

Periodontal Disease: Known Harm, Neglected Signal and Profitable Aftermath

What the dental establishment knew, what it did not test, and who benefited downstream

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The charge

Veterinary dentists and dental organisations know that periodontal disease is widespread, painful, destructive, frequently hidden and associated with wider systemic effects. The natural-prevention case was placed directly before the specialist community in 1993; the Cybernetic Hypothesis was published in its own journal in 1994; and a leading veterinary periodontist formulated the decisive comparative experiment. Yet no published controlled lifetime comparison followed. Industrial feeding remained the background condition, while brushing, approved chews, dental diets, anaesthetised cleaning, radiography and extraction became the professional response. The issue is no longer mere oversight. It is whether specialist authority maintained a materially incomplete and commercially advantageous account of prevention.

Executive assessment

Periodontal disease is not obscure. Veterinary authorities describe it as one of the most common clinical conditions in companion animals and recognise pain, concealed pathology, tooth loss, bacteraemia, systemic inflammatory responses and associations with distant-organ disease. Those acknowledgements create an upstream duty. When a disorder is endemic, early, painful and substantially preventable, specialists must investigate the conditions that make it endemic; they cannot confine prevention to owner compliance and commercial adjuncts while leaving the dominant feeding system outside the decisive experiment. [1-3]

The public record establishes a direct knowledge chain. Sir Frank Colyer linked soft food with periodontal disease and tooth-demanding food with freedom from disease. Brown and Park demonstrated calculus removal and control using oxtails. Borthwick carried the contradiction into Waltham's commissioned research environment, and Watson carried it into an Australian Veterinary Association review. Peter Higgins, veterinary adviser to Uncle Ben's, said uncooked bones had the most marked oral-cleaning effect. These materials were assembled in the 1993 Preventative Dentistry course chapter; the Journal of Veterinary Dentistry published the Cybernetic Hypothesis in 1994; and a systemic clinical signal followed in 1995. [24-28,42-44]

Professor Colin Harvey, who led the 1993 course and was a leading veterinary periodontist, proposed a long-term comparison of canned food, dry food, dry food plus a chew, raw food and daily brushing. In 2021 he confirmed the design and explained why major pet-food companies were unlikely to fund work that might reveal distant-organ disease and reduced lifespan in one or more groups. The central experiment was not unimaginable or unknown. It was formulated, understood and left undone. [29-31]

The evidential heart of the indictment

The specialist community was placed on notice, understood the question, contemplated the necessary experiment and then continued to teach, certify, recommend and commercialise as though the question did not exist.

1. Known harm creates a duty to look upstream

Periodontal disease destroys gingiva, periodontal attachment and supporting bone. Animals may continue to eat while enduring chronic pain. Advanced disease can require general anaesthesia, full-mouth radiography, subgingival treatment, extraction and specialist surgery. Veterinary reviews describe bacteraemia, acute-phase responses and microscopic changes in renal, hepatic and cardiac tissues, with inflammatory markers increasing as disease becomes more severe. [1-3,10-11]

Competent diagnosis and treatment are indispensable. This paper does not attack necessary anaesthesia, radiography, scaling, extraction or pain relief. It attacks the inversion by which treatment of an avoidable aftermath is represented as prevention while the biological conditions producing the recurring burden remain protected from direct comparison.

A specialty claiming authority over the mouth must ask why domestic carnivores develop severe oral disease at extraordinary prevalence. That inquiry must include food form, oral work, feeding frequency, microbial ecology and systemic feedback. Refining treatment downstream cannot discharge the duty to investigate upstream.

Specialist status raises the standard

The more intelligent, educated and technically capable the authority, the less persuasive a profession-wide claim of innocent incomprehension becomes. Expertise creates duties to notice contradictions, test alternatives, disclose uncertainty and resist convenient consensus.

2. The knowledge chain: Colyer to the Cybernetic Hypothesis

The natural-feeding proposition did not begin as an unsupported personal belief. It arose from a veterinary and dental record extending across decades.

