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## Topic#1 - Oral Calcium

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### Special points of interest:

- \* Welfare is an issue when treating dairy cows
- \* Rehydration of small animals - we have an answer

In the early years of the century NZVA actually asked the question of its members about whether the profession should be involved in animal welfare debates.

It seems incredulous today that the question would even be asked; isn't that what being a veterinarian is all about?

While welfare is now deemed vital to veterinary practice some of our older remedies need to be reviewed and we need to be aware of the old medical adage of the cure being worse than the disease.

We look at this topic inside this issue with re-

spect to oral calcium supplementation in dairy cattle and it seems we are still behind the eight ball when compared to overseas trading partners.

Specifically we ask the question, in the article on welfare, "Is this remedy the best for the patient's well-being or am I recommending it because of competition from the farm shop?"

This is quite relevant when the farm shop does not have access to the only product on the market with peer reviewed data on both efficacy and safety in hypocalcaemic cattle.

Marketers have, for many years, pushed misinformation and idolized spurious concepts such as ease of administration when, with the flaccid muscle tone of the hypocalcaemic cow, stockmanship is what is needed mostly when dosing.

Inside we look at this issue, the appearance of boluses, which have already failed in Europe and the whole issue of certifiable claims and the advantages of using fully registered products.



## Topic#2 - Oral Rehydration

Oral rehydration has always been an issue with animals. A couple of years ago, thanks to Kentucky Equine Research, EA addressed this issue in horses with the highly successful "Drink UP."

Now, thanks to DLC Australia, we can present an oral rehydration solution for small animals in the form of Oralade. As with horses palatability has been a major issue with small animal hydration.

Sick animals, in particular, are notorious for being difficult to get drinking. Oralade, with its special flavouring and lack of both citrus and chlorine elements, has overcome this issue and is the answer.

## Oralade

One in every fourteen dogs presents with diarrhoea, with the most common cause being dietary indiscretion. Viral causes include parvo, corona and newly emergent gastrointestinal viruses, including noroviruses. Many patients are treated symptomatically

Gastroenteritis tends to occur more frequently in first 3 months of dog's life but there is evidence of seasonal variation (increased in summer). Some individuals may be predisposed.

Feeding protocols in gastrointestinal disease have recently been revised. Fasting isn't the answer. In conditions such as gastro enteritis energy deficit leads to breakdown of the gut barrier. Fasting reduces energy intake faster and speeds up the process of gut mucosa deterioration. This results in bacterial translocation and sepsis so now the recommendation is that, if the gut works, use it!

Oralade is a dietetic complementary feed to help in the management of acute intestinal absorptive disorders, such as recovery from acute diarrhoea, as well as pancreatitis and post-gastrointestinal surgery.

It contains a balanced level of electrolytes, including sodium and potassium, with easily digestible sugars and simple amino-acids in an isotonic solution.

It is low in phosphorus and highly palatable, making it ideal for renal patients. This product is also suitable for diabetics and hypoallergenic patients.

Glutamate and glycine are functional amino-acids that provide enterocyte nutrition and gastrointestinal tract repair. There is also taurine to support heart, vision and digestive health plus other essential amino acids.

Dextrose is a simple sugar that inhibits gastric secretions and provides ready-to-use energy

Being ultra-low fat Oralade is highly digestible, quickly absorbed and the hydrolysed chicken liver is suitable for hypoallergenic patients. It has a highly digestible formula and only 12Kcal per ml, enable feeding an acute gastrointestinal patient within the first 24hrs of care.

Per-oral micro-enteral nutrition feeds the enterocytes, ultrafast absorption benefits even in vomiting patients and minimizes risk of gastrointestinal bacterial translocations. It optimizes gastrointestinal health, improves immune function, blood flow and intestinal barrier and results in a faster transfer to regular diet

It also minimizes down regulation of important gastrointestinal enzymes and re-establishes absorptive capacity

Oralade is ready to serve and highly palatable with an osmolarity of 300mOsm/L that enables fast fluid replacement and absorption, providing effective rehydration. It is hypoallergenic and has zero contraindications so is suitable for all breeds and ages of cat and dog, including renal, diabetic, and more.

Cats & Dogs are chlorine sensitive, having a higher sense of smell and taste but most tap water sources contain chloride. This is why you can find it hard to get your cats and dogs to drink lots of water. Oralade is chlorine free

Most animals are citrus sensitive and find it highly unpalatable. However it is commonly found in most ORT rehydration powder products. Oralade does not contain citrus ingredients, that's why animals love it!

Adding flavour encourages animals to drink more fluids for longer. Water is proven to shut down the thirst mechanism before enough fluids are consumed for effective hydration. Oralade has an added chicken flavour, helping animals to consume more liquids.

While every cat or dog needs vitamins most receive these through any complete food. Most vitamins carry a strong flavour which can be unpalatable, however vitamins are built into the Oralade product without any negative effect on taste

Oralade uses only purified water, natural chicken flavour and essential electrolytes, glucose and amino acids to create an extremely palatable, fast acting solution that dogs and cats love, even when nauseous!



## Oralade for Cats

Oralade Cat is a unique formula designed especially for cats, with a palatable natural roasted chicken flavour. The flavour and aroma encourage uptake even with fussy or nauseous cats.

It has a special blend of functional amino acids – Taurine for heart health, Lysine, Argastrostinalnine, L carnitine to promote gut health.

It has zero phosphorous and zero calcium so is safe for use with acute or chronic renal patients.

Palatability can be used to encourage better uptake of water or prescription diets.

Cats are prone to fluid overload when receiving intravenous fluid therapy

High risk groups include; cardiac disease, hyperthyroidism, and acute kidney injury. Per-oral fluid therapy is safe and often sufficient for these patient groups

### Anorexia and Poor Appetite in Cats

Cats do not tolerate fasting and must meet at least 2/3 of their daily energy requirements.

Periods of anorexia or poor appetite can have serious consequences therefore the condition should be approached promptly. Oralade Cat

is the perfect supplement to encourage increased consumption of any diet. It has high palatability so can be mixed in both dry and canned diets, it improves hydration status and thereby wellbeing and also improves gastrointestinal tract absorption and barrier function towards bacteria.

### Chronic Kidney Disease

CKD is a very common disease encountered in older cats. Kidney disease is often scored and monitored according to IRIS guidelines. The IRIS system is based on international experts recommendations and aids in decision making and monitoring. Increasing fluid intake is recommended for all stages of CKD.

Oralade Cat is therefore suitable to increase fluid intake in all stages of CKD due to its unique taste and optimized electrolyte composition.

Increasing fluid intake will improve wash out of waste products, help restore electrolyte balances, maintain hydration and wellbeing and replace fluid loss from concurrent gastrointestinal losses (e.g. intermittent vomiting).

### Feline Lower Urinary Tract (FLUTD) Disease

FLUTD is common and affects cats at all ages leading to a lot of dis-

comfort and pain for the patient. The exact cause is