Standards of care
Regular health check standards for dogs and cats
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THE AUSTRALIAN VETERINARY ASSOCIATION HAS PREPARED THESE STANDARDS TO SUPPORT VETERINARIANS IN OFFERING THE HIGHEST STANDARDS OF CARE TO THEIR PATIENTS. THE REGULAR HEALTH CHECK IS ONE OF THE BUILDING BLOCKS OF COMPANION ANIMAL PRACTICE AND IS ALSO AN ESSENTIAL COMPONENT OF RESPONSIBLE PET OWNERSHIP.

The standards set out in this document detail the highest standards of care for a regular health check for dogs and cats. Not every owner will want every aspect described here included in their pet’s regular health check. But the Australian Veterinary Association believes that owners should be advised of the best available care as set out in these standards.

These standards have been based on the latest peer-reviewed scientific research, surveys of Australian veterinarians and broad consultation within the veterinary profession. They are only relevant to a regular health check in an apparently healthy dog or cat and do not address the clinical concerns applicable to an ill or injured animal.

Accurate clinical records are an essential part of veterinary practice, and practitioners must accurately record every aspect of a regular health check.

These standards will be reviewed and updated based on feedback from veterinarians and the publication of relevant new research.

TABLE 1: CHECKLIST FOR REVIEW AT EACH CONSULTATION

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Weight comparison chart for dogs and cats

**Figure 1: Human Age Equivalence Chart for Dogs and Cats**

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Courtesy of Fred L. Metzger, DVM, DABVP
**ANIMAL’S TEMPERAMENT 1-2**
Should be noted and recorded.

**MICROCHIP 3**
Check number corresponds to the paperwork the client has provided. Refer to AVA Micro-chipping policy.

**WEIGHT 4-9 / BODY CONDITION SCORE**
Most pedigree breeds have a reference interval for appropriate weight. The WSAVA has an excellent visual and numerical Body Score Chart for all cats and dogs regardless of pedigree. Body Condition Score ranges from 1 to 9 with the former considered emaciation and the latter morbid obesity.

Regular weight checks are very valuable. The frequency of these will depend on the animal’s age, health and veterinarian’s opinion.

**EYES 10**
An examination of the eyes may require magnification, a focal light source, Schirmer tear test strips, local anaesthetic, fluorescein and a dark room. Routine eye examination should assess the papillary light response, tear film, cornea, anterior chamber and retina. Intra-ocular pressure measurement may also be measured in senior / geriatric animals and breeds predisposed to glaucoma.

**ORAL CAVITY 7,10-16**
Examination of the oral cavity should include assessment of:
- Lips
- Tongue
- Gingiva
- Teeth
- Occlusion of teeth
- Oral Mucosa - include capillary refill time

Abnormalities found should be noted including dental score – particular attention should be made for the presence of the following diseases or changes:
- Periodontal disease – gingivitis, gingival recession, purulent material
- Asymmetry of calculus build up: a great indicator of a painful mouth
- Obvious signs of tooth fractures
- Abnormal wear of teeth
- Presence of extra teeth – supernumerary or retained deciduous
- Absence of teeth
- Halitosis

Any dental pain should be scored. (See pain scoring below) A Wood’s lamp or dyes may be used to demonstrate plaque on teeth. Refer to the AVA Dental Guidelines.

**NARES 17-20**
Examination of the nares should include assessment of:
- Pigment
- Bilateral patency and air flow
- Philtrum

Abnormalities found should be noted – particular attention should be made for the presence of the following diseases or changes:
- Asymmetry
- Changes in pigmentation
- Discharges
- Swelling
- Odour
- Scarring

**EARS 17-20**
Examination of the ears should include assessment of:
- Canals
- Pinna

To accurately assess the canals requires an otoscopic examination.

**INTEGUMENT 17-20**
Examination of the integument should include assessment of:
- Condition of skin and hair eg. alopecia
- Texture
- Inflammation
- Colour
- Lesions
- Parasites
- Pruritus
- Nails

Abnormalities found should be noted – particular attention should be made of measurements and characteristics of lesions. Consideration should be given to cytology and histology.

**HEART 10, 21-23**
Examination of the heart should include assessment of:
- Rate (this should always be recorded)
- Rhythm
- Heart sounds including abnormalities e.g. murmurs
- Pulse, including quality and rate

Look for congenital, inherited or age related concerns.

