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Literature Search Results

Search completion date: 8th November 2011
Search completed by: Alison Price

Enquiry Details
Effects of passive smoking on pets – research and statistics
Opening Internet Links
The links to internet sites in this document are ‘live’ and can be opened by holding down the CTRL key on your keyboard while clicking on the web address with your mouse.

Full Text Papers
Links are given to full text resources where available. For some of the papers, you will need a free NHS Athens Account. If you do not have an account you can register by following the steps at: https://register.athensams.net/nhs/nhseng/. You can then access the papers by simply entering your username and password. If you do not have easy access to the internet to gain access, please let us know and we can download the papers for you.

Guidance on Searching within Online Documents
Links are provided to the full text of each of these documents. Relevant extracts have been copied and pasted into these Search Results. Rather than browse through often lengthy documents, you can search for specific words and phrases as follows:

Portable Document Format / pdf. / Adobe
Click on the Search button (illustrated with binoculars). This will open up a search window. Type in the term you need to find and links to all of the references to that term within the document will be displayed in the window. You can jump to each reference by clicking it. You can search for more terms by pressing ‘search again’.

Word documents
Select Edit from the menu, the Find and type in your term in the search box which is presented. The search function will locate the first use of the term in the document. By pressing ‘next’ you will jump to further references.
BBC Health News - Passive smoking puts pets at risk

*Cats may be more at risk of cancer than other pets*

People who smoke at home could be putting their pets at risk of cancer.

A study carried out by vets in the United States has linked passive smoking to cancer in cats.

Feline lymphoma kills three out of four cats within a year of being diagnosed.

People who smoke should think about the risks to their cats.

The vets hope their findings, published in the American Journal of Epidemiology, will encourage more people to give up smoking.

Dr Antony Moore and colleagues at Tufts University in Massachusetts studied 180 cats treated at a Tufts veterinary hospital between 1993 and 2000.

They found that, adjusting for age and other factors, cats exposed to second-hand smoke were twice as likely to develop the disease.

However, if they were exposed to passive smoking for five years or more that risk tripled.

If two people living in the house smoke, the cats were four times more likely to contract the cancer.

*There are no figures on how many cats in the UK get feline lymphoma.*

Dr Moore said the findings raise questions about the risks to children of developing lymphoma if their parents smoke.

He added that he hoped the study would encourage more people to give up smoking.

"I think there are a lot of people who might not quit smoking for themselves or their family," he said. "But they might for their cats."

Dr Moore and colleagues are planning to carry out a similar study on dogs. However, they believe that cats may be most at risk of the developing lymphoma from second hand smoke.

"They accumulate a lot on their fur," he said. "In a veterinary clinic if a cat comes in, you can tell if it's in a smoking household because it smells of smoke."

This compares with dogs which tend to be washed more often and go outside more frequently.

The RSPCA described the study as interesting and said the findings will be used to decide if the criteria it uses to decide who should be allowed to adopt cats from its shelters should change.

A spokeswoman told BBC News Online: "At the moment, we do not question prospective owners on whether they smoke but once we've evaluated the evidence from this new report we may change that."

She added: "We think people who smoke should think about the risks to their cats in the same way as they would think about the risks of passive smoking to children."

[http://news.bbc.co.uk/1/hi/health/2165722.stm](http://news.bbc.co.uk/1/hi/health/2165722.stm)
Passive smoking is a problem for pets too, says vet

Issued: Wed, 26 Oct 2011 07:00:00 BST

The dangers of passive smoking in people are well known, but how does it affect our pets?

Clare Knottenbelt, Professor of Small Animal Medicine and Oncology at the University of Glasgow’s Small Animal Hospital, says second-hand smoke causes health problems in animals too.

She will address a seminar on second-hand smoke being held by NHS Ayrshire & Arran on Wednesday 26 October aimed at encouraging people to create a smoke-free atmosphere in their homes to protect the health of children and other relatives.