Date	Record	Public-interest significance
1947	Sir Frank Colyer contrasted soft, pappy feeding with food requiring the teeth to grind and work.	Food form and oral function were placed inside the veterinary dental record.
1968	Brown and Park reported removal and control of calculus by regular oxtail feeding in experimental Beagles.	A direct controlled oral-function signal existed decades before modern dental products.
circa 1986	Borthwick reported to Waltham that modern feeding had not improved dental health and that increased mastication could greatly assist control.	Mars's scientific environment possessed a commissioned warning about the industrial baseline.
1987	Peter Higgins said uncooked bones had the most marked cleaning effect and hard chewing material was imperative for prevention.	A veterinary adviser to Uncle Ben's publicly acknowledged the preventive mechanism.
1993	Preventative Dentistry assembled food texture, mastication, gum stimulation, plaque control and systemic consequences in official course proceedings.	The specialist audience received the mechanism, evidence, protocols, cautions and a direct challenge.
1994	The Journal of Veterinary Dentistry published the Cybernetic Hypothesis of Periodontal Disease in Mammalian Carnivores.	The proposition entered the specialist literature as a testable framework.

2A. Waltham and Watson extend the chain

The complete Borthwick report adds an internal corporate-science link. Commissioned for Waltham's Animal Studies Centre, it found that broad meat categories did not distinguish oral outcomes well, whereas regular access to demanding chewing material was associated with highly significantly lower periodontal, plaque and calculus indices. It concluded that modern feeding had not appeared to improve dental health, that increased mastication could be used to great advantage and that the prevailing veterinarian-patient approach was largely ineffective. [42]

The January 1994 AVA-commissioned Watson review, published in October as *Diet and Periodontal Disease in Dogs and Cats*, added a national professional finding. Watson described periodontal disease as a serious diet-related problem, treated nutritionally complete soft food as potentially physically inadequate, recommended attention to texture and chewiness, and called for further comparative research. [43]

The review and published article acknowledge assistance from Colin Harvey, Barbara Fougere and Stephen Coles. Fougere was then veterinary adviser to Uncle Ben's. Coles was a leading dental authority who publicly defended commercial foods as the nutritional baseline while conceding benefit from bones or other chewing materials. Tom Lonsdale, whose intervention prompted the inquiry and whose work was cited, was not accorded equivalent participation. This does not establish that Mars controlled the review. It establishes that a Mars-affiliated adviser had access to its preparation and that the industrial and specialist establishment possessed direct knowledge of the issue. [43]

3. Direct notice: the 1993 veterinary dentistry course

Preventative Dentistry formed part of the official proceedings for a University of Sydney refresher course conducted with the Australian Veterinary Dental Society from 14 to 17 June 1993. It opened with a deliberately disruptive proposition: natural prevention could produce logarithmic improvement in companion-animal health, relegate veterinary dentistry to a minor role and transform veterinary science. [24-25]

The paper distinguished chemical nutrient adequacy from the physical work of feeding. Pulverised, heat-treated and fortified material does not reproduce ripping, tearing, shearing, crunching, gnawing, gum massage and daily oral cleansing. The daily feeding session was identified as the natural preventive event; removal of that function was said to permit plaque, gingivitis and progressive periodontal disease.

This was not a casual comment from the floor. It was a conspicuous chapter in proceedings led by internationally prominent dental specialists. The audience received a biological mechanism, historical sources, clinical observations, practical protocols, cautions and a legal warning that veterinarians who failed to consider the issues might one day be joined as defendants. The proper response was not automatic acceptance. It was sustained inquiry: replicate the signal, define the comparator, quantify risks, test oral and systemic outcomes and publish the result. The subsequent absence of that programme is part of the evidence.

