

PLACEBOS FOR PETS?

**THE TRUTH ABOUT ALTERNATIVE
MEDICINE IN ANIMALS**

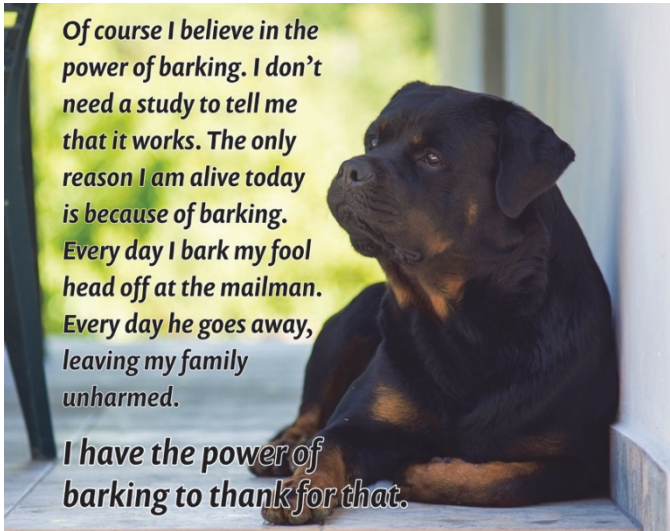
BY BRENNEN MCKENZIE, VMD, MSc

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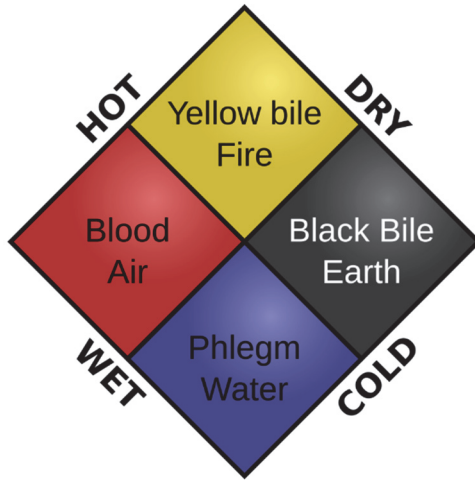
Image from Russell R. Perception. 2009;38(8):1211-1219.) © R. Russell



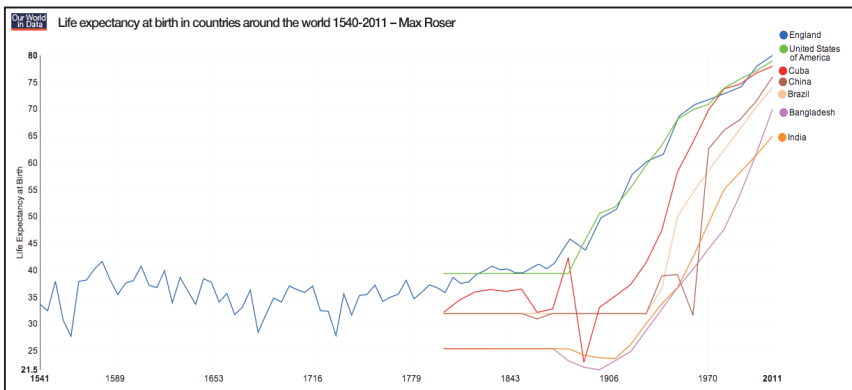
**Of course I believe in the
power of barking. I don't
need a study to tell me
that it works. The only
reason I am alive today
is because of barking.
Every day I bark my fool
head off at the mailman.
Every day he goes away,
leaving my family
unharmred.**