Prof Knottenbelt will speak about the research and mounting evidence which shows how damaging second-hand smoke is to the health of pets.

Prof Knottenbelt said: “We are all aware of the risks to our health of smoking and it is important we do everything we can to encourage people to stop smoking.

“As well as the risk to the smoker, there is the danger of second-hand smoke to others, including children, but pets are also at risk too.

“Several published studies have shown increased risk of lymphoma and oral cancer in cats, and an increased risk of lung, nasal and sinus cancer in dogs.

“Currently I am writing a research paper looking at levels of nicotine in the fur of dogs which indicates they are as exposed to the same levels of nicotine as children in a household. This may be a useful way of indicating second-hand smoke exposure in a household in general.

“While veterinary medicine is advancing all the time and we have the ability to treat some cancers in pets, it is expensive and provides no guarantees of long-term survival.

“The best way of avoiding damage to your pet’s health is to not smoke around them – or better still, to give up.”

Susan Downie, Health Promotion Officer from NHS Ayrshire & Arran, said: “While we know that the best thing smokers can do for themselves and their loved ones is to give up smoking, we also recognise that some people may not be ready to quit.

“In the meantime we want to encourage them to think about the health consequences of smoking for others in their homes and cars.

“Many animal lovers who are also smokers may not realise that their second-hand smoke will also be having an effect on their pets. We want to encourage as many smokers as possible to consider either smoking outside or making one room in their house the designated smoking room.

“By doing this and keeping smoke away from other people and pets in the house or car, smokers can ensure that their loved ones – including their pets, will not suffer from second-hand smoking related illnesses.”

http://www.gla.ac.uk/news/headline_215360_en.html
Pet health and passive smoking

Pharmacists have again been involved in the annual government anti-smoking campaign culminating in No Smoking Day, held this year on 11 March (2009). Over the years advertising campaigns have used various tactics, such as concentrating on the health benefits of giving up, the social stigma caused by the smell of stale smoke on clothes and breath, and tobacco’s cosmetic effects such as staining the teeth and fingers.

This year the focus was on the effect the habit has on the children of smokers, and the upset caused by the prospect of having a parent die of the disease. Recent research suggests that a future campaign could concentrate on the relationship between pet owners and their pets as a means to persuade smokers to quit. Researchers in the US found that almost a third of pet owners who smoked said that information on the dangers of pet exposure to second-hand smoke would motivate them to try to give up smoking, and almost a quarter of non-smokers said they would ask their partners either to give up smoking or smoke outside.

The studies found that dogs, cats and birds are all at risk of tobacco-related cancers. Cats are susceptible to squamous cell carcinoma of the mouth, and the incidence is higher in cats living in smoky places than in those in smoke-free homes. The problem arises because cats constantly lick themselves while grooming, removing carcinogens derived from second-hand smoke with their tongues. Cats from smoking environments are also twice as likely to develop malignant lymphoma than those from non-smoking homes.

In dogs, second-hand smoke is associated with an increased occurrence of nasal and sinus cancer and, to a lesser extent, an increase in lung cancer. Long-nosed dogs have a greater surface area in their noses, which leads an accumulation of carcinogens, and these breeds tend to suffer from nasal and sinus cancer. Short-nosed breeds show an increase in lung cancer, because their nasal passages are less effective at accumulating the carcinogens and allow more to reach the lungs. The respiratory systems of pet birds are particularly sensitive, with pneumonia and lung cancer caused by second-hand smoke. Other health risks include eye, skin and heart problems.