4. Publication in the specialist journal

In March 1994 the *Journal of Veterinary Dentistry* published the *Cybernetic Hypothesis of Periodontal Disease in Mammalian Carnivores*. It did not ask the profession to accept every proposed ecological implication. It offered a testable framework and predicted that industrial feeding supplied calories without the physical cleansing of the oral cavity, sustaining animals in chronic disease rather than permitting the faster attrition seen under natural conditions. [26-28]

Publication placed the proposition inside the formal record of veterinary dentistry. The surviving issue and cover/editorial material show that it was not an invisible private communication. Once published, the specialist community had three legitimate options: substantiate it, refute it or design better tests. Quietly excluding the question while expanding the product-and-procedure paradigm was not a scientifically neutral fourth option.

The obscurity defence fails

The warning appeared in official course proceedings and in the specialist journal. The relevant authorities were not required to agree. They were required to engage.

4A. A published systemic signal: periodontal disease and leucopenia

In 1995 the Journal of Small Animal Practice published Periodontal Disease and Leucopenia. Eight animals with advanced periodontal disease underwent dental treatment, antibiotics and a change to raw meaty bones feeding. Follow-up white-cell counts increased markedly in most cases and owners reported improved vitality and wellbeing. [44]

The study was a small uncontrolled clinical series involving combined interventions. It did not prove that raw meaty bones alone restored immune function, and the paper expressly recognised that correlation did not establish causation. Its importance is different: it supplied a published, biologically coherent signal that periodontal disease and feeding might interact with systemic and haematological status, and it called for extensive further investigation. A responsible establishment could criticise the design and then organise a better trial. It could not properly use the limitations of a preliminary signal as a reason to make the question disappear.

5. Harvey: the proposed experiment and chosen non-inquiry

Professor Colin Harvey led the 1993 course. He later prepared a proposal entitled Effect of the Form of the Diet on the Development of Periodontal Disease in the Dog - A Long-Term Clinical Trial. Its questions were direct: could a natural diet maintain a healthy mouth; was dry food truly better than canned food; and did processed food differ from the natural diet? [29-31]

In 2021 Harvey confirmed a broader lifetime design beginning at weaning. He described groups fed canned food, dry kibble, kibble plus a daily chew, raw food and, ideally, kibble plus daily brushing. He said the project would be expensive and that major pet-food companies - the obvious potential funders - would likely not participate because the study might show distant-organ disease and reduced lifespan in one or more groups.

That explanation is not proof that a company prohibited the work. It is proof of something already serious: a leading specialist understood the decisive design, understood the systemic and longevity stakes, recognised the conflict facing the obvious funders and watched the experiment remain undone.

What followed

The unperformed lifetime comparison was followed by decades of dental diets, chews, brushing programmes, seal systems, professional cleaning and specialist treatment. The research question moved from "Is the industrial feeding system wrong?" to "Which addition best manages its consequences?"

6. What current authorities prescribe

Current veterinary dental guidance describes periodontal disease as common and serious, recommends daily brushing, professional cleaning under general anaesthesia, radiography and selected commercial products, and frequently relies upon Veterinary Oral Health Council acceptance. WSAVA guidance acknowledges that ordinary dry food is not beneficial for oral health and that raw bones can reduce calculus, yet says evidence for preventing periodontitis is limited. [1-8]

That limitation is real, but the conclusion drawn from it is asymmetric. The profession cites the absence of long-term evidence while failing to organise the long-term comparison. A research gap created or tolerated by the relevant authorities cannot fairly be converted into evidence against the excluded comparator. The proper response is independent testing, not indefinite reliance upon interventions developed inside the industrial baseline.

The circular standard

Industrial feeding is treated as normal. Disease within that population is managed by professional cleaning and commercial home-care products. A selected score improves. The addition is validated. The baseline escapes judgment.