**I have the power of
barking to thank for that.**

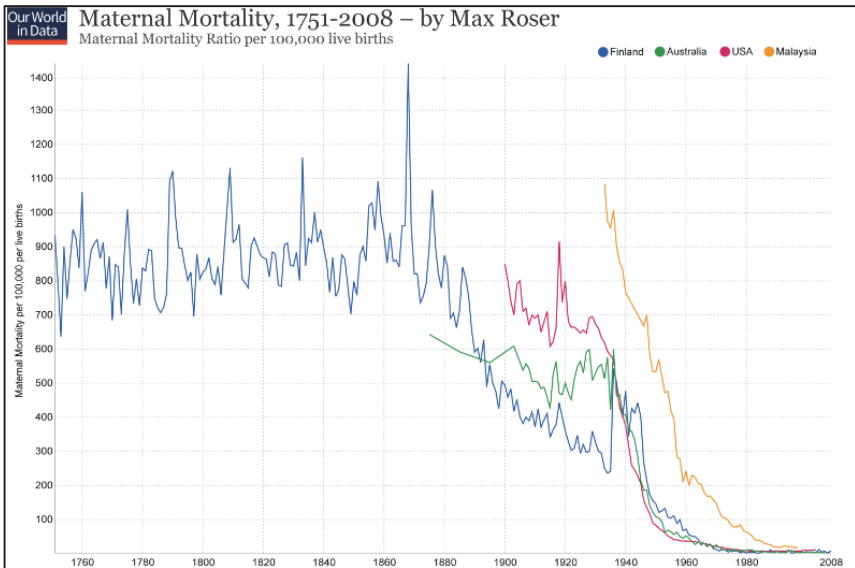
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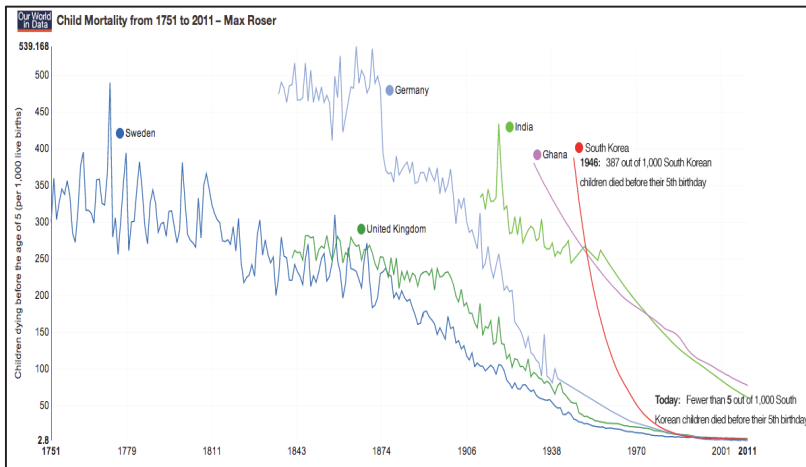
The four humors



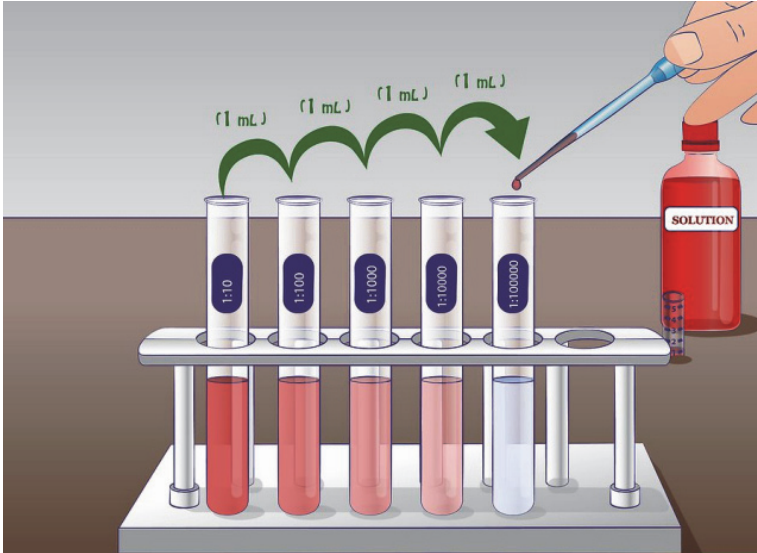
Life expectancy around the world. 2018 Image from OurWorldInData. Used with permission



Maternal mortality in selected countries from 1750 to 2008. 2018 Image from OurWorldInData. Used with permission.