http://www.pjonline.com/blog_entry/pet_health_and_passive_smoking
Smoking to be banned in pet owners' homes
By Pete Wedderburn Last updated: April 1st, 2010
As part of the review of legislation concerning dogs, a new proposal has been released with the intention of banning smoking in pet owners' homes. A spokesperson for DEFRA is quoted as saying "Under the Animal Welfare Act 2006, if a pet owner knowingly exposes a pet to a risk of disease, they are committing an offence. Smoking in the presence of a pet will inevitably expose the animal to known irritants and carcinogens, which are likely to cause both disease and suffering to the animal."
Local authority and RSPCA officers have already been instructed to investigate possible instances of smoking in pet owners' homes. If smoking is proven to have taken place, the pet owner will be given two options: surrender of the animal into local authority care, or confiscation of all smoking materials.
Harvey Locke, vet and President Elect of the British Veterinary Association, said: "Household pets can become very ill because of their owners smoking in the home. There is evidence that passive smoking in dogs causes chronic bronchitis and can aggravate feline asthma in cats. Animals don't have a say about where they live. We would urge the public to think about the effect smoking is having on their pets and for them to not to expose animals to second-hand smoke or to any smoking products."
Dogs are twice as likely to develop a cancerous tumour when living with a smoker – the most common forms relate to second hand smoke including cancer of the nasal passage and lungs.
Cats can swallow smoke and soot when they groom themselves. The risk of developing feline lymphoma cancer is also two and a half times more likely for cats living with smokers.
Birds cannot filter the air that they breathe in, causing smoke to become trapped which blackens their lungs and can lead to pneumonia and secondary infections.
DEFRA accepts that implementation of the new proposal may be problematic, and liaison with local police forces, with powers of arrest and detention, is expected to be necessary in some instances.

Leaflets

Leaflet – Pets and Passive Smoking
Health risks of passive smoking for pets are serious. Dogs, cats and birds exposed to tobacco smoke have increased rates of lung cancer and respiratory problems. Cats have higher rates of oral cancers from grooming their tar coated fur. Why not pack it in for 'Pretty Polly', puss or pooch?
http://www.gasp.org.uk/p-pets-and-passive-smoking.htm

Research papers overleaf:
Search Results

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1. Demographic and historical findings, including exposure to environmental tobacco smoke, in dogs with chronic cough

Citation: Journal of veterinary internal medicine / American College of Veterinary Internal Medicine, July 2010, vol./is. 24/4(825-831), 0891-6640 (2010 Jul-Aug)

Author(s): Hawkins E.C.; Clay L.D.; Bradley J.M.; Davidian M.

Language: English

Abstract:

BACKGROUND: Controlled studies investigating risk factors for the common presenting problem of chronic cough in dogs are lacking. HYPOTHESIS/OBJECTIVES: To identify demographic and historical factors associated with chronic cough in dogs, and associations between the characteristics of cough and diagnosis. ANIMALS: Dogs were patients of an academic internal medicine referral service. Coughing dogs had a duration of cough≥2 months (n=115). Control dogs had presenting problems other than cough (n=104). METHODS: Owners completed written questionnaires. Demographic and historical data were compared between coughing and control dogs. Demographic data and exposure to environmental tobacco smoke (ETS) also were compared with hospital accessions and adult smoking rates, respectively. Characteristics of cough were compared among diagnoses. RESULTS: Most coughing dogs had a diagnosis of large airway disease (n=88; 77%). Tracheobronchomalacia (TBM) was diagnosed in 59 dogs (51%), including 79% of toy breed dogs. Demographic risk factors included older age, smaller body weight, and being toy breed (P<.001). No association was found between coughing and month (P=.239) or season (P=.414) of presentation. Exposure to ETS was not confirmed to be a risk factor (P=.243). No historical description of cough was unique to a particular diagnosis. CONCLUSIONS AND CLINICAL IMPORTANCE: Associations with age, size, and toy breeds were strong. TBM is frequent in dogs with chronic cough, but descriptions of cough should be used cautiously in prioritizing differential diagnoses. The association between exposure to ETS and chronic cough deserves additional study.

Publication Type: Journal: Article

Source: EMBASE

2. Clinical digest. Knowledge of risk could make pet owners stop smoking: exposure to cigarette smoke is linked to lymphoma in cats and lung cancer in dogs.

