Feline Middle Age Spread; Preventing And Managing Obesity in the Ageing Cat

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Weight Management Nurse
Introduction

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ROYAL CANIN® Weight Management Clinic Nurse

• University of Liverpool, Small Animal Teaching Hospital
• Three basic principles
  • Provide a clinical referral service
  • Raise awareness
  • Clinical research
Introduction

Kelly Eyre RVN
ISFM DipFN & AdvCertFB
ROYAL CANIN® Feline Healthy Ageing Clinic Nurse

• University of Liverpool, Institute of Life Course and Medical Sciences
• Study aims to extend the quality of life in our ageing cats through research and education
  • 6 monthly visits to assess and monitor all aspects of ageing
Introduction
Introduction

Aim:
To improve quality and length of life.
Contents

• Age related concerns
  • Prevalence of age-related disease
  • Ageing cat consultation
  • Owner feedback

• Feline obesity care
  • Obesity as a disease
  • Obesity care programs
  • Obesity care for a senior cat
Age Related Concerns
What is ageing?

Ageing is the process of growing old, and healthy ageing is the process of growing older without any age related disease.

What is our aim?

Our aim is to improve the quality and length of their life through regular monitoring, early detection of disease and the most appropriate intervention.
Age Related Concerns

How old is your cat?

<table>
<thead>
<tr>
<th>Life stage</th>
<th>Age of cat</th>
<th>Human equivalent age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitten (0-6 months)</td>
<td>14 years old</td>
<td>14 years</td>
</tr>
<tr>
<td>Junior (7-12 months)</td>
<td>21 years old</td>
<td>21 years</td>
</tr>
<tr>
<td>Adult (1-2 years)</td>
<td>28 years old</td>
<td>28 years</td>
</tr>
<tr>
<td>Mature (3-7 years)</td>
<td>44 years old</td>
<td>44 years</td>
</tr>
<tr>
<td>Senior (8-10 years)</td>
<td>60 years old</td>
<td>60 years</td>
</tr>
<tr>
<td>Super Senior (10+ years)</td>
<td>76 years old</td>
<td>76 years</td>
</tr>
</tbody>
</table>

Average lifespan: 14 years old
## Prevalence of age related disease

<table>
<thead>
<tr>
<th>Disease</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>6-7 years</td>
</tr>
<tr>
<td>Osteoarthritis</td>
<td>6-7 years</td>
</tr>
<tr>
<td>Chronic Kidney Disease</td>
<td>8-9 years</td>
</tr>
<tr>
<td>Hypertension</td>
<td>10 years</td>
</tr>
<tr>
<td>Hyperthyroidism</td>
<td>9-10 years</td>
</tr>
<tr>
<td>Dental disease</td>
<td>4 years +</td>
</tr>
</tbody>
</table>

**Obesity**

6 years + increase in prevalence

Images © University of Liverpool, Feline Healthy Aging Clinic
Prevalence of age related disease

209 cats between 7 and 10 years enrolled at the Feline Healthy Ageing Clinic

- 3% cats diagnosed with hyperthyroidism
- 54% of cats had dental disease
- 58% indicated possible musculoskeletal disease
- 11% of the cats had potential kidney disease
- 4% elevated blood pressure
- 57% overweight
Ageing Cat Consultation

- Full physical exam
- Weight, BCS and MCS
- Dental exam
- Blood pressure
- Cardiac auscultations for heart rate and murmurs
Ageing Cat Consultation

- Goitre check
- Orthopaedic exam and watch mobility
- Retinal exam
- Abdominal palp
- Blood tests to include biochemistry, haematology and T4
- Urinalysis
Ageing Cat Consultation - Frequency

- Mature
  - Annual with vet, 6 monthly nurse
- Senior
  - Annual with vet, 6 monthly nurse dependant on disease status
- Super Senior
  - Twice yearly with vet, 3 monthly with nurse
Owner Feedback