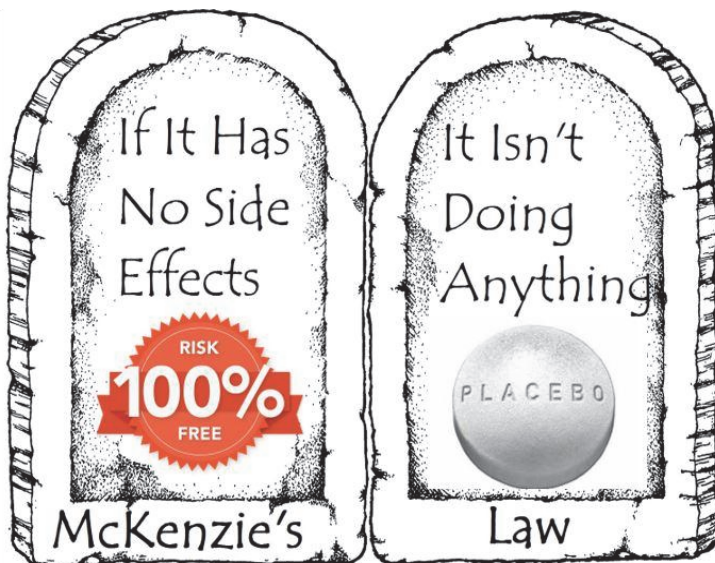
Child Mortality from 1751-2011. 2018 Image from OurWorldInData. Used with permission.



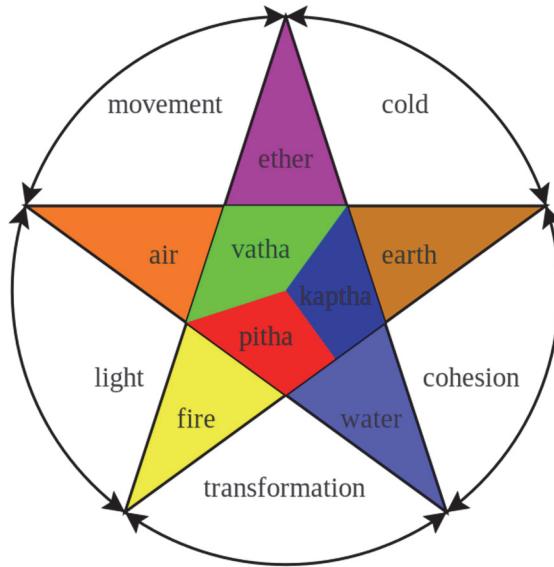
Logarithmic Dilution by Luigi Grasso under Creative Commons license by SA 4.0



Homeopathic globuli (sugar pills infused with dilute homeopathic preparations)