Citation: Nursing Standard, 08 April 2009, vol./is. 23/31(0-), 00296570

Language: English

Publication Type: journal article

Source: CINAHL

Full Text: Available in fulltext at EBSCO Host

3. Pet owners' attitudes and behaviours related to smoking and second-hand smoke: A pilot study

Citation: Tobacco Control, April 2009, vol./is. 18/2(156-158), 0964-4563;1468-3318 (01 Apr 2009)

Author(s): Milberger S.M.; Davis R.M.; Holm A.L.

Language: English

Abstract:

Background: Although research indicates that secondhand smoke (SHS) harms both human and animal health, data on the percentage of pet owners who smoke or allow smoking in their homes are not readily available. Objective: To investigate pet owners' smoking behaviour and policies on smoking in their homes, and the potential for educational interventions to motivate change in pet owners' smoking behaviour. Methods: A web-based survey was used with 3293 adult pet owners. The main outcome measures were smoking behaviour of pet owners and their cohabitants; policies on smoking in pet owners' homes; and impact of information about the dangers of pet exposure to SHS on pet owners' smoking intentions. Results: Of respondents, 21% were current smokers and...
27% of participants lived with at least one smoker. Pet owners who smoke reported that 
information on the dangers of pet exposure to SHS would motivate them to try to quit 
smoking (28.4%) and ask the people with whom they live to quit smoking (8.7%) or not 
to smoke indoors (14.2%). Moreover, non-smoking pet owners who live with smokers 
said that they would ask the people with whom they live to quit (16.4%) or not smoke 
indoors (24.2%) if given this information. About 40% of current smokers and 24% of 
non-smokers living with smokers indicated that they would be interested in receiving 
information on smoking, quitting, or SHS. Conclusions: Educational campaigns 
informing pet owners of the risks of SHS exposure for pets could motivate some owners 
to quit smoking. It could also motivate these owners and non-smoking owners who 
cohabit with smokers to make their homes smoke-free.

4. Environmental tobacco smoke and canine urinary cotinine level.

Citation: Environmental Research, March 2008, vol./is. 106/3(361-4), 0013-9351;0013-9351 (2008 Mar)

Author(s): Bertone-Johnson ER; Procter-Gray E; Gollenberg AL; Ryan MB; Barber LG

Language: English

Abstract: Epidemiologic studies of companion animals such as dogs have been established as 
models for the relationship between exposure to environmental tobacco smoke (ETS) and 
cancer risk in humans. While results from these studies are provocative, pet owner report 
of a dog's ETS exposure has not yet been validated. We have evaluated the relationship 
between dog owner's report of household smoking by questionnaire and dog's urinary 
cotinine level. Between January and October 2005, dog owners presenting their pet for 
non-emergency veterinary care at the Foster Hospital for Small Animals at Cummings 
School of Veterinary Medicine, Tufts University, were asked to complete a 10-page 
questionnaire measuring exposure to household ETS in the previous 24 h and other 
factors. A free-catch urine sample was also collected from dogs. Urinary cotinine level 
was assayed for 63 dogs, including 30 whose owners reported household smoking and 33 
unexposed dogs matched on age and month of enrollment. Urinary cotinine level was 
significantly higher in dogs exposed to household smoking in the 24 h before urine 
collection compared to unexposed dogs (14.6 ng/ml vs. 7.4 ng/ml; P=0.02). After 
adjustment for other factors, cotinine level increased linearly with number of cigarettes 
smoked by all household members (P=0.004). Other canine characteristics including age, 
boby composition and nose length were also associated with cotinine level. Findings from 
our study suggest that household smoking levels as assessed by questionnaire are 
significantly associated with canine cotinine levels.

5. The dog as a passive smoker: Effects of exposure to environmental cigarette smoke on domestic dogs

Citation: Nicotine and Tobacco Research, November 2007, vol./is. 9/11(171-1176), 
1462-2203;1469-994X (Nov 2007)

Author(s): Roza M.R.; Viegas C.A.A.

