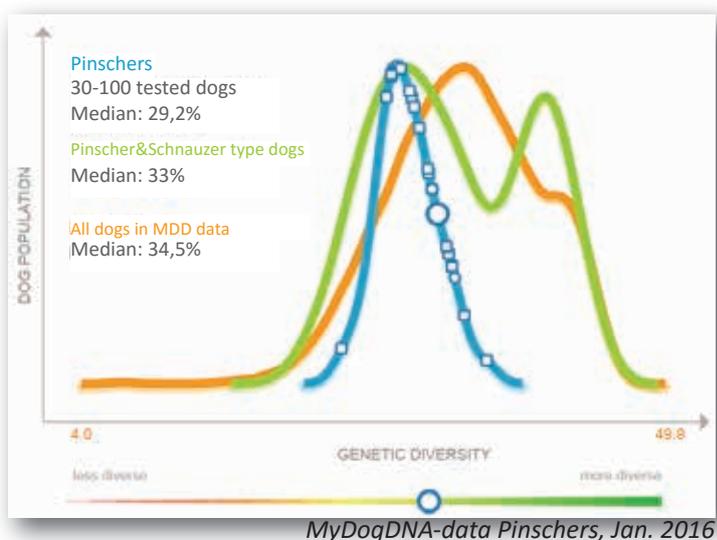
Lately 18 Pinschers from US has also been tested with MDD-pass and the Breed club tries to get contact with these dog's owners for co-operation and sharing information.

Follow-up reports are published 1-2 times a year in the Breed club's website or in the Breed magazine.

These results with collected DLA-results tell that the breed's genetic variation isn't that big.

MyDogDNA-data could be useful for example for planning crossbreeding projects, if Pinscher owners and breeders start testing their dogs more.

All dogs that are in the project marked with white dots below:



## 4.4. CONFORMATION



©N.P.

### 4.4.1 BREED STANDARD

**GENERAL APPEARANCE :** The German Pinscher is smoothhaired, medium in size with proud carriage, flowing outlines, elegant and square build. He is strong like the Schnauzer. Due to his short smooth coat, his well developed muscles are clearly visible especially when he moves.

#### IMPORTANT PROPORTIONS

- In relation of length to height, his build should be as square as possible.
- The length of the head (measured from the tip of the nose to the occiput) corresponds to half the length of the topline (measured from the withers to the set on of the tail).

**BEHAVIOUR/TEMPERAMENT :** His lively, spirited, self assured and evenly tempered nature combined with intelligence and endurance makes him an agreeable family, watch and companion dog.

#### HEAD

##### CRANIAL REGION

**Skull :** Strong, elongated, without markedly protruding occiput. The forehead is flat and runs parallel to the bridge of nose.

**Stop :** Slight, yet clearly defined.

##### FACIAL REGION

**Nose:** Nose leather well developed and always black.

**Muzzle:** Ending in a blunt wedge. Bridge of nose straight.

**Lips:** Black, smooth and tight-fitting to the jaws; corners of mouth closed.

**Jaws/Teeth:** Strong upper and lower jaw. The complete scissor bite (42 pure white teeth according to the dentition formula) is strong and firmly closing. The

chewing muscles are strongly developed without pronounced cheeks interfering with the smooth outline.

**Eyes:** Dark, oval, with black pigmented, close fitting eyelids.

**Ears:** Drop ears, set high, V-shaped, with inner edges lying close to the cheeks, turned forward towards temples. Folds parallel, should not be above the top of the skull.

**NECK :** Nobly curved, not too short. Blending smoothly into the withers without any marked set on. Dry, without dewlap or throatiness. Throat skin tight-fitting without folds.

#### BODY

**Topline:** Slightly sloping from withers towards rear.

**Withers:** Forming the highest point in topline.

**Back:** Strong, short and taut.

**Loins:** Short, strong and deep. The distance from last rib to hip is short to make the dog appear compact.

**Croup:** Slightly rounded, imperceptibly blending into tail set on.

**Chest:** Moderately broad, oval in diameter, reaching to the elbows. The forechest is distinctly marked by the point of the sternum.

**Underline and belly :** Flanks not too tucked up, forming a nicely curved line with the underside of the ribcage.

**TAIL :** Natural; a sabre or sickle carriage is sought after.

#### LIMBS

##### FOREQUARTERS :

**General appearance:** Seen from the front the front legs are strong, straight and not close together; seen from the side, the forearms are straight.

**Shoulders:** The shoulder blade lies close against the rib cage and is well muscled on both sides of the shoulder bone, protruding over the points of the thoracic vertebrae. As sloping as possible and well laid back. forming an angle of appr. 50° to the horizontal.

**Upper arm :** Lying close to the body, strong and well muscled, forming an angle of 95° to 100° to the shoulder blade.

**Elbows:** Correctly fitting, turning neither in nor out.

**Forearm:** Strongly developed and well muscled.

Completely straight seen from the front and the side.

**Carpal joint:** Strong and firm.

**Pastern:** Strong and slightly springy. Seen from the front, vertical, seen from the side, slightly sloping towards the ground.

**Forefeet:** Short and round, toes well-knit and arched

(cat feet), pads resistant, nails short, black and strong.

#### HINDQUARTERS :

General appearance: Standing obliquely when seen from the side, standing parallel, but not close together, when seen from the rear.

Upper thigh: Moderately long, broad, strongly muscled.

Stifle: Turning neither in nor out.

Lower thigh : Long and strong, sinewy, running into a strong hock.