7. VOHC: a professional seal inside the product paradigm

The Veterinary Oral Health Council is an entity of the American Veterinary Dental College, not an independent government regulator. Manufacturers act as product sponsors: they supply products, fund trials, submit data, pay fees and, if accepted, obtain the right to use a registered professional seal. VOHC permits the sponsor and trial-facility owner to be the same company. Trial periods may be short and the defined claims concern plaque and/or tartar control. [5-8]

What the process may establish	What it does not establish
A submitted product reduced plaque and/or calculus relative to a selected control under the protocol used.	That the underlying feeding system is biologically appropriate or that periodontitis is prevented over a lifetime.
The sponsor-funded package met VOHC's stated efficacy threshold.	That the work was independent of the commercial sponsor or measured every clinically important outcome.
The sponsor may use a professional seal for an accepted claim.	That the product is necessary, optimal or preferable to restoring food structure and normal oral function.

The accepted-product list includes major pet-food corporations and an array of dental diets, chews, additives, wipes, powders and sealants. The issue is not that every listed product has no effect. It is that the specialty has built a formal pathway for manufacturer-funded, repeat-purchase interventions while no equivalent machinery exists for assessing the complete natural feeding system those interventions displaced.

What the seal cannot answer

- Did industrial feeding create or amplify the need for the sealed product?
- Would foundational raw meaty bones feeding provide superior oral work, gingival stimulation, behaviour, periodontal outcomes and whole-animal benefit?
- Why has the certifying specialty not demanded that comparison?

8. Veterinary dental sponsorship is current, not historical

The commercial-professional integration remains visible in 2026. Specialist dental forums list Hill's, Mars and Virbac among major sponsors and sell access, visibility, sponsored sessions, exhibition space and participant-contact opportunities. Commercial sponsorship of education is not automatically improper. It is nevertheless a structural influence when sponsors sell the products, diets, instruments and services discussed by specialists who write guidance, certify products, train practitioners and appear as expert witnesses. [12-15]

Authority is not independence. A diplomate title, society office, guideline authorship or conference platform establishes technical expertise. It does not establish freedom from the research paradigm, sponsorship network or economic system under examination. In litigation and regulation, expertise must be tested for independence, scope and assumptions - not merely displayed.

9. Mars and the profitable aftermath

Mars occupies multiple positions in the oral-disease chain. It sells everyday industrial foods, dental diets and repeat-purchase chews; operates Waltham research; owns diagnostics; and provides preventive, general, specialist and emergency veterinary care through a global clinic network. Corporate research has examined toothbrushing, chews, malodour, plaque microbiota, risk prediction

and owner-reported risk factors. Those studies may produce useful measurements. They do not answer whether industrial feeding should remain the baseline. [9-10,16-20,41]

Mars can therefore help select the research question, employ the scientists, manufacture the food and dental product, produce educational material, obtain professional acceptance, communicate the recommendation and participate in the veterinary care that follows. No single step proves wrongdoing. The integrated loop explains why the upstream comparator threatens more than one product line.

Stage	Institutional or commercial activity	Downstream effect
Baseline	Industrial food is normalised as ordinary feeding.	The feeding system itself escapes the burden of proof.
Disease	Periodontal disease becomes endemic and recurring.	Owners and animals enter a continuing care pathway.
Research	Selected variables are measured within industrial feeding.	Products and procedures gain evidence without testing the baseline.
Validation	Specialist bodies certify products, publish guidance and teach protocols.	Corporate interventions acquire professional authority.
Care and revenue	Veterinary teams provide home care, anaesthesia, imaging, scaling and extraction.	The continuing burden generates products, data, research and repeat care.

A 2021 Australian dental catalogue reproduced in Multi-Billion-Dollar Pet Food Fraud made the commercial interest unusually explicit: increased awareness of dental disease was said to increase requests for professional treatment, significantly increase profits and build client relationships, while toothbrushing remained the stated gold standard. [21]

There is nothing inherently improper about payment for relieving suffering. The ethical and potentially legal problem arises when recurring treatment is profitable, upstream information is withheld or distorted, and the dominant feeding recommendation is not subjected to the test capable of revealing whether it is a major trigger of disease.