Five-Element Cycles 2018 by Yulicachen under Creative Commons license by SA 4.0



The three Doshas and five Great Elements of Ayurvedic Medicine



Arabic Herbal Medicine Guidebook

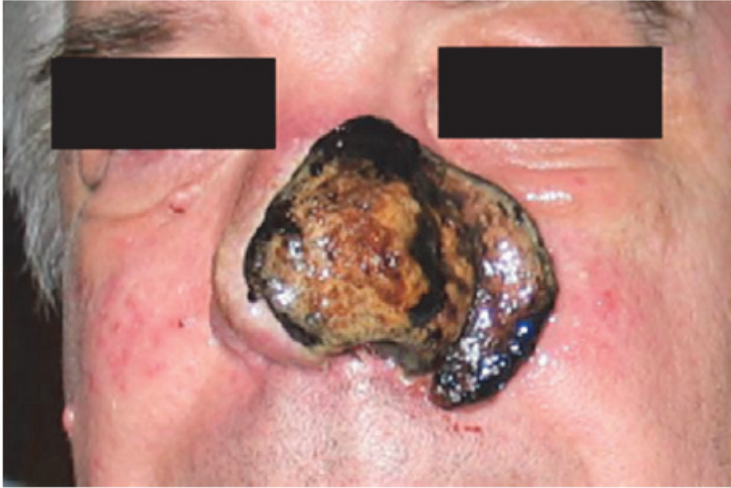


Image from Eastman (2011).



Veterinary Supplements 2010 by Rhona-Mae Arca under Creative Commons by SA 2.0

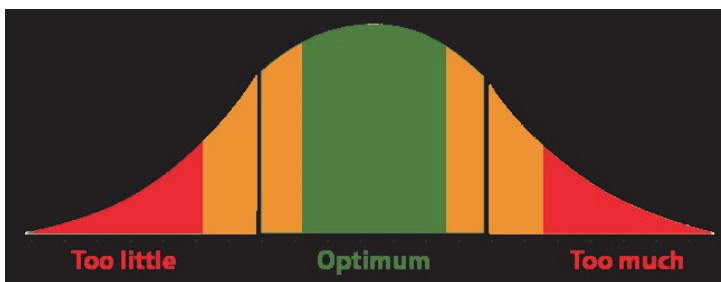


Image from Zwart, S. Ironing out nutrition's bell-shaped curve. © J. Robinson

Body Condition



1



3

UNDER IDEAL

- 1 Ribs, lumbar vertebrae, pelvic bones and all bony prominences evident from a distance. No discernible body fat. Obvious loss of muscle mass.
- 2 Ribs, lumbar vertebrae and pelvic bones easily visible. No palpable fat. Some evidence of other bony prominences. Minimal loss of muscle mass.
- 3 Ribs easily palpated and may be visible with no palpable fat. Tops of lumbar vertebrae visible. Pelvic bones becoming prominent. Obvious waist and abdominal tuck.

Garner A, et al. Comparison of a noninvasive method with dual-energy x-ray absorptiometry for noninvasive estimation of percentage body fat in dogs. *AAEP* 2010;74:383-386.
 Jeon J, et al. Effect of body condition score on the relationship between body condition score and body weight in dogs. *AAEP* 2010;74:383-386.
 Kelly RD, et al. Effect of diet restriction on the rate and age-related changes in dogs. *JAMA* 2002;287:1315-1320.
 Lathrop DT. Development and validation of a body condition score system for dogs. *Canine Pract* 1993;22:10-15.

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5



7



9

OVER IDEAL

- 6 Ribs palpable with slight excess fat covering. Waist is discernible viewed from above but is not prominent. Abdominal tuck apparent.
- 7 Ribs palpable with difficulty. Heavy fat cover. Noticeable fat deposits over lumbar area and base of tail. Waist absent or barely visible. Abdominal tuck may be present.
- 8 Ribs not palpable under very heavy fat cover, or palpable only with significant pressure. Heavy fat deposits over lumbar area and base of tail. Waist absent. No abdominal tuck. Obvious abdominal distention may be present.
- 9 Massive fat deposits over thorax, spine and base of tail. Waist and abdominal tuck absent. Fat deposits on neck and limbs. Obvious abdominal distention.



Body Condition

Score



UNDER IDEAL

- 1 Ribs visible on short-haired cats. No palpable fat. Severe abdominal tuck. Lumbar vertebrae and wings of ilia easily palpated.
- 2 Ribs easily visible on short-haired cats. Lumbar vertebrae obvious. Pronounced abdominal tuck. No palpable fat.
- 3 Ribs easily palpable with minimal fat covering. Lumbar vertebrae obvious. Obvious waist behind ribs. Minimal abdominal fat.