Hock : Markedly angulated, strong, firm, turning neither in nor out.

Metatarsus : Vertical to the ground.

Hind feet : Somewhat longer than the forefeet. Toes well-knit and arched. Nails short and black.

**GAIT/MOVEMENT :** The German Pinscher is a trotter. His back remains firm and rather steady in movement. The movement is harmonious, sure, powerful and uninhibited with good length of stride. Typical of the trot is a ground covering, relaxed, fluent movement with strong drive and free front extension.



**SKIN :** Tight fitting over the whole body.

#### COAT

**HAIR :** Short and dense, smooth, close and shiny without bald patches.

#### COLOUR

- Self coloured : Deer red, reddish-brown to dark red brown.
- Black and Tan : Lacquer black with red or brown markings. The aim is for markings as dark, as rich and as clearly defined as possible. The markings are distributed as follows: above the eyes, at the underside of the throat, on the pastern, on the feet, at the inside of the hind legs and under the root of the tail. Two even, clearly separated triangles on the chest.

#### SIZE AND WEIGHT :

Height at withers : Dogs and bitches: 45 to 50 cm.

Weight : Dogs and bitches: 14 to 20 kg.

**FAULTS :** Any departure from the foregoing points should be considered a fault and the seriousness with which the fault should be regarded should be in exact proportion to its degree and its effect upon the health and welfare of the dog.

#### Particularly:

- Clumsy or light in build. Too low or too high on leg.
- Heavy or round skull.
- Wrinkles on forehead.
- Short, pointed or narrow muzzle.
- Pincer bite.
- Light, too small or too large eyes.
- Ears set low or very long, unevenly carried.
- Strongly protruding cheekbones (cheekiness).
- Throatiness.
- Too long, tucked up or soft back.
- Roach back.
- Croup falling away.
- Long feet.
- Pacing movement.
- Hackney gait.
- Thin coat.
- Black trace on the back, dark saddle and lightened or pale coat.
- Over- or undersize up to 1 cm.

#### SERIOUS FAULTS

- Lack of sexual type (i.e. doggy bitch).
- Light appearance
- Apple head.
- Lines of head not parallel.
- Elbows turning out.
- Straight or open hocked hindlegs.
- Hocks turning out.
- Over- or undersize by more than 1 cm but less than 3 cm.

#### DISQUALIFYING FAULTS

- Aggressive or overly shy dogs.
- Any dog clearly showing physical or behavioural abnormalities shall be disqualified.
- Malformation of any kind.
- Definitely inverse sexual type.
- Faults in mouth, such as over- or undershot or wry mouth.
- Severe faults in individual parts, such as faults in structure, coat or colour.
- Over- or undersize by more than 3 cm.

#### N.B.:

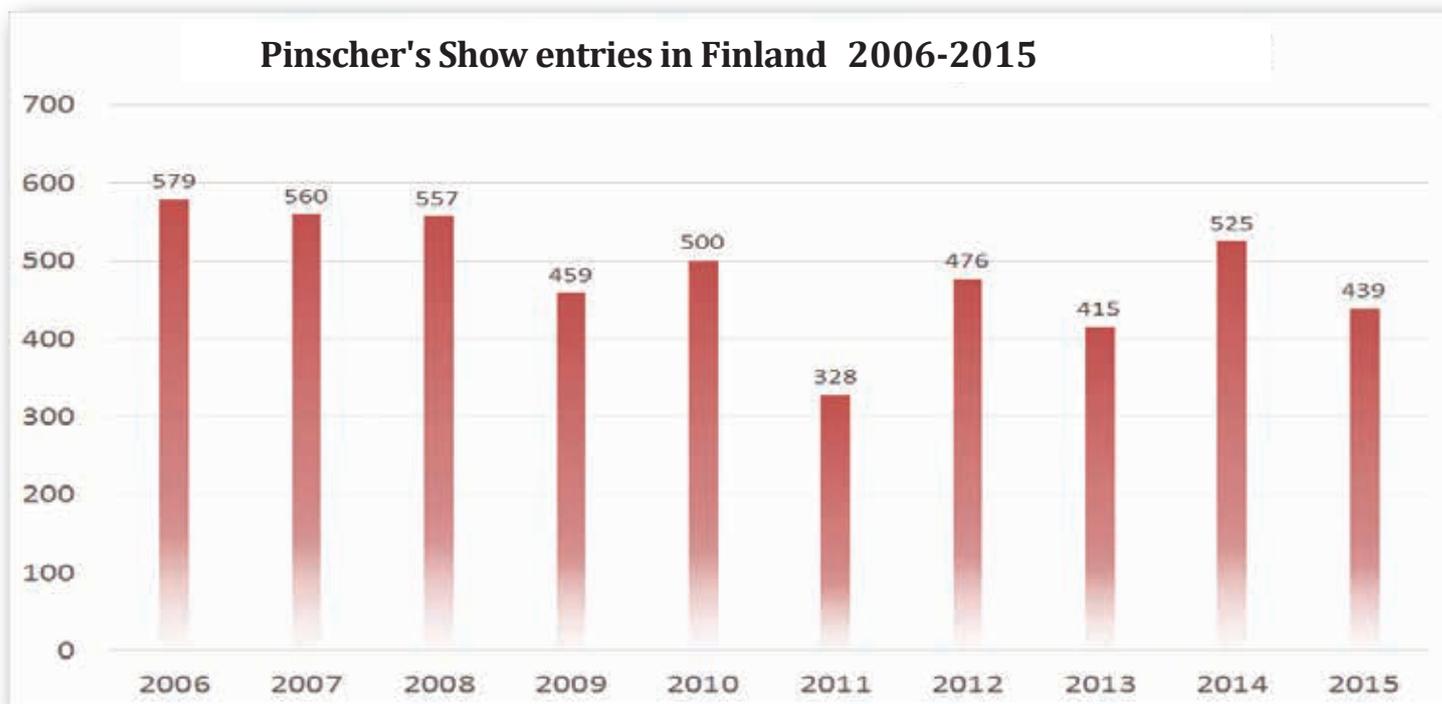
- Male animals should have two apparently normal testicles fully descended into the scrotum.
- Only functionally and clinically healthy dogs, with breed typical conformation should be used for breeding.