- Owner questionnaire
- Support diagnosis
- Educate owners
- Provide before consult

www.catcare4life.org

www.vetprofessionals.com
Owner Feedback – Questionnaire

Physical Changes
- Breath smells
- Feels bony or skinnier
- More matted hair

Activity Changes
- Going outside less
- Struggling to reach high places
- Difficulty in getting comfortable

Image © University of Liverpool, Feline Healthy Aging Clinic

Image © University of Liverpool, Feline Healthy Aging Clinic
Owner Feedback – Questionnaire

**Eating Habits**
- Dropping food when chewing
- Leaving more food behind in the bowl
- Eating more/less

**Drinking Habits**
- Drinking more
- Drinking from other places e.g. tap
- Difficulty in bending head to drink

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Image © University of Liverpool, Feline Healthy Aging Clinic
Image © Sonia Lorre
Owner Feedback – Questionnaire

Toileting Changes
- Increased urination
- Missing the litter tray
- Change in faeces

Behaviour Changes
- Aggressive behaviour
- More vocal
- Shrinking the environment
Feline Obesity Care
Prevalence

39% of cats have overweight or obesity*

FHAC (mature cats) 57%

Commonest form of malnutrition

*Courcier E., et al. (2010)
Obesity, A Disease

• Chronic, incurable, disease

MER: Maintenance energy requirement

MER after weight loss

Positive energy

Negative energy

*30-50% calorie reduction

Obesity, A Disease

- Post weight loss
- Lower calorie requirement
- Continued obesity care
- Prone to regain

"...a disorder of STRUCTURE OR FUNCTION especially one that produces SPECIFIC SYMPTOMS or that AFFECTS A SPECIFIC LOCATION and is not simply a result of physical injury..."

Treatable, but incurable disease
Obesity, A Disease

- Adipose tissue
  - Adds weight and bulk
  - Releases adipokines
    - Inflammation
    - Insulin resistance
    - Affect immunity
### Associated risk of having obesity

<table>
<thead>
<tr>
<th>Risk Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Osteoarthritis*</td>
</tr>
<tr>
<td>Airway disease</td>
</tr>
<tr>
<td>Urinary disease*</td>
</tr>
<tr>
<td>Metabolic disorders*</td>
</tr>
<tr>
<td>Increased cancer risk*</td>
</tr>
<tr>
<td>Increased Surgical and anaesthetic risk*</td>
</tr>
<tr>
<td>Poor skin and coat*</td>
</tr>
<tr>
<td>* Also an increased risk with aging</td>
</tr>
</tbody>
</table>

58% FHAC cats have musculoskeletal disease

Images © University of Liverpool, Weight Management Clinic
Obesity, A Disease

Reduced quality of life
Reduced life span

Weight loss IMPROVES quality of life

Images © University of Liverpool, Weight Management Clinic
Obesity Care

• Recognition

Calculate the OPTIMAL weight

To achieve weight loss feed for OPTIMAL weight
Obesity Care Consultations

• Gather information
  • Medical
  • Dietary
  • Lifestyle
  • Environment

• Examination
  • Weighing
  • Body condition scoring
  • Muscle condition scoring
  • Measurements
  • Photos

RECORD all parameters
## Obesity Care - Recommendations

| Diet | Complete and balanced  
|      | Cut out treats and extras  
|      | BCS < 6 = Reduce maintenance food  
|      | BCS >7 = Use specialist weight management diets |

**2 x 2-minute play sessions**

**Diet**
- Complete and balanced
- Cut out treats and extras
- BCS < 6 = Reduce maintenance food
- BCS >7 = Use specialist weight management diets

**Weight Management**
- Nutrient adjustment for weight loss
  - Nutrient dense, calorie dilute
  - Satisfying

**Accuracy**
- Measure food out on digital scales – no measuring cups

**Divide**
- Split allocation into 2+ meals a day

**Working for food**
- Increase meal duration
- Increase activity
- Allows time to feel full

Images © Georgia Woods-Lee
Obesity Care – Problem Solving

• Transitioning

  FOOD TRANSITION PERIOD (1 WEEK)

  Days 1 & 2
  75% usual food + 25% new food

  Days 3 & 4
  50% usual food + 50% new food

  Days 5 & 6
  25% usual food + 75% new food

  Days 7 & after
  100% new food

1-2 months if needed!