Language: English

Abstract: Of the few studies available regarding the effects of smoking on animals, most of them 
involve animals actively smoking through the use of a mask or tracheostomy. The present 
study investigated the effects of passive smoke exposure on domestic dogs. The sample 
comprised 30 Yorkshire terriers (18 males) ranging in age from 27 to 106 months (M = 
38.6 +/- 15.8) and weighing 1.9-4.0 kg (M = 3.04 +/- 0.48). Half of the dogs came from 
homes where residents smoked at least 20 cigarettes/day for a minimum of 24 months,
and the other half were from homes without smokers. All animals were subjected to bronchoalveolar lavage to determine cell populations and the presence of anthracosis in macrophage cytoplasm; in addition, a carinal biopsy was obtained. To characterize environmental cigarette smoke exposure, urinary cotinine was determined by an immunochromatographic assay. Cotinine was not detected in the urine of dogs not exposed to cigarette smoke, whereas exposed dogs tested positive. In dogs exposed to cigarette smoke, macrophage and lymphocyte populations were significantly increased (p<.05) and anthracosis was present in the cytoplasm of macrophages. The measurement of urinary cotinine by an immunochromatographic assay is an effective method that can be used to confirm environmental tobacco exposure. Cytological analysis of bronchoalveolar lavage fluid demonstrated airway alterations triggered by passive exposure to tobacco smoke in domestic animals.

**Publication Type:** Journal: Article

**Source:** EMBASE

**Full Text:** Available in fulltext at EBSCO Host

6. Urinary biomarkers to assess exposure of cats to environmental tobacco smoke.

**Citation:** American Journal of Veterinary Research, April 2007, vol./is. 68/4(349-53), 0002-9645;0002-9645 (2007 Apr)

**Author(s):** McNiel EA; Carmella SG; Heath LA; Bliss RL; Le KA; Hecht SS

**Language:** English

**Abstract:** OBJECTIVE: To evaluate the use of urinary biomarkers to assess exposure of cats to environmental tobacco smoke (ETS).ANIMALS: 61 healthy client-owned cats (19 from households in which smoking was reported and 42 from households in which there was no smoking).PROCEDURES: Urine samples were obtained from each cat and assayed for total nicotine (nicotine plus nicotine glucuronide) and total cotinine (cotinine plus cotinine glucuronide) content by use of gas chromatography-mass spectrometry. In addition, total urinary content of 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNAL), a major metabolite of the tobacco-specific nitrosamine 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone, was measured by use of gas chromatography with nitrosamine-selective detection.RESULTS: Cats from households in which smoking was reported had significantly higher concentrations of total nicotine (70.4 ng/mL), total cotinine (8.53 ng/mL), and total NNAL (0.0562 pmol/mL) in urine, compared with concentrations for cats that lived in households in which there was no smoking (4.89 ng/mL, 0.74 ng/mL, and 0.0182 pmol/mL, respectively).CONCLUSIONS AND CLINICAL RELEVANCE: Analysis of these data provided biochemical evidence of exposure to ETS and uptake of tobacco-specific carcinogens by cats that live in households with smokers. Biomarkers could facilitate investigation of the health effects of ETS in cats and other species.

**Publication Type:** Comparative Study; Journal Article; Research Support, N.I.H., Extramural

**Source:** MEDLINE

7. Environmental and lifestyle risk factors for oral squamous cell carcinoma in domestic cats.

**Citation:** Journal of Veterinary Internal Medicine, July 2003, vol./is. 17/4(557-62), 0891-6640;0891-6640 (2003 Jul-Aug)