10. The natural comparator and the double standard

Small Beagle studies have reported substantial calculus removal from chewing bovine bones without fractures, oral injuries or obstruction in the observed animals. They do not establish lifetime safety or prove prevention of periodontitis. They do demonstrate a powerful mechanical signal requiring serious independent investigation. Risks should be quantified by bone type, hardness, size, animal, chewing behaviour, supervision and feeding context - and compared with the cumulative risks of chronic periodontal disease, repeated anaesthesia, extraction, medication and lost oral function. [22-23]

The double standard is stark. Commercial products may obtain professional authority from short, sponsor-funded trials measuring plaque or calculus. The natural comparator is expected to supply lifetime proof before being taken seriously, while the profession demanding that proof does not organise the trial. The absence of evidence is maintained and then cited as authority.

A valid programme should preserve substantial food structure and follow the two high-gain developmental periods - eruption of the deciduous teeth and eruption of the permanent dentition - before assessing adult periodontal attrition, systemic inflammatory effects, pain, tooth retention, treatment burden and lifetime welfare.

11. From veterinary dentistry to human public health

Human periodontal medicine recognises that oral health is integral to general health. The World Health Organization estimates that severe periodontal disease affects more than one billion people and places oral disease within the noncommunicable-disease, universal-health-coverage and commercial-determinants agendas. Human consensus reports support independent associations between periodontitis and cardiovascular disease, diabetes and respiratory disease, while distinguishing association, biological plausibility and intervention evidence. [32-34]

This paper does not allege that Mars caused human periodontal disease, nor that a canine feeding trial would automatically establish human causation. The charge is narrower: domestic carnivores offered an accessible comparative system in which food form, oral work, microbial ecology, systemic inflammatory markers, clinical disease and lifetime outcomes could have been studied together. The veterinary dental establishment and major pet-food corporations failed to develop that opportunity despite direct notice.

A properly governed comparative programme could have illuminated how mechanical function, microbial communities, host regulation, chronic inflammation and distant-organ effects interact through time. It could have challenged fragmentation between dentistry, medicine, feeding science, immunology and ecology. Instead, the animal model remained inside a product-management programme.

The downstream disaster is wider than dentistry

Possible costs include animal pain and tooth loss; owner expenditure; repeated procedures and medication; distorted professional education; misdirected research funding; delayed cybernetic inquiry; lost comparative knowledge relevant to human periodontal medicine; and the environmental and institutional burdens of a disease-and-repair economy. The mouth is an interface, not an isolated repair site.

12. The Five-Part Public Interest Test applied upwards

The Five-Part Public Interest Test developed in the Raw Meaty Bones Record should be applied not only to raw-feeding promoters and influencers, but also to Mars, Waltham, veterinary dental specialists, societies, colleges, journals and product-certification bodies. [35]

Test	Question for Mars and veterinary dentistry	Possible public-interest failure
1. Biological suitability	Was lifelong industrial feeding shown to meet the animal's biological requirements, rather than merely nutrient-profile requirements?	Disease, suffering and procedures may be normalised inside an unvalidated baseline.
2. Functional form	Does the food require ripping, tearing, shearing and gnawing, clean and exercise the mouth, and engage normal behaviour?	Chemical formulation may displace essential physical function and oral feedback.
3. Causal and evidential integrity	Was the industrial product compared with the natural functional standard using periodontal, systemic and lifetime outcomes?	Short-term surrogate improvements may be inflated into validation of the whole system.
4. Public-interest orientation	Did authorities help owners understand root conditions, or create dependency on products, procedures and specialist authority?	Professional education may protect a commercial system rather than independent judgment.
5. Whole-system consequences	What cumulative effects fell on animals, owners, science, public health, institutions, resources and the environment?	Harms, incentives, inertia and suppression of corrective ideas may reinforce one another.