• Treats

Images © Georgia Woods-Lee

Images © ROYAL CANIN ®
Increases water intake
Obesity Care – Problem Solving

• Food seeking behaviors
  • Increase meal frequency
  • Slow down consumption
  • Unevenly divide food

• Multi-cat households
Obesity Care For Senior Cats
Obesity Care For Senior Cats

• Aims
  • Improve quality of life
  • Improve mobility
  • Not further compromise the patient
  • Preserve lean body mass

• Holist approach
  • Consider age
  • Consider concurrent disease

Image © University of Liverpool, Weight Management Clinic
Obesity Care For Senior Cats

- Weight management in senior cats
  - Prevent weight gain
  - Safely reduce weight
- Correct diet choice
  - Life stage
  - Obesity care
  - Balanced for the individual needs
- Correct amounts
  - Accurate portioning

- Environmental modifications
Obesity Care Balanced For Senior Cats

• The Obesity Paradox*
• Older age, when associated with concurrent progressive disease
  • Diabetes
  • Renal disease
  • Heart failure
  • Cancer

High adipose tissue mass = better survival

• The importance of tailored plan
• 6% weight loss = Noticeable physical benefit

*Slupe, (2008)
Obesity Care Balanced For Senior Cats

Tailored plans

- Reduce weight >6%
- Reduce weight by **15 to < 20% - NO MORE**
  - Dependent on health status
- Lean tissue loss observed >20% of weight loss*

* Image © University of Liverpool, Weight Management Clinic

* German (2016)
Obesity Care Balanced For Senior Cats

• 80% of cases at the Weight Management Clinic have concurrent disease

• Tailored for the individual

• Disease dependent

• Improve quality of life
Obesity Care For Senior Cats - Environmental Modification

Litter tray
- Number of trays
- Correct size
- Low sided
- Correct substrate
- Increase hygiene
- Location

Reduced mobility due to aging and obesity can cause anxiety so owners may see a reduced amount of time spent outdoors

Image © Kelly Eyre
Image © Kelly Eyre
Image © Google
Obesity Care For Senior Cats - Environmental Modification

- Increase fluid intake
  - Add water to wet food
  - Correct water bowls
  - Water fountains
  - Increase number
  - Felaqua
Obesity Care For Senior Cats - Environmental Modification

- Access to favourite places
- Cat flap access
- Horizontal scratch posts
- Increase grooming
  - Obesity
  - Dental disease
  - OA
- Raised food and water bowls
- Low impact play
Obesity Care For Senior Cats - Ruby

Aim:
To improve quality and length of life.
Obesity Care For Senior Cats - Ruby

9 years old at enrolment
Start weight: 7.3kg
BCS 9/9
Optimal weight: 3.5kg
Target weight: 5.8kg
Weight reduction: 1.5kg
Total weight loss (%): 20%

- Weight
- Body condition score
- Morphometric measurement
- Photographs
- Blood pressure
- Biochemistry and hematology
- Urinalysis
- DEXA scan
- Weight management plan

Images © University of Liverpool, Weight Management Clinic
Obesity Care For Senior Cats - Ruby

Feline Healthy Ageing Clinic detected:

• Chronic kidney disease
• Musculoskeletal disease in spine, right shoulder and elbow
• Dental disease – FORL’s
• Obesity – 9/9

• Hyperthyroidism – Dx post weight loss

Highlights the Importance of modest weight loss
Advice given:
• Regular monitoring
• Environmental modification for OA
• Supplementation for OA
• Dental under GA
• Increase water intake to support kidneys
• Treatment for hyperthyroid
Summary

• Age related concerns
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  • Ageing cat consultation
  • Owner feedback

• Feline obesity care
  • Obesity as a disease
  • Obesity care programs
  • Obesity care for a senior cat

Aim:
To improve quality and length of life.
Thank you for listening

Twitter: @TheFatVetNurse

Facebook and Instagram: Feline Healthy Ageing Clinic