**Author(s):** Bertone ER; Snyder LA; Moore AS

**Language:** English

**Abstract:** Oral squamous cell carcinoma (SCC) is a common malignancy in cats, but little currently is known about its etiology. We examined the relationship between risk of oral SCC and factors such as environmental tobacco smoke, flea control products, and diet in 36 domestic cats with histologically confirmed oral SCC and 112 renal disease control cats presented to a large veterinary referral hospital between 1994 and 2000. Questionnaires were mailed to owners of all study and control cats to assess demographic characteristics, lifestyle factors, and level of chemical exposures 2 years before diagnosis. Multivariate
relative risks (RR) were used to estimate the relationships between the various factors and the risk of oral SCC. Flea control product use and diet were significantly associated with risk of oral SCC. Cats that wore a flea collar had 5 times the risk of oral SCC as nonusers, after adjustment for other factors (RR = 5.3; P = .002). In contrast, use of flea shampoo substantially reduced risk. Compared to cats eating mostly dry food, those with high canned food intake had a 3-fold increase in risk (RR = 3.6; P = .014); canned tuna fish intake was independently associated with risk (RR = 4.7; P = .004). Exposure to household environmental tobacco smoke was associated with a nonsignificant 2-fold increase in risk (P = .11). Results of this study suggest that flea control products, diet, and perhaps environmental tobacco smoke might be associated with risk of oral SCC and indicate that further investigation into these relationships is warranted.

8. Environmental tobacco smoke and risk of malignant lymphoma in pet cats

Citation: American Journal of Epidemiology, August 2002, vol./is. 156/3(268-273), 0002-9262 (01 Aug 2002)

Author(s): Bertone E.R.; Snyder L.A.; Moore A.S.

Language: English

Abstract: Feline malignant lymphoma occurs commonly in domestic cats and may serve as a model for non-Hodgkin's lymphoma in humans. Several studies have suggested that smoking may increase the risk of non-Hodgkin's lymphoma. To evaluate whether exposure to household environmental tobacco smoke (ETS) may increase the risk of feline malignant lymphoma, the authors conducted a case-control study of this relation in 80 cats with malignant lymphoma and 114 controls with renal disease diagnosed at a large Massachusetts veterinary teaching hospital between 1993 and 2000. Owners of all subjects were sent a questionnaire inquiring about the level of smoking in the household 2 years prior to diagnosis. After adjustment for age and other factors, the relative risk of malignant lymphoma for cats with any household ETS exposure was 2.4 (95 percent confidence interval: 1.2, 4.5). Risk increased with both duration and quantity of exposure, with evidence of a linear trend. Cats with 5 or more years of ETS exposure had a relative risk of 3.2 (95 percent confidence interval: 1.5, 6.9; p for trend = 0.003) compared with those in nonsmoking households. These findings suggest that passive smoking may increase the risk of malignant lymphoma in cats and that further study of this relation in humans is warranted.

9. Environmental causes for sinonasal cancers in pet dogs, and their usefulness as sentinels of indoor cancer risk.

Citation: Journal of Toxicology & Environmental Health Part A, August 1998, vol./is. 54/7(579-91), 1528-7394;0098-4108 (1998 Aug 7)

Author(s): Bukowski JA; Wartenberg D; Goldschmidt M

Language: English

Abstract: A case-control study was conducted to investigate the environmental causes of sinonasal cancers among pet dogs. Sinonasal cancer (SNC) cases and digestive cancer controls from the years 1989 through 1993 were obtained from a veterinary histopathology database. Owners were mailed a self-administered survey requesting information on canine factors, owner demographics, household exposures (including environmental tobacco smoke), and local pollution. A total of 129 case owners and 176 control owners returned completed surveys: a response rate of approximately 72%. Only household exposures were associated with increased SNC risk. Use of indoor coal or kerosene heaters represented the strongest risk factors, with significant adjusted odds ratios of 4.2 and 2.2 respectively. Environmental tobacco smoke exposure was not a risk factor and was suggestive of a
nonsignificant, mildly protective effect at the lower exposure levels. Increasing nasal length was a significant risk factor, and there was effect modification between nasal length and coal or kerosene combustion. No self-reported measures of local pollution, such as urban status or residence within 1 mile of a factory, were associated with SNC risk. These results suggest that canine SNC has a strong environmental component and highlight the importance of indoor exposures, especially from fossil fuel combustion products. These results also suggest that pet dogs represent excellent sentinels for indoor cancer risk and that canine SNC cases can be used as early markers of household exposure to carcinogenic combustion products.