<http://www.fci.be/Nomenclature/Standards/184g02-en.pdf>

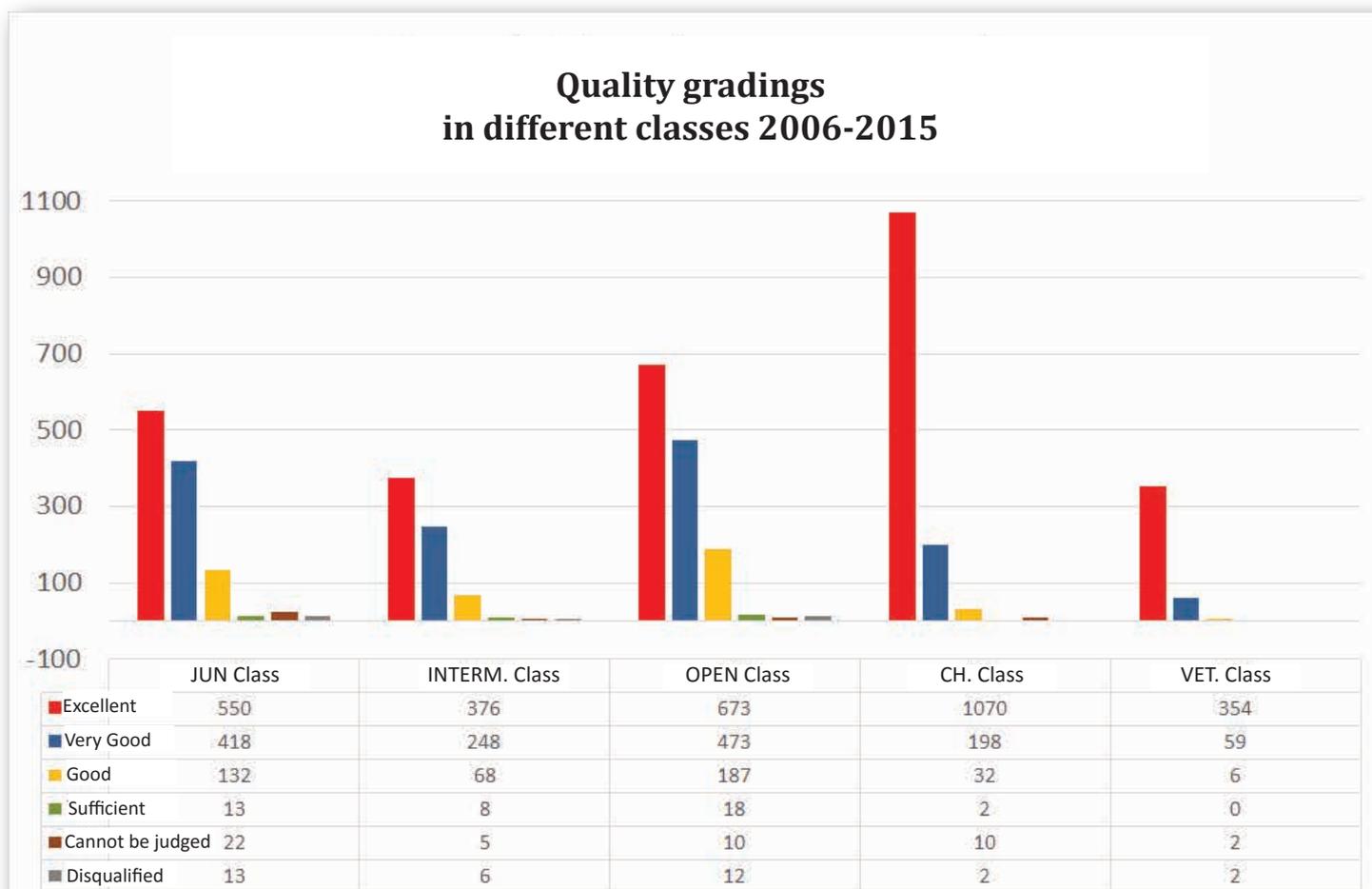
#### 4.4.2 SHOWS AND BREEDING EVALUATIONS

##### GERMAN PINSCHER'S SHOWING AMOUNTS

The main activity with Pinschers is dog shows. In Finland there are around 500 show entries annually. Quality of the dogs is good and they usually get Excellent-grading in all age classes.



*DogNet, show statistics, Jan. 2016*



*DogNet, show statistics, Jan. 2016*

## BREEDING EVALUATIONS

The Breed club arranges Breeding evaluations usually once a year. It gives a very detailed evaluation of the dog's conformation, done by a breed-specialty judge. Breeding evaluations are open to all Pinschers and it is free for dog owners. Purpose is to collect information of the dogs.

During years 2007-2015, 80 Pinschers attended to Breeding evaluation; 49 males and 31 females.