Applying the test upwards exposes the same underlying fault seen in the commercial raw marketplace: objective health claims outrun the complete evidence, physical food function disappears behind formula and credential, and withdrawal from one harmful element is appropriated to validate another commercial authority.

13. The expert shield in litigation and regulation

Any serious challenge to Mars can be expected to meet an expert shield. Veterinary dentists may accurately state that prevailing guidance supports brushing, dental diets, VOHC products, professional cleaning and caution about bones. That describes consensus. It does not establish how the consensus was produced, whether the decisive comparator was tested, or whether the witness is independent of the system being challenged.

Courts and regulators should distinguish skill in treating established disease from expertise in evolutionary feeding, long-term comparative design, microbial ecology, public health, corporate

influence and the history of the omitted experiment. The title "veterinary dentist" cannot confer authority over questions the specialty has systematically failed to test.

Questions for every proposed dental authority

- When did you first become aware that food form and natural mastication might prevent periodontal disease?
- Did you attend, organise, edit, receive or later review the 1993 course proceedings and the Preventative Dentistry chapter?
- Were you aware of Colyer, Brown and Park, Higgins, the 1994 Cybernetic Hypothesis or Harvey's proposed trial?
- What direct lifetime comparison between representative industrial feeding and foundational raw meaty bones feeding have you conducted, reviewed, demanded or helped fund?
- Do the studies you rely upon measure periodontitis, attachment loss, tooth retention, systemic outcomes and lifetime welfare - or only plaque, calculus, malodour and other surrogates?
- What funding, consultancy, honoraria, travel, sponsorship, product-review work, society office or institutional support have you or your organisation received from relevant manufacturers?
- What evidence justifies treating the industrial product as the control rather than the intervention requiring proof?
- What did you tell students, practitioners, owners, regulators and courts while the decisive comparison remained unperformed?

The crucial distinction

Technical competence is not institutional independence. Consensus is evidence of agreement; it is not proof that the right question was asked.

14. Possible legal and regulatory pathways

This section identifies issues for independent legal assessment. It is not legal advice and does not assert that any civil wrong, professional offence, animal-welfare offence, fraud, conspiracy or crime has been proved. Pet owners and their advisers could examine whether particular facts support claims or complaints concerning:

- Misleading representations or omissions: health, safety, superiority, prevention, "veterinary recommended", scientific-establishment or professional-independence claims, including the overall impression created by packaging, websites, clinical advice and omitted limitations.
- Consumer guarantees: whether goods were of acceptable quality or fit for a disclosed purpose, and whether veterinary or related services were provided with due care and skill. Application depends upon product, service, reliance, evidence, limitation period and legally recognised loss.
- Negligence or failure to warn: whether a practitioner or institution owed and breached a duty by recommending a feeding or dental-management system without adequate inquiry, disclosure or consideration of alternatives.
- Professional discipline: whether repeated conduct was likely to cause unnecessary suffering, demonstrated inadequate knowledge, skill, judgment or care, or constituted improper or unethical conduct under the relevant legislation or code.
- Representative or class proceedings: whether a defined claimant group received materially similar representations or omissions, suffered legally recognised loss and raises common questions of fact or law.
- Regulatory enforcement and public inquiry: compulsory production of research, sponsorship and internal decision records; review of advertising and product seals; conflict-of-interest investigation; independent comparator research; corrective statements; restitution or other authorised remedies.

- Serious civil or criminal allegations: only where evidence proves the required elements of knowledge, intention, causation, agreement and statutory offence. Parallel conduct or association alone is not enough.

Australian consumer law prohibits misleading or deceptive conduct and false or misleading representations, and provides consumer guarantees for goods and services. The ACCC states that advertised claims should be true, accurate, based on reasonable grounds and capable of proof. NSW veterinary legislation recognises unnecessary animal suffering, inadequate knowledge, skill, judgment or care and improper or unethical conduct as possible disciplinary matters, and prohibits an employer from directing or inciting veterinary misconduct. Federal representative proceedings require an identifiable group and common questions of law or fact. [36-39]

The strongest first case may be narrow

A well-documented test case concerning a specific representation, recommendation, omission, product, procedure and loss may expose more evidence than an immediate attempt to prove every disease in every animal. Common representations may be more manageable than identical biological causation across a diverse population.