IDEAL

- 4 Ribs palpable with minimal fat covering. Noticeable waist behind ribs. Slight abdominal tuck. Abdominal fat pad absent.
- 5 Well-proportioned. Observe waist behind ribs. Ribs palpable with slight fat covering. Abdominal fat pad minimal.

OVER IDEAL

- 6 Ribs palpable with slight excess fat covering. Waist and abdominal fat pad distinguishable but not obvious. Abdominal tuck absent.
- 7 Ribs not easily palpated with moderate fat covering. Waist poorly discernible. Obvious rounding of abdomen. Moderate abdominal fat pad.
- 8 Ribs not palpable with excess fat covering. Waist absent. Obvious rounding of abdomen with prominent abdominal fat pad. Fat deposits present over lumbar area.
- 9 Ribs not palpable under heavy fat cover. Heavy fat deposits over lumbar area, face and limbs. Distention of abdomen with no waist. Extensive abdominal fat deposits.

Bismard CM, et al. Evaluation of a nine-point body condition scoring system in privately practice pet cats. *AAEP* 2011;75:424-427.

 Lefebvre H. Development and validation of a body condition scoring system for cats. *J Feline Med Biol* 1999;3:159-166.

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Image courtesy of World Small Animal Veterinary Association (WSAVA)

Table 1: Effects of Neutering on Females

Condition	How Common?	How Serious?	Effect of Spaying	Species	Comments
Unwanted litters	Very Common	Very	Prevents	dog, cat	significant pet overpopulation and associated euthanasia
Risks of reproduction	Uncommon	Variable	Prevents	dog, cat	dystocia, brucellosis, diabetes, others; risk of dystocia can be high for certain breeds
Mammary neoplasia	Very Common	Very	Probably ↓	dog, cat	generally poor prognosis
Pyometra	Very Common	Very	Prevents	dog, cat	
Uterine neoplasia	Rare	Variable	Prevents	dog, cat	some benign/removable, some malignant
Ovarian neoplasia	Uncommon	Variable	Prevents	dog, cat	
Vaginal/Vulvar neoplasia	Uncommon	Moderate	↓ Dramatically	dog	
Osteosarcoma	Uncommon	Very	Possibly ↑	dog	risk variable by breed
Hemangiosarcoma	Uncommon	Very	Probably ↑	dog	risk variable by breed
Lymphosarcoma	Uncommon	Very	Possibly ↑	dog	risk variable by breed
Mast Cell Neoplasia	Common	Moderate	Probably ↑	dog	risk variable by breed, often curable
Transitional cell carcinoma	Uncommon	Very	↑	dog	risk variable by breed
Cruciate ligament disease	Common	Moderate	↑	dog	risk variable by breed, surgically treatable
Hip dysplasia	Common	Moderate	Probably ↑	dog	risk variable by breed

Aggressive behavior	Common	Very	Possibly ↑	dog, cat	
Urinary incontinence	Very Common	Mild	Possibly ↑	dog	medically controllable in 65-75% of cases
Urinary tract infection	Common	Mild	Possibly ↑	dog	easily treatable
Hypothyroidism	Uncommon	Moderate	Possibly ↑	dog	easily treatable
Diabetes mellitus	Uncommon	Very	Possibly ↑	dog, cat	risk variable by breed
Acute pancreatitis	Uncommon	Very	Possibly ↑	dog	
Obesity	Common	Very	↑	dog, cat	easily prevented by calorie restriction
Longevity	--	--	Possibly ↑	dog, cat	neutering influences causes of death