Publication Type: Journal Article; Research Support, Non-U.S. Gov't
Source: MEDLINE
Full Text: Available in fulltext at EBSCO Host

10. Cancer of the nasal cavity and paranasal sinuses and exposure to environmental tobacco smoke in pet dogs.

Citation: American Journal of Epidemiology, March 1998, vol./is. 147/5(488-92), 0002-9262;0002-9262 (1998 Mar 1)
Author(s): Reif JS; Bruns C; Lower KS
Language: English
Abstract: A case-control study of nasal cancer in pet dogs was conducted to test the hypothesis that exposure to environmental tobacco smoke increases risk. Cases (n = 103) were selected from a teaching hospital during 1986-1990. Controls (n = 378) with other forms of cancer were selected from the same study base. Exposure to environmental tobacco smoke was evaluated by determining the number of smokers in the household, the packs of cigarettes smoked per day at home by each smoker, the number of years that each person smoked during the dog's lifetime, and the proportion of time spent indoors by the dog. The crude odds ratio for exposure to environmental tobacco smoke was 1.1 (95% confidence interval (CI) 0.7-1.8) and was unchanged after adjustment for confounders. Skull shape was found to exert a pronounced modifying effect; among dolichocephalic (long-nosed) dogs, the odds ratio for a smoker in the house was 2.0 (95% CI 1.0-4.1). A monotonic increase in the odds ratios across strata of total packs smoked and total indoor exposure to environmental tobacco smoke was found in this group of dogs, with risks of approximately 2.5 for the highest stratum. Conversely, all odds ratios for exposure to environmental tobacco smoke among short- and medium-length-nosed dogs were approximately 0.5. The data support an association between environmental tobacco smoke and canine nasal cancer.

Publication Type: Journal Article
Source: MEDLINE
Full Text: Available in fulltext at Highwire Press

11. Pets and passive smoking.

Citation: BMJ, October 1994, vol./is. 309/6959(960), 0959-8138;0959-535X (1994 Oct 8)
Author(s): Cummins D
Language: English
Publication Type: Letter
Source: MEDLINE
Full Text: Available in fulltext at Highwire Press

12. Passive smoking and canine lung cancer risk

Citation: American Journal of Epidemiology, 1992, vol./is. 135/3(234-239), 0002-9262 (1992)
Author(s): Reif J.S.; Dunn K.; Ogilvie G.K.; Harris C.K.
A case-control study was conducted to determine whether household exposure to environmental tobacco smoke is associated with an increased risk for lung cancer in pet dogs. Lung cancer cases and controls with other forms of cancer were obtained from two veterinary teaching hospitals during 1985-1987. Exposures assessed included the number of smokers in the household, the amount smoked, and the proportion of time spent indoors by the pet. A weak relation was found for exposure to a smoker in the home (odds ratio = 1.6, 95% confidence interval 0.7-3.7), after controlling for confounding in stratified analyses. Strong evidence for a further increase in risk associated with more than one smoker in the home was not found, nor was a significant trend observed for increasing number of packs of cigarettes smoked per day or an exposure index based on number of smokers in each household, packs smoked per day, and the proportion of time the dog spent within the home. However, skull shape appeared to exert effect modification; the risk was restricted to breeds with short and medium length noses (odds ratio = 2.4, 95% confidence interval 0.7-7.8). Despite the inconclusive findings of the current study, epidemiologic studies in pet animals may add to our understanding of environmental tobacco smoke effects in human populations.