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Preface: There’s So Much More to Cats…  xi
Margie Scherk

Stress and Feline Health 653
C.A. Tony Buffington and Melissa Bain

In the health sciences, stress often is defined in terms of stressors; events that are perceived as threats to one’s perception of control. From this perspective, a stressor is anything that activates the central threat response system (CTRS). Recent research shows that the CTRS can be sensitized to environmental events through epigenetic modulation of gene expression. When CTRS activation is chronic, health and welfare may be harmed. Environmental modification can mitigate the harmful effects of chronic CTRS activation by reducing the individual’s perception of threat and increasing its perception of control, which improves health and welfare.

Environment and Feline Health: At Home and in the Clinic 663
Sarah Heath

Environmental optimisation of the home and the veterinary clinic is important, not only for promoting good emotional and cognitive health for domestic cats but also ensuring good physical health. All three aspects of the feline health triad are interconnected. When the social and physical environment is compromised, emotional challenge can result in behavioral responses that are undesirable and/or detrimental to feline welfare. The physiological responses to compromised emotions and sustained protective emotional motivation can be involved in the triggering, maintenance and increased significance of a range of physical health issues including chronic pain and urinary tract, gastrointestinal and dermatological disease.

Behavior as an Illness Indicator 695
Elizabeth Stelow

When an owner notices a behavior change in their cat that concerns them enough to present the cat to the vet, there are 3 possibilities: the behavior change reflects a change in behavioral health (a change in psychological state), a change in medical health (a change in physical state), or a combination (comorbid medical and behavioral pathologies). Because many behavioral pathologies are diagnoses of exclusion, it is important that the veterinarian rule out all of the likely medical differentials for the changed behavior. This article is a behavior-by-behavior guide to the more common differentials for the most common problem behaviors.
Behavior Problem or Problem Behavior?

Terry Marie Curtis

When humans decide to live with another species, certain considerations must be made: the first being that this other species has a repertoire of species-specific and species-normal behaviors, some of which may be annoying or objectionable to the humans. Many cat behaviors are understood but many still are not. Five of the common problem behaviors in cats are house soiling, scratching, climbing and jumping up on things, howling, and hunting. By understanding the normal behaviors of cats, it may be easier to work out compromises so that the human and feline species can live together in harmony.

Feline Aging: Promoting Physiologic and Emotional Well-Being

Amy Miele, Lorena Sordo, and Danielle A. Gunn-Moore

Video content accompanies this article at http://www.vetsmall.theclinics.com.

Caring for elderly cats presents challenges. The interplay between emotional and physical health is an important consideration; they cope with stress poorly. Optimising their environment can improve their quality of life, as does early diagnosis and treatment of medical or behavioural problems. This may be complicated by multiple, often interacting diseases, and the overlap of clinical signs, including behavioural change. Client evenings and geriatric clinics play a crucial role in making owners aware of normal ageing changes and when to seek veterinary advice. Differential diagnoses behind behavioural changes, such as increased vocalisation will be considered, including cognitive dysfuncion syndrome.


Paulo V. Steagall

Cats have unique anatomic, physiologic, and behavioral considerations that may influence analgesia and pain management. They present specific challenges that require an individualized, feline-specific approach. This article presents an overview of recent advances in feline pain management and their differences in relation to other species and evolves on its future challenges. The main specific anatomy and physiology of the cat and how it may affect analgesia is discussed. Validated pain assessment tools including the UNESP-Botucatu Multidimensional Composite Pain Scale, Glasgow Feline Composite Measure Pain Scale, and the Feline Grimace Scale are summarized.

Feline Chronic Pain and Osteoarthritis

Beatriz P. Monteiro

This article reviews the current knowledge regarding osteoarthritis-related pain in cats as a structure in which to discuss the assessment of chronic pain in the research and clinical settings. The scientific evidence available for current and emerging drug therapies is described. The importance of environmental enrichment and positive emotions to reduce pain, stress,
and anxiety as means to promote feline welfare and human-pet bond is discussed.

**Feline Neuropathic Pain**

Mark E. Epstein

Neuropathic pain represents the extreme in maladaptive pain processing. In itself, it is a disease in which pain has become exaggerated in some combination of scope, severity, character, field, duration, and spontaneity. It is almost certainly an underappreciated, underdiagnosed cause of possible significant patient morbidity in cats. This article explores the basic mechanisms, recognition, known and suspect syndromes, and prospective treatment of feline maladaptive and neuropathic pain.

**Complex Disease Management: Managing a Cat with Comorbidities**

Margie Scherk

Many older cats often suffer concurrently from multiple conditions. By focusing on the common concerns, rather than conflicting requirements, a management program can be devised. Optimize hydration, nutrition, and ensure comfort though providing analgesia and a low-stress environment in which the patient’s feline-specific nature is respected both in the clinic and at home. Additional requirements, such as hyperphosphatemia or hypokalemia, can be met using treatments outside of diet, if necessary.

**Distinguishing Between Dermatologic Disorders of the Face, Nasal Planum, and Ears: Great Lookalikes in Feline Dermatology**

Kimberly Coyner

Facial dermatitis in cats can be caused by a broad range of infectious, allergic, immune-mediated and neoplastic disorders with very different treatments and prognoses. Baseline dermatologic diagnostics (skin scrapings for mites, cytology for infection and to characterize inflammatory infiltrate, and dermatophyte culture) are required, as well as possible further diagnostics, including therapeutic trials for parasites and feeding a hypoallergenic diet, bacterial culture, and skin biopsies for histopathology in order to achieve a diagnosis. Clinical presentations of diseases affecting different parts of the feline face are presented and discussed.

**New Tests in Feline Veterinary Medicine: When to Use Them and When to Stick with Tried-and-True Tests**

Sally Lester

The focus of this article is on how interpretations of laboratory data can utilize both population and individual reference intervals, while making the most of routine testing procedures coupled with some of the newer laboratory tests, which can complement the existing tests in diagnosing disease.
Veterinary medicine has traditionally functioned as an art and a science, that is, as knowledge of general principles and knowledge of, and relationship with, the individual animal and their caregiver. With the advent of increasing specialization, this intimate knowledge of the individual is being lost. This has great ramifications for diagnosis and treatment. Knowing the particular personality and tendencies of the patient helps differentiate between behavioral issues and fully medical issues. Excessive “scientization” in veterinary medicine needs to be addressed in veterinary medical education.