Diagnosing cardiac disease in cats can be especially difficult. Cats present with few, if any, clinical signs and thoracic auscultation is normal in 30% of cats with heart disease67.
BLOOD PRESSURE
All practices should be equipped to measure blood pressure.
Routine measurement of blood pressure is an age related veterinarian decision.

RESPIRATORY SYSTEM
Examination of the respiratory system should include assessment of:
- Thoracic auscultation
- Respiratory Rate (this should always be recorded)
- Depth of respiration
- Tracheal sensitivity on palpation

LYMPH NODES
Examination of the lymphatic system should include assessment of:
- Peripheral node size and symmetry
- Minimum check should be submandibular, prescapular, inguinal and popliteal nodes

MUSCULOSKELETAL / GAIT
Examination of the musculoskeletal system should include assessment of:
- Observation of the animal before it is placed on the table. Preferably allow the animal to ambulate freely before being handled.
- Gait
- Symmetry
- Muscle tone
- Joint mobility and presence of crepitus
- Score pain - note the score each time even if the animal has zero pain.

ABDOMINAL PALPATION
This should occur at each examination – in particular looking for pain, abdominal masses and guarding.

TEMPERATURE
A body temperature should be taken and recorded.

ANAL SACS
Examination of the anal sacs should include assessment of:
- Size
- Asymmetry
- Pain

Examination of the anal sacs does not require expression of contents unless indicated.

GENITALS
Examination of the genitals should include assessment of:
- Male:
  - Testicles: number, position, irregularities.
  - Scrotum
  - Penis and prepuce
  - Prostate if indicated
  - Entire or desexed.
- Female:
  - Mammary glands
  - Vulva
  - Entire or desexed.
**NUTRITION 4,5,10,17,20-22,30,36-44**

- Type and amount of all food regularly consumed
- Dietary supplements
- Treats

Every pet owner should be made aware of what they should feed their pet for their breed, age, lifestyle and health status.

**PARASITE DISCUSSION**

Owners should be made aware of the risks to both their pet and themselves of parasites. Appropriate and strategic testing and/or treatment strategies should be advised. These will depend on geographical and environmental considerations and associated risk factors.

These may include but are not restricted to:
- Fleas
- Ticks
- Mites
- Giardia
- Gastrointestinal worms
- Heartworm

**VACCINATION PROTOCOLS**

Vaccination protocols should be determined within a veterinarian–client–patient relationship, based on attributes such as duration of immunity of available vaccines and an individual animal’s requirements.

Every animal should be immunised and each individual animal only as frequently as necessary. Refer to the AVA position statement on vaccinations.

**HEALTH SCREENING 52-53**

Cats and dogs age faster than humans with significant health changes occurring in as little as three to six months. As animals age many degenerative diseases increase in prevalence e.g. kidney disease, heart disease and some endocrine conditions. Pets therefore should have regular health checks throughout their lives.

The frequency of these health checks will depend on the life-stage of the animal: wherein the health checks could be as regular as every 3-6 months but no less than once a year minimum.

**CLINICAL PATHOLOGY 53-66**

- Biochemistry
- Haematology
- Urinalysis
- Thyroid testing
- Faecal Analysis

Given the expansion in knowledge about breed specific interval ranges, consideration can be given to the concept that the best reference interval may well be the animal’s own historical results. Obtaining a baseline normal for the individual animal can be important.

The pattern of the results, rather than an isolated result taken in one moment in time in an animal’s life may be the significant reading.

In general, on-going clinical pathology testing can be an important tool for the early detection of subclinical disease which in early stages may present as subtle changes in parameters still within reference range.

**HAEMATOLOGY**

Haematology may be indicated in animals as part of a preventive health check or a pre-anaesthetic examination in healthy animals.

The evaluation of a packed cell volume and total protein at a minimum can help determine if there is anaemia or potentially dehydration. A complete blood count provides a more complete picture of cell counts and can provide information on red cell parameters, and indications of inflammatory disease. Assessment of platelet numbers is one important aspect of the evaluation of haemostatic potential. A blood smear review is an important part of a blood count.

**BIOCHEMISTRY**

A biochemical profile may be indicated in animals as part of a preventive health check screen or pre-anaesthetic examination in healthy animals. The extent of the biochemical profile may vary from case to case and should include total protein, ALT, ALP, blood urea, creatinine and glucose as a base line. In older patients a more complete biochemical profile is indicated.

