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CALCIUM

Dog food advertisements like to give the impression that calcium builds strong bones and teeth and gives your pet a wet nose, a shiny coat and breath that doesn't smell like a prop forward's jock strap. Likewise, ads directed at us humans play up the virtues of calcium. But, as with the breast feeding versus 'formula' controversy, how much of what we see and hear is 'medicine' and how much is marketing?

An editorial written by Karl Michaëlsson and published in the BMJ reminds us that "calcium is vital to many biological processes, and serum concentration is tightly regulated. Net calcium excretion must be replaced, but the amount of calcium needed has been debated for decades. Twenty five years ago (again in the BMJ), Kanis and Passmore concluded that calcium supplements to prevent fractures were not justified by the available evidence, though this view was challenged by determined opponents."

Looking at the recent evidence the BMJ concludes that the conclusions of Kanis and Passmore still hold true. Furthermore, there seems little to be gained from an increased consumption of calcium rich foods.

Prof Michaëlsson goes on to say: "The official recommendations in the UK and Nordic countries of 700-800 mg/day of dietary calcium for adults seem at present to be enough. This intake can be achieved with a normal varied diet. Other guidelines, such as the one from the US National Osteoporosis Foundation, promote at least 1200 mg calcium and 800-1000 IU vitamin D daily as a goal for women aged 50 or older. Few women can achieve these intakes through dietary means alone. As a result, most middle aged and older women in the US now take calcium and vitamin D supplements. As there is currently little, if any, firm evidence that higher intakes prevent bone loss, falls, or fractures in middle aged and older women and men living in the community, the continued emphasis by several organisations (such as NOF) on ever increasing intakes of calcium and vitamin D is puzzling."

What has caused this state of affairs? KM opines that "The profitability of the global supplements industry probably plays its part" and goes on to say: "Conflicts of interest arise when leading academics have shares or management positions in companies making and marketing supplements."

Does it really matter. KM thinks it does, adding: "Most will not benefit from increasing their intakes and will be exposed instead to a higher risk of adverse events such as constipation, cardiovascular events, kidney stones, or admission for acute gastrointestinal symptoms. The weight of evidence against such mass medication of older people is now compelling, and it is surely time to reconsider these controversial recommendations." (See <http://www.bmj.com/content/351/bmj.h4825> for further details.)

Helga Rhein, an Edinburgh GP says "Please do not throw the baby out with the bathwater." What does she mean by this? She explains: "I agree calcium supplements are not needed if one has a healthy diet, but vitamin D supplements might well be needed. My patients live in the climatically challenged Scotland, where most of us are deficient in vitamin D. It is in early childhood that good bone health might be influenced by a good mineral rich diet and sunshine or vitamin D; it probably cannot be influenced much during the few years of a trial in later life."

However, we now know that sufficient vitamin D contributes to a healthy immune system. And even in later life, many diverse conditions, as encountered by general practitioners, from Crohn's

disease, to surgical outcomes, or cancer survival, could be influenced by correcting vitamin D insufficiency, and this (baby) should not be ignored."

Thanks for putting us straight about that, Helga! There have been changes in thinking about vitamin supplements recently - some of which I'll try to follow up in the coming weeks.

EARLY DETECTION OF CANCER

Catching cancers when they are small still makes a difference to survival, even in the current era of more effective therapies, according to a study of breast cancer patients (again in The BMJ this week.)

The research team, based in the Netherlands, say that "traditional factors such as tumour size and number of positive lymph nodes "still have a significant and major influence on overall mortality independent of age and tumour biology." Breast cancer survival rates have increased significantly all over the world in the past decades, mainly due to earlier diagnosis and better treatment options. As such, it has been suggested that traditional prognostic factors, such as tumour size and number of positive lymph nodes, may no longer predict survival. And if these factors do affect survival, the size of this effect is unknown."

Well it isn't unknown any longer. "The results show that both tumour stage and lymph node status had a significant influence on overall survival in both cohorts." HOWEVER "The researchers stress that this is an observational study so no definitive conclusions can be drawn about cause and effect. Nevertheless, they say that tumour size and nodal status "still have a significant and major influence on overall mortality independent of age and tumour biology in the current era of more conservative surgery and newer systemic therapies. Early stage at detection is vital; surgery is crucial, and more conservative surgery is more favourable."

An editorial carries an uplifting (no pun intended) message: enhanced treatments "are providing persistent, incremental improvement in outcomes" and certain groups of patients "are achieving astonishingly good outcomes." Hurrah!

Dr John Cormack