The evaluation reports are not always complete: all judges don't see necessary to mention the overall grading for different parts, but feel it more important to specify different conformation features. For the same reason there is not the overall quality grading given to all dogs.

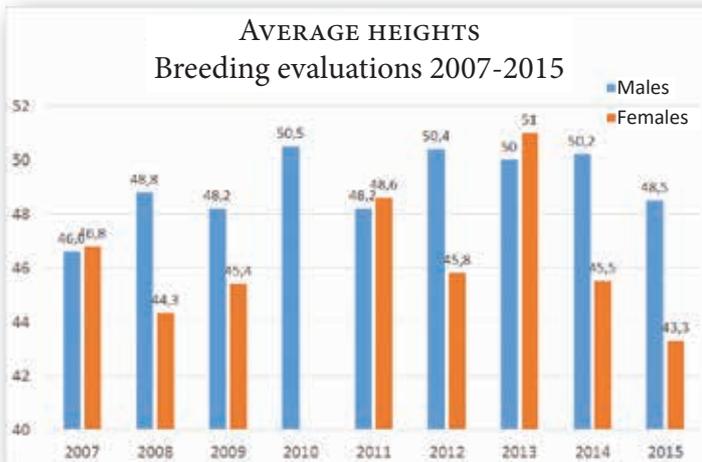
All dogs are not measured because they were not cooperative.

### SIZE

There are measurement info available from 47 males. The average size was 49,3 cm. Smallest measured male was 45 cm and tallest 55cm.

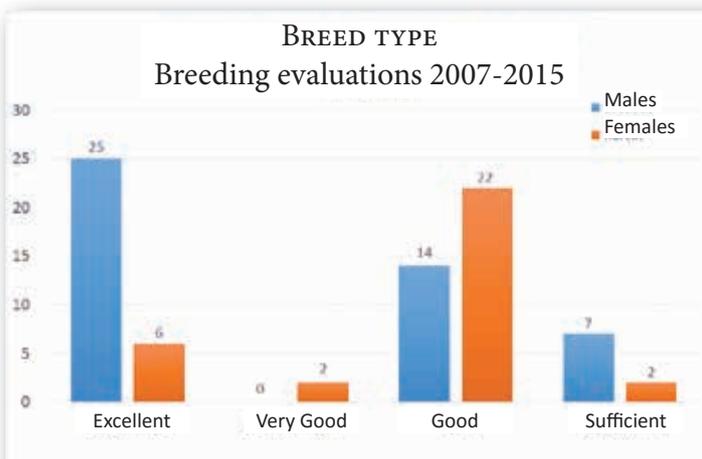
13 males (27,6%) were taller than the Breed standard (over 50 cm).

31 females were measured, and the average size was 45,5 cm. Smallest was 40 cm and biggest 51 cm. 10 females (32,2%) were smaller than what is required in Breed standard (under 45 cm) and one was over the standard.



### BREED TYPE

Breed type is evaluated for 79 dogs. Most males (53%) got grade 'excellent', when only 18,7% of females were graded 'excellent'.



## OVERALL GRADE

Overall grade was given only to 36 males and 23 females.



### 4.4.3 CONFORMATION AND ORIGINAL PURPOSE

Being originally a ratter and a yard guard, it is distinctive for the breed to have quick reactions and excellent physique, that allows the dog to do quick turns and movements. This should be taken into consideration when breeding for correct breed type. German Pinscher should be powerful but also at the same time it must show elegance and be agile and moderate in every way.

Pinscher is a moderate dog in every way: there shouldn't be any exaggerations whatsoever in it's structure.

Movement should be easy, active, ground covering and energy saving. So-called "show trot" is not typical for the breed, or movement that is tied to ground, rear high or crossing over.

### 4.4.4 SUMMARY OF ESSENTIAL PROBLEMS WITH STRUCTURE AND CONFORMATION

#### ESSENTIAL PROBLEMS OF THE BREED

As a healthy moderate breed there aren't features that would essentially lower the functionality of the breed. Front have been a problem since from the early days of the breed; poor forechests and especially short and straight upper arms are probably the biggest problems throughout the population. Because of this also unbalanced angulations in front and rear (rear angles usually being ok) are a problem.

There are several faults seen in Pinscher's movements, like rear-high topline or too arched loins.

#### POSSIBLE REASONS FOR STATED PROBLEMS

Possibly the breeding has been concentrating more to other than structural problems (like health or genetic variation), so detail problems in structure have been secondary priorities in breeding.

## 5. FOLLOW UP OF OBJECTIVES SET IN EARLIER BREEDING STRATEGIES

### VALIDITY PERIODS OF PREVIOUS BREED-SPECIFIC BREEDING STRATEGY ("JTO")

The first Breed-specific Breeding Strategy, "JTO", was valid during 2007-2011.

The first JTO was updated year 2011 and it was valid during 2012-2016.

### THE VERY FIRST BREEDING STRATEGY FOR THE BREED

First Breeding Strategy for German Pinschers became valid in year 2003 and it was followed until the first "JTO", Breed Specific Breeding Strategy (required by Finnish Kennel Club) was compiled and approved for the breed, and taken into use 1.1.2007. First breeding strategy was very brief and it did not have any concrete plan of actions.

