FOOD DIGESTIBILITY IS NOT DECREASED IN HEALTHY SENIOR CATS

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INTRODUCTION

Fat digestibility was shown to present an age-related decline in cats (Harper, 1998) for unknown reason. Subclinical gastrointestinal diseases can affect food digestibility. Serum feline specific lipase (fPLI) and cobalamin (B12) concentration are markers of subclinical pancreatitis or gastrointestinal diseases. The aim of this study was to evaluate food digestibility in apparently healthy senior cats, with either B12 deficiency or high fPLI, compared to senior cats with these two markers within reference range values.

MATERIALS AND METHODS

Sixteen senior cats (11.8±0.6y) without evident signs of gastrointestinal disease were selected and divided into 3 groups according to fPLI and B12 serum concentrations (Table 1). All cats were fed the same commercial dry diet (% as is: 40.1 % protein, 20.5% fat, 1.1% crude fibre, 25.6% nitrogen-free extractives, 5,2% moisture) during 2 weeks. During the second week digestibility of dry matter, fat, protein and mesured metabolizable energy was determined following AFFCO protocols. Data were statistically analyzed with Kruskal-Wallis one-way ANOVA and Mann-Whitney U-test with Bonferroni correction. Significance was established at $P<0.05$.

Table 1. Description of the groups

	units	Groups			P-value[1]
		Control (n=5)	Low B12 (n=5)	High fPLI (n=6)	
Vitamin B12	ng/L	721.8 ± 141	200.1 ± 26*	700.8 ± 85	0.008
fPLI	µg/L	2.38 ± 0.43	2.72 ± 0.33	5.17 ± 0.51*	0.004

* significant differences with regard to other groups (p<0.015, Mann-Whitney U test)
[1] Kruskal-Wallis one-way ANOVA

RESULTS

Cats in Group Low B12 showed decreased fat digestibility versus control cats (P=0.009) and it had a significant impact on measured metabolizable energy of the diet (P=0.009). No significant differences were observed between groups Control and High fPLI, nor between groups Low B12 and High fPLI, even though Control Group showed the highest digestibility values for all the gross nutrients.

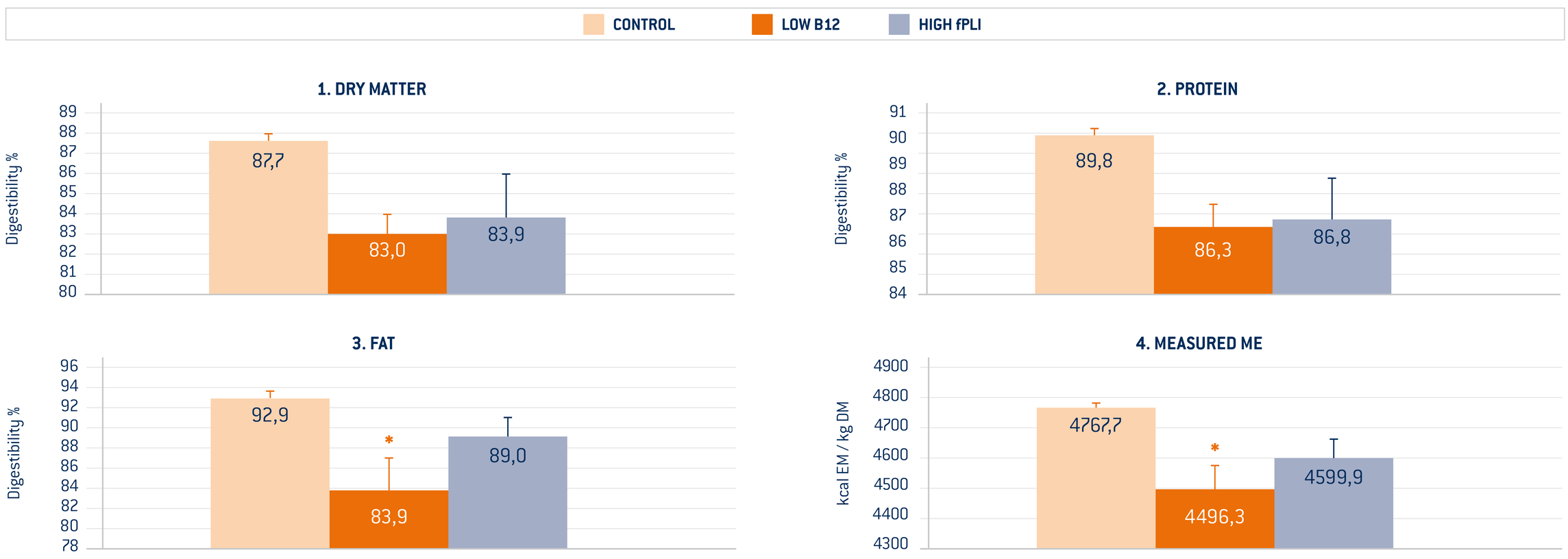

Fig. 1-3. Digestibility of gross nutrients. **Fig. 4.** Measured metabolizable energy on a dry matter basis.

* significant differences compared to control group (p<0.015) (Mann-Whitney U test)

DISCUSSION AND CONCLUSION

Senior (≥10y) cats with fPLI and vitamin B12 in reference range seem to maintain a high digestibility of gross nutrients; however a significant decrease of fat digestibility has been observed in cats with low serum B12 but not in cats with increased fPLI. Results suggest that decreased food digestibility in aged cats could be the consecuence of subclinical chronic gastrointestinal diseases.