15. Evidence preservation: what owners and investigators should keep

Legal theories are useless without preserved evidence. Pet owners considering a complaint or seeking advice should retain, where available:

- product packaging, ingredient panels, advertising, websites, screenshots and "veterinary recommended" or dental-health claims;
- purchase records showing product, date, duration and source;
- veterinary records, periodontal charts, radiographs, photographs, pathology, laboratory reports and referrals;
- written and verbal feeding recommendations, warnings against alternatives, consent discussions and conflict disclosures;
- invoices for dental checks, anaesthesia, imaging, scaling, extraction, medication, specialist care and replacement products;
- a dated chronology of food, breath, oral findings, systemic illness, advice, treatment and outcome;
- records of any change in oral or general health following a feeding change, without treating the observation as proof by itself.

Corporations, professional bodies, universities and clinics should preserve research proposals, protocols, funding decisions, raw data, adverse events, negative findings, publication correspondence, guideline drafts, sponsorship agreements, product-seal submissions, legal reviews, expert-witness arrangements and communications concerning raw meaty bones, food form, Harvey's proposed study, the 1993 proceedings and the Cybernetic Hypothesis. Once litigation is reasonably contemplated, affected parties should obtain jurisdiction-specific advice about preservation obligations.

A public preservation notice

Do not destroy the record of what was known, what was proposed, what was funded, what was refused, what was published, what was omitted and who made each decision.

16. Intellectual and professional responsibility

The allegation of deliberate professional or intellectual fraud must remain bounded by proof. Fraud in law ordinarily requires defined elements such as a material representation or omission, knowledge or recklessness, intention, reliance, causation and loss. The public record does not establish those

elements against every dentist, society or corporation. It does establish material warranting investigation into whether specialist authority created misleading impressions of prevention, independence and scientific completeness.

The ethical charge is already formidable. Specialists knew the scale and consequences of disease. The natural-prevention argument was placed directly before them. A leading authority designed the comparator. The specialty journal published the hypothesis. Commercial sponsors obtained access and validation. The decisive experiment remained absent. Those occupying positions of authority had personal duties to inquire, disclose and challenge.

Anticipatory obedience, institutional conditioning, career pressure and self-censorship may explain conduct; they do not erase responsibility. Nor does the Sergeant Schultz response - "I know nothing" - answer a record showing that not knowing was cultivated, convenient and professionally rewarded.

No specialist alibi

"I treated the disease placed before me", "the guideline recommended it", "VOHC approved it", "there was no evidence for the alternative" and "industry sponsorship is normal" are not complete answers. The inquiry is what each authority knew, should have known, failed to test, represented to the public and gained from the omission.

17. Accountability proportionate to proof

Exposure should lead to proportionate accountability. Honest error should lead to correction, disclosure and better research. Undisclosed conflicts may justify removal from decision-making roles. Reckless professional guidance may warrant disciplinary investigation. Knowingly misleading representations, concealment of material evidence or coordinated misuse of authority may justify retraction, loss of office or accreditation, restitution and civil damages. Where evidence meets a criminal threshold, institutional prestige should not create immunity.

The aim is not indiscriminate punishment of every veterinary dentist. It is protection of animals, restoration of professional integrity and recovery of the scientific opportunity. Those who treated suffering competently and acted candidly should be distinguished from those who designed, promoted, concealed or protected the system. Collective custom must not dissolve individual responsibility.