### 5.1 QUALITY OF MOST USED BREEDING STOCK

#### MALES

Table shows the most used stud males during years 2001-2015 (15-year period)

#	STUD MALE	Born	OFFSPRING				HIPS				EYES			
			Litters	Total	During last year	2nd generation offspring	Examined	Affected	Examined %	Affected %	Examined	Affected	Examined %	Affected %
1	SINI-MININ DON HUAN	2005	5	39	0	75	10	1	26 %	10 %	9	0	23 %	0 %
2	LILLA ENEBYS VICTORY FOR CERIINAN	2002	4	30	0	64	8	0	27 %	0 %	10	2	33 %	20 %
3	LILLA ENEBYS HARRY	2007	7	29	0	16	4	0	14 %	0 %	9	2	31 %	22 %
4	SINI-MININ BIG BOY	2003	4	26	0	0	5	0	19 %	0 %	7	1	27 %	14 %
5	CAMARO CAMUS DW HARMONY STAR	2006	4	25	0	5	2	0	8 %	0 %	3	0	12 %	0 %
6	SINI-MININ MAFIOSO	2009	4	25	0	7	3	0	12 %	0 %	2	0	8 %	0 %
7	PACCO VOM AWARENRING	2006	4	25	0	8	4	0	16 %	0 %	7	1	28 %	14 %
8	CLEFELL'S GENTLEMAN	2001	3	23	0	44	6	3	26 %	50 %	9	2	39 %	22 %
9	OF LEIJLIDEN HERTZMAN	2001	3	23	0	16	4	2	17 %	50 %	5	4	22 %	80 %
10	CERIINAN ARNOLD	2001	3	23	0	33	8	0	35 %	0 %	7	1	30 %	14 %
11	ARON ARMING HARMONY STAR	2003	5	22	0	52	8	0	36 %	0 %	12	5	55 %	42 %
12	CERIINAN IVAR	2005	3	19	0	12	9	3	47 %	33 %	8	1	42 %	12 %
13	XITAMIZ VOLCANO	2008	3	19	0	5	2	0	11 %	0 %	2	0	11 %	0 %
14	CERIINAN GILBERT	2004	4	19	0	14	7	1	37 %	14 %	8	2	42 %	25 %
15	CLEFELL'S OSIRIS	2007	3	18	7	15	2	0	11 %	0 %	2	1	11 %	50 %
16	LEGACY'S MIDAS TOUCH FOR CLEFELL'S	2008	2	17	0	7	2	0	12 %	0 %	4	1	24 %	25 %
17	CERIINAN PRIMAS	2009	2	15	7	0	1	1	7 %	100 %	0	0	0 %	
18	CHERPIN MASSIMO	2003	2	15	0	0	0	0	0 %		4	0	27 %	0 %
19	RIVENDELLS MIDNIGHT EAGLE	2010	2	15	0	0	2	1	13 %	50 %	2	0	13 %	0 %
20	KARL DRYM'S DREAM KING BLACK	2012	2	15	7	0	0	0	0 %		0	0	0 %	

DogNet: Male's offspring statistics, reg.years 2001-2015, 20 first males

In the table, those results where percentage of affected offspring is over 30% are marked with red.

## BITCHES

Table shows the most used dams during years 2001-2015 (15-year period)

#	DAM	Born	OFFSPRING				HIPS				EYES			
			Litters	Total	During last year	2nd generation offspring	Examined	Affected	Examined %	Affected %	Examined	Affected	Examined %	Affected %
1	SINI-MININ MOCCA	2009	3	30	0	20	12	1	40 %	8 %	8	0	27 %	0 %
2	LILLA ENEBYS DREAM FOR SINI-MININ	2006	3	24	0	5	2	0	8 %	0%	2	0	8 %	0%
3	RATTENJÄGER MINNE FÜR MEGAMAGEE	2007	2	21	0	14	5	0	24 %	0 %	5	0	24 %	0 %
4	CERIINAN ADELE	2001	2	19	0	29	4	0	21 %	0 %	6	2	32 %	33 %
5	DOGIWOGIN CARKKI	2003	2	19	0	5	4	0	21 %	0 %	7	1	37 %	14 %
6	SINI-MININ BISSE	2003	4	19	0	56	6	0	32 %	0 %	4	0	21 %	0 %
7	DOGIWOGIN KISMET	2007	4	19	1	0	0		0 %		2	1	11 %	50 %
8	IDACO'S ISABELLA	2003	3	18	0	23	4	0	22 %	0 %	4	1	22 %	25 %
9	RIVENDELLS IMSA	2008	2	18	0	0	3	0	17 %	0 %	1	0	6 %	0 %
10	DOGIWOGIN DEAR DIVA	2004	2	17	0	0	0	0	0 %		1	0	6 %	0 %
11	NORRSTRÖM NIKKA	2009	2	17	0	0	7	1	41 %	14 %	6	2	35 %	33 %
12	IDACO'S IVETTE	2003	2	16	0	15	3	0	19 %	0 %	3	0	19 %	0 %
13	OF LEIJLIDEN PIA PARANT	2004	2	16	0	13	4	2	25 %	50 %	2	1	12 %	50 %
14	RIVENDELLS CINIMINI	2005	2	15	0	4	3	1	20 %	33 %	2	0	13 %	0 %
15	YARRACITTA LOISTOLYYLI	2007	2	15	0	8	3	1	20 %	33 %	3	0	20 %	0 %
16	XITAMIZ VEZPERA VIOLETTE	2008	2	15	0	7	3	1	20 %	33 %	4	1	27 %	25 %
17	CHERPIN RENEE	2006	2	14	0	11	4	1	29 %	25 %	3	1	21 %	33 %
18	OF LEIJLIDEN HARMONI	2001	2	13	0	19	4	0	31 %	0 %	4	1	31 %	25 %
19	DOGIWOGIN CELLERI	2003	2	13	0	7	2	0	15 %	0 %	2	0	15 %	0 %
20	XCLUSIVE VOM CAMP ACHENSEE	2007	2	13	0	71	6	0	46 %	0 %	6	0	46 %	0 %

DogNet: Offspring statistics of Bitches, reg.years 2001-2015, 20 first bitches

In the table, those results where percentage of affected offspring is over 30% are marked with red (at least 2 dogs).