↓=decreases/reduces, ↑=increase/exacerbates

Table 2: Effects of Neutering on Males

Condition	How Common?	How Serious?	Effect of Castration	Species	Comments
Unwanted litters	Very Common	Very	Prevents	dog, cat	significant pet overpopulation population and associated euthanasia
Testicular neoplasia	Uncommon	Moderate	Prevents	dog	most benign and surgically removable
Prostate disease	Very Common	Variable	↓ dramatically	dog	some have few symptoms others have severe, chronic disease
Behavior problems	Common	Variable	Variable	dog, cat	conflicting studies; most report less aggression, roaming, urine marking
Perineal hernias	Uncommon	Moderate	↓	dog	can often be repaired surgically
Perianal fistulas	Uncommon	Moderate	↓	dog	incidence varies by breed, some respond well to treatment others are serious chronic problem
Prostatic neoplasia	Uncommon	Very	Probably ↑	dog	poor prognosis
Osteosarcoma	Uncommon	Very	Possibly ↑	dog	risk variable by breed
Hemangiosarcoma	Uncommon	Very	Probably no effect	dog	risk variable by breed
Lymphosarcoma	Uncommon	Very	Unclear	dog	risk variable by breed
Mast Cell Neoplasia	Common	Moderate	Probably no effect	dog	risk variable by breed, often curable
Cruciate Ligament Disease	Common	Moderate	↑	dog	risk variable by breed, surgically treatable

Hip dysplasia	Common	Moderate	Probably ↑	dog	risk variable by breed, common in a few breeds
Femoral physeal fracture	Uncommon	Moderate	Possibly ↑	cat	obesity may be confounding factor
Hypothyroidism	Uncommon	Moderate	Possibly ↑	dog	easily treatable
Diabetes mellitus	Uncommon	Very	Possibly ↑	dog, cat	risk variable by breed
Acute pancreatitis	Uncommon	Very	Possibly ↑	dog	
Obesity	Common	Very	↑	dog, cat	easily prevented by calorie restriction
Longevity	--	--	Possibly ↑	dog, cat	neutering influences causes of death

↓=decreases/reduces, ↑=increase/exacerbates

Table 3. In vivo studies of Yunnan Baiyao in veterinary species

Study	N=	Rand	Blind	Con- trols	Effect	Comments
Ogle, 1976	54 (rats) 10 rabbits	N	N	Y	Y	YB reduced subjective bleeding time in cut rat livers and <i>in vitro</i> clotting time of rabbit blood more than saline or starch (applied topically or mixed w/ blood)
Ogle, 1977	? (Rats) ? (Rabbits)	N	N	Y	Y	YB reduced subjective bleeding time in cut rat livers and <i>in vitro</i> clotting time of rabbit blood more than starch solution (given by orogastric tube)
Graham, 2002	6 (ponies)	?	?	Y	Mixed	TBT-yes ACT-no 247 vs 318 seconds in TBT (oral use)
Epp, 2005	5 (horses)	Y	Y	Y	No	Many lab measures and clinical EIPH evaluated (oral use)
Fan, 2005	17 (rats)	Y	Y	Y	Y	Bleeding time cut tail tips 10.53-16.81min wheat flour vs 7.1-14.13min YB (topical use)

Murphy, 2017	67 (dogs)	N	N	Y	No	Retrospective, YB +/- aminocaproic acid with right atrial hemangiosarcoma, no difference in symptoms or survival (oral use)
Lee, 2017	8 (dogs)	Y	Y	Y	No	No change in lab measures of clotting (oral use)
Frederick, 2017	8 (dogs)	Y	Y	Y	No	No change in BMBT or lab measures of clotting (oral use)
MacRae, 2017	6 (dogs)	N	N	N	No	No effect on lab measures of clotting (oral use)
Adelman, 2017	19 (dogs)	Y	Y	Y	Mixed	Bleeding time after Bx (300+/- 12 sec YB: 367+/- 9 sec placebo) BMBT - no difference TEG (lab measure of clotting) - no difference Total blood loss - no difference
Ness, 2017	12 (horses)	Y	Y	Y	No	No effect on any <i>in vitro</i> measure of hemostasis