For some biochemical parameters the absolute value is not as important as changes in the value over time, with creatinine a good example. Therefore serial testing (pre anaesthetic screens or serial blood screening for older patients) can be very important.

**URINALYSIS**

A urinalysis is an important part of clinicopathological testing and should accompany biochemical and haematological profiles. It can potentially provide important information on renal function, and is useful to assist in the interpretation of some changes on a biochemical profile, such as azotaemia or hyperglycaemia.

A urinalysis should consist of:
- physical evaluation (colour, clarity and specific gravity)
- chemical analysis (dipstick)
- microscopic evaluation.

If there is an indication of infection (pyuria or bacteriuria) microbiology may be indicated. In cases of proteinuria with a bland sediment a urine protein: creatinine ratio may also be indicated. Urinalysis with some of the newer veterinary dipsticks can provide USG, protein: creatinine ratios as well as the normal factors found in human urinalysis sticks. This simple ratio can assist in identifying congenital or acquired renal impairment which is of importance in the newly purchased puppy or elderly animal.
THYROID TESTING

Testing of a total thyroxine (TT4) level may be indicated in some patients.

Thyroid testing is indicated in dogs where clinical signs of hypothyroidism are present. A canine subnormal TT4 may indicate hypothyroidism, a breed specific low normal or a sick euthyroid syndrome. Evaluation of FT4 and cTSH serial assays can provide additional valuable diagnostic information in such cases.

In cats, serial, rather than a once-off TT4, testing in the geriatric cat can be helpful in identifying hyperthyroid cats who can throw a normal TT4 in the earlier stages of hyperthyroidism.

TT4 can also have potential as a pre-anaesthetic screening test as hyperthyroidism can potentially increase the risk of anaesthesia.

FAECAL PARASITE ANALYSIS

Faecal parasitology (fresh wet mounts and flotation or flotation-centrifugation faecal examination) can be considered as part of an annual preventive health examination.

Despite the use of regular prophylactic anthelmintics, faecal parasitology may still be indicated. *Giardia* spp. are not eliminated by commonly used regimens of anthelmintics. Consideration should be given to testing for *Giardia* where appropriate.

BREED PREDISPOSITION DISCUSSION

Advise the client on any preventative methods to reduce/alleviate potential inherited problems. Counsel the client on the appropriateness whether to breed or not from an animal with a diagnosed genetic disorder. It is possible to leverage the LIDA10 site from Sydney University to familiarise oneself with breed predisposition; use LIDA throughout the consultation as a reference point for genetic concerns.

INSURANCE

Vets should be comfortable discussing pet insurance with their clients. The AVA policy states that pet insurance can contribute to optimal health and welfare outcomes for all Australian pets and that pet insurance should be available to all Australian pets regardless of age or condition. Vets should advise owners of the need to read all terms and conditions to understand the scope of the coverage.
References

1) Dr Sophia Yin –Author of Low Stress Handling Restraint and Behaviour Modification of Dogs and Cats; http://lowstresshandling.drsophiayin.com/images/ intrograph.gif
2) Drsophiayin.com/blog/entry/free-downloads-posters-handouts-and-more
8) Global Year Against Acute Pain 2011 – “Anticipate, Assess, Alleviate”.
9) Australian Veterinary Pain Advisory Council link.
12) Gary Wilson BVSc MVSc MACVSc-The Normal Bite of The Dog.
14) Ethical profit making from dentistry AVA 2012.
19) Assess, Alleviate”.
20) Sue Paterson Manual of Skin Diseases of the Dog.
23) Blood Pressure* Campbell and gavaghan, Senior Care MSD.
30) Waltham Fecal Score Chart.
31) FAB Bristol Information sheet on Cat Friendly Home, Spraying and Soiling etc-http://www.fabcats.org/ behaviour.
44) B Prevalence and risk factors of behavioural changes associated with age-related cognitive impairment in geriatric dogs.
52) https://www.avma.org/News/JAVMA/NewsPages/Pages/040115s.aspx
53) https://www.avma.org/News/JAVMA/NewsPages/Pages/060915s.aspx
67) Cats with confirmed hypertrophic cardiomyopathy as part of a study conducted at the University of Illinois; 1998-1999.