For both sexes it can be noted from the tables that the population of the breed is small. Health examinations are usually done only to breeding prospects and other individuals aren't usually examined, so the amount of examined dogs is also small.

Couple offspring's results raise the percentages essentially and tables should be screened by individual dog amounts rather than percentages. Only in single cases some conclusions can be made about what a certain dog produces.



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## 5.2 FOLLOW-UP ON FULFILLMENT OF OBJECTIVES SET IN EARLIER BREED-SPECIFIC BREEDING STRATEGY

OBJECTIVE	PLAN OF ACTION	RESULT
Litter's COI maximum 6,25 % in 5 generations		Litter COI's: fulfilled
Development of the whole population COI: cannot rise more than 0,25 % during a year	To set a breeding criteria. Litters that don't fulfill the requirements will be left out from Breed Club's puppy list.	Fulfilled to sufficient level: Population COI has been mainly decreasing
Males are allowed to 4 litters and dams to 3 litters within Finland		Litter restrictions fulfilled, except couple single cases
Annual registrations should not go under 60 dogs	More new breeders	Fulfilled well
Effective population size should not decrease	Follow the situation	Has not fulfilled completely
One dog from every litter into breeding	Educating breeders	Has not fulfilled
Offspring amount of single dogs shouldn't be more than 5% (in one generation)	Educating breeders	Has not fulfilled completely
Amount of HC-affected and C-hips should not decrease.	All breeding dogs will be eye examined and Hip x-rayed	Considering HC: has fulfilled Considering hips: has not fulfilled
Following the development of temperaments	At least 10 dogs should be Mental tested annually. (Preferably breeding dogs)	Fulfilled
Following unwanted features in the population	Not combining dogs with same faults	Has not fulfilled completely
Quality of the dogs, measured by shows and breeding evaluations, should not decrease	Breeding dogs must be prized with VG from shows or have breeding evaluation done	Mainly fulfilled well
Amount of dogs under or over the standard's size limits should not decrease	Breeding dogs must be prized with VG from shows or have breeding evaluation done	Has not fulfilled completely

### PORTION OF DOGS LEFT OUT FROM EFFECTIVE POPULATION

Whole litters are being left outside of the effective population. Previously the goal was to get at least one dog from every litter into breeding use, and it still would be important to use bigger portion of the population for breeding.

### EVALUATION OF BREEDING CRITERIA AND HEALTH PROGRAMME FOR CANINE GENETIC DISEASES AND DEFECTS (PEVISA) OF THE BREED

#### BREEDING CRITERIA

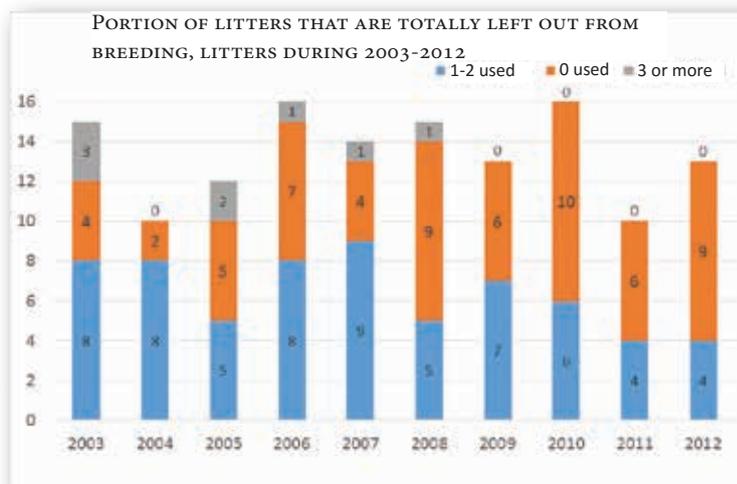
The Breed Club set the standing Criteria in 1.1.2013.

The criteria emphasizes for the diversity. Criteria leaves room for breeder's choices and allow to diverge from single health- or conformational features once if breeder feels a need for it. (However the Criteria does not allow using dogs that are in pain, have severe health issues or are shy or aggressive regarding Finnish Kennel Club's rules.)

#### BREEDING CRITERIA AND HEALTH PROGRAMME FOR CANINE GENETIC DISEASES AND DEFECTS (PEVISA)

Considering Hip Dysplasia PEVISA is up to date. Breeding dogs must be x-rayed before using but there are no limitations for the results. PEVISA-program considering Hips will be applied as is also for period 2017-2012.

Considering eyes, in Annual meeting 2014 the Breed Club decided to apply for longer validity period for eye examination certificates for next PEVISA-period. Now eye certificates are valif for 8 months, and The Breed Club applies for 12 month validity period so it would be the same as in most other countries.



*DogNet, litters 2003-2012. Jan. 2016*

## 6. BREEDING OBJECTIVES AND PLAN OF ACTION

### 6.1 BREEDING OBJECTIVES

#### POPULATION

Strive to avoid many closely related dogs being on top of generational and 10-year period breeding statistics, by sharing information and educating breeders of the problems caused by narrow breeding base.