18. Records required from Mars and the dental establishment

A proper legal or regulatory inquiry should obtain records rather than rely upon retrospective assurance. It should require at least:

- 1. All periodontal research records:** Mars, Waltham, Royal Canin, Greenies and Pedigree protocols, abandoned proposals, negative findings, adverse events and publication decisions.
- 2. The excluded-comparator record:** All material concerning the 1993 course, Harvey's proposed trials, the Cybernetic Hypothesis, raw meaty bones, whole-carcass feeding, food form, the two developmental pinch points and direct comparator design.
- 3. Professional and institutional contacts:** Contacts with AVDC, EVDC, VOHC, WSAVA, AVDS, EVDF, Veterinary Dental Forum, journals, universities, specialist colleges and training programmes concerning dental products, guidelines and bone-feeding advice.
- 4. VOHC product files:** Submission packages, reviewer reports, voting records, fees, maintenance agreements, product changes and the basis for claims extending from plaque or tartar to periodontal-disease severity.
- 5. Conflict and sponsorship disclosures:** Financial disclosures for guideline authors, journal editors, society officers, speakers, expert witnesses and institutions receiving pet-food or dental-industry support.
- 6. Revenue and utilisation data:** Data linking food and dental-product sales with screening, anaesthesia, radiography, scaling, extraction, repeat procedures and insurance claims.
- 7. Risk and strategy communications:** Material identifying commercial, reputational, professional or legal risks associated with findings adverse to industrial feeding.

- 8. Human-health communications:** Records of communication with human periodontology, medicine or public-health researchers concerning oral-systemic mechanisms and the comparative animal model.
- 9. Waltham and Watson files:** The Borthwick commission, raw data, drafts, reviews and successor decisions; the Watson review drafts, correspondence and records of assistance, receipt, circulation and response.
- 10. Data for independent comparison:** De-identified feeding, periodontal, treatment, cost, quality-of-life, diagnostic and mortality data, with coding dictionaries sufficient for independent analysis by feeding system.

Conclusion

Veterinary dentists are likely to be presented as the ultimate authorities on the periodontal consequences of pet feeding. Their expertise in established disease is real. Their authority over the unperformed comparison is not.

The specialty has spent decades describing an epidemic, refining diagnosis, developing products, teaching procedures and building professional institutions. Yet the natural-prevention case was in its official course record by 1993, in its journal by 1994 and in the proposed study of one of its leading figures. Waltham commissioned a report. The AVA commissioned a review. A systemic clinical signal was published. The decisive experiment was not performed. The disease continued. Products and procedures multiplied. Mars now occupies the food, science, dental-product, veterinary and diagnostic sides of the resulting system.

The wider consequence is not confined to animal dentistry. The neglected comparative model may have delayed understanding of oral-systemic feedback relevant to periodontal medicine, public health and chronic disease. That lost opportunity, together with animal suffering and owner loss, belongs in the whole-system account.

The purpose of this record

The purpose is not to destabilise a corporation for its own sake. It is to destabilise unsupported authority and replace it with evidence, disclosure, independent comparison and accountability. The question is no longer simply why veterinary dentistry failed. It is who knew, who benefited, what wider knowledge was lost - and what forms of legal and public accountability must now follow.

Evidential and legal status

This paper is a public-interest analysis, not a judicial, regulatory or professional finding and not legal advice. It distinguishes documented arrangements and statements from inferences and allegations requiring disclosure, expert assessment and adjudication. It invites correction, production of omitted evidence and independent testing. Inclusion of a source does not convert an observation, association or preliminary study into proof of causation or liability.

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Source note: The complete Borthwick and Watson documents and the other primary exhibits are preserved in the project exhibit bundle. Historical observations and preliminary studies are used as notice, mechanism and research signals; they are not inflated into proof of every causal or legal proposition. Current corporate and professional webpages are dated because roles, content and institutional arrangements may change.

Corrections and responses: Mars, veterinary dental bodies and materially named organisations are invited to identify factual errors, provide omitted evidence and answer the questions raised. Substantiated corrections and material responses should be incorporated into the public record. Silence is not treated as admission.