#### BEHAVIOR AND TEMPERAMENT

Strive to keep the amount of Mental tested or MH-described dogs at about 20 to 25 Pinschers annually. Strive to decrease the amount of noise sensitive dogs in the population, or at least not let the amount increase from present situation (around 24% of tested and described dogs).

#### HEALTH AND REPRODUCTION

Strive to at least keep the Breed's diversity as wide as it is now, and through that to decrease autoimmune- and other health problems. Strive to keep amount of puppies with post-vaccination reactions under present percentage (33%).

#### CONFORMATION

Strive to keep the high quality of dogs that we have now.

### 6.2 GUIDELINES FOR COMBINATIONS AND FOR BREEDING DOGS

#### GUIDELINES FOR COMBINATIONS AND BREEDING DOGS

During period 2017-2021, diversity will be kept as the central point of the breeding. Thus the next criteria must be fulfilled in every litter to get the litters presented in The Breed Club's puppy list. These criteria will not be loosen or tighten during the period 2017-2021 (except criteria considering Hips, if the Dysplasia situation gets worse):

- Both parents must have official Hip certificate before mating. Dog with C-hip must be paired with a dog with A- or B-hips. Dogs with D- or E-hips are not allowed to be used.
- Dog that has had post-vaccinal reactions must be bred only with a dog without reactions.
- COI of the combination cannot be more than 6,25% with 6 generations, and the 6-generation pedigree must be known with 90% of the ancestors. If needed, the Breeding committee helps to calculate the COI.
- Repeat litters (from same parents) are not allowed.
- Bitch can have 3 litters and male can have 4 litters within Finland.
- Dogs used for breeding must be physically healthy. Shy or aggressive dogs must not be used for breeding.

Other parts of Breed Club's Breeding Criteria will be updated if needed. Up to date Criteria in full length can be found from Breed Club's website.

#### CROSSBREEDINGS

The Breed Club encourages breeders to do well considered and systematical crossbreedings. Considering the breed's present situation, the Breeding committee recommends that the dogs that are chosen for crossbreeding programs are especially evaluated by their temperament and behavior.

Additional Criteria for individuals chosen for crossbreeding programs:

- Dog has Mental test or MH-description done, and desirably there is information about the individual's close relatives' temperaments also.
- Dogs with noise sensitivity or poor nerves are not to be used in crossbreedings.
- Dog from another breed must have A- or B-hips.

## RECOMMENDATION FOR INDIVIDUAL'S MAXIMUM AMOUNT OF OFFSPRING

According to Finnish Kennel Club, "dog's lifetime amount of offspring should not be more than 5% of that amount that is registered during 4-5 years".

In German Pinschers this would mean around 18 puppies per breeding dog, and that would mean about 2 litters would be enough for one dog. However, the Breed Club doesn't feel it possible to restrict the litter amount so low, but would be recommended that breeders and stud dog owners would pay attention to their dog's presence in the breeding statistics.

The Breed Club does not present those litters in it's puppy list, where parents have more than 3 (dams) or 4 (sires) litters already. However there is not any registration restrictions (PEVISA-rules) about offspring amounts.

## 6.3 BREED CLUB'S ACTIONS FOR PERIOD 2017-2021

### HEALTH

- To follow health situation like during last period.
- If amount of C- and D-hips decreases to 30%, The Breed Club will start actively to prevent Hip dysplasia with stricter breeding Criteria and with applying stricter PEVISA-rules.
- Re-evaluation and changing the breeding Criteria if needed, for other health issues.
- To do a health survey.
- To do a survey about reproduction.
- Booklet about ear splitting to be published in Breed Club's website.

### TEMPERAMENT

- Breed Club arranges Mental test annually.
- Following especially amount of dogs that show noise sensitivity in Mental tests and MH-descriptions.
- To do a behavior and temperament survey during the period.
- Share information about importance of screening the temperaments and behavior to breeders and puppy buyers.

### CONFORMATION

- To update the illustrated breed standard for Judges' education, to show the conformation issues (mainly short and straight upper arms, that has been an issue throughout the breed history) more specifically.

## 6.4 THREATS AND POSSIBILITIES AND ANTICIPATION

### THE BREED'S MAIN THREATS AND POSSIBILITIES

#### THREATS

- Temperament and behavior: shyness, sensitivity to noises and slippery floors
- Sales activity: breeders have puppies well after 7-8 weeks of age. Do possible buyers find the breed? Is the "old reputation" still affecting to people's opinion about the breed?
- Autoimmune problems, other possible problems to come (caused by narrow gene pool), defunctional informing from breeder to breeder about dog's health issues in the family

#### POSSIBILITIES

- Size, coat and temperament mainly excellent for a companion dog
- Suitable for activities, especially rally-obedience
- Crossbreedings: better diversity
- Better promotion for making the breed more well-known?

#### ANTICIPATION

- Temperament: Informing about the importance of Mental testing and MH-description to breeders and possible buyers. "Opening up" the test results in Breed Club's website
- Marketing: Promoting the breed in happenings and expos, possible "PR" for competing (agility & rally-obedience) dogs?
- Health: encouraging breeders for being more open about health issues in their litters and changing information with each other and with the Breed Club. Following the situation in other countries.

## 6.5 BREED CLUB'S STRATEGY AND FOLLOW-UP

YEAR	TASK OR PROJECT
2017	Breed's "marketing plan" Breeding evaluation Mental test Breeder's meeting or similar Annual summary and analyzing (population, COI, breeding statistics, health, temperament, conformation)
2018	MyDogDNA- diveristy project analysis Health survey Mental test Breeder's meeting or similar Annual summary and analyzing
2019	Temperament and behavior survey Breeding evaluation Mental test Breeder's meeting or similar Annual summary and analyzing
2020	Preparing the Breed-specific Breeding Strategy for period 2022-2026 Approving the PEVISA-program in the Breed Club's annual meeting for next PEVISA-period Breeding evaluation Mental test Breeder's meeting or similar Annual summary and analyzing
2021	Sending the new Breed-specific Breeding Strategy for period 2022-2026 to be accepted by Finish Kennel Club To apply the PEVISA for next period from Finnish Kennel Club Breeding evaluation Mental test Breeder's meeting or similar Annual summary and analyzing

### FOLLOW-UP PLAN OF THE IMPACTS OF JTO AND PEVISA

Analysing annual summaries to see if the objectives that are set are going to be fulfilled:

#### POPULATION

Annual:

- COI of litters (max. 6,25 % with 6 gen.)
- Population's COI's development (should not increase more than 0,25 % annually)
- Litter amounts (Males 4 litters, bitches 3 litters within Finland)
- Registration amounts (should not decrease from about 70 dogs)

Generation:

- Effective population development (should not decrease from present)
- Single individual's offspring amount (should not be more than 5% or registrations)

#### HEALTH

Annual:

- Amount of cataract-affected
- Amount of Hip dysplasia-affected

In Generation:

- Cataract-affected amount (should not decrease)
- Hip dysplastic (grades C, D) amount (should not increase)

#### TEMPERAMENT

Annually:

- at least 10 dogs mental tested/described
- Are dogs with similar issues paired together, or are dogs with issues bred with un-tested/described dogs

Generation:

- Development of Breed profile (appearing of unwanted features in the population)
- Amount of tested/described parents should not decrease (26% both tested/described, 34% another parent tested/described)

## 7. SOURCES

1. *Pinscher ry's survey-, examination- and statistical data*
2. *Previous Breed Specific Breeding Strategies of German Pinschers 2007-2011 & 2012-2016*
3. *Post-vaccination studies* © DVM Ph.D Minna Leppänen 1996 & 2005
4. *Dog reproduction- lecture material* © VMD Nina Menna
5. *Finnish Kennel Club*, [www.kennelliitto.fi](http://www.kennelliitto.fi)
6. *Finnish Kennel Club's DogNet data*, <http://jalostus.kennelliitto.fi/>
7. *DogsFiles-data*, <http://www.dogsfiles.com/>
8. *Tulospörssi-data of Mental tests in Finland* © Jorma Lankinen, <http://www.lemmikkipalstat.net/tulos/>
9. *Breed-typical behaviour in dogs—Historical remnants or recent constructs?* © Svartberg 2006, [http://www.appliedanimalbehaviour.com/article/S0168-1591\(05\)00160-7/abstract](http://www.appliedanimalbehaviour.com/article/S0168-1591(05)00160-7/abstract)
10. *MyDogDna-Health pass data* © Genoscooper oy <http://www.mydogdna.com>
11. *Verband für das Deutsche Hundewesen*, <http://www.vdh.de/home/>
12. *Pinscher-Schnauzer Klub 1895 e.V.*, <http://www.psk-pinscher-schnauzer.de/>
13. *Wallenfels Pinscher*, <http://www.wallenfels-pinscher.de/>
14. *Pinschersektionen Sweden*, <http://www.pinschersektionen.se/>
15. *Svensk Kennel Klub Avelsdata*, <https://hundar.skk.se/avelldata/>
16. *The German Pinscher Club of America*, <http://www.german-pinscher.com/>
17. *Orthopedic Foundation For Animals*, <http://www.offa.org/>
18. *American Temperament Test Society*, <http://atts.org>
19. *A rare form of persistent right aorta arch in linkage disequilibrium with the DiGeorge critical region on CFA26 in German Pinschers*, <http://www.ncbi.nlm.nih.gov/pubmed/20106682>
20. *Unusual vascular ring anomaly associated with a persistent right aortic arch and an aberrant left subclavian artery in German pinschers*, <http://www.ncbi.nlm.nih.gov/pubmed/21846749>

### ADDITIONAL SOURCES USED IN TRANSLATED VERSION OF JTO

1. [http://abri.une.edu.au/online/pages/inbreeding\\_coefficient\\_help.htm](http://abri.une.edu.au/online/pages/inbreeding_coefficient_help.htm)
2. <http://www.barnim.net/database/genetik.html?language=en>
3. [https://en.wikipedia.org/wiki/Effective\\_population\\_size](https://en.wikipedia.org/wiki/Effective_population_size)
4. <http://oivakoira.com/mentaltest.html>
5. [http://vilavallarens.50megs.com/MH\\_testE.htm](http://vilavallarens.50megs.com/MH_testE.htm)
6. <http://www.workingdogs.com/vchipdysplasia.htm>
7. [http://www.angelfire.com/fl5/drool\\_gang/dysplasia.htm](http://www.angelfire.com/fl5/drool_gang/dysplasia.htm)
8. <http://ecvo.org/images/ecvo-manual/5-Definitions%20130304.pdf>
9. *GPCA website*, <http://www.german-pinscher.com/EyesEarshealth.htm>
10. <http://www.fci.be/Nomenclature/Standards/184g02-en.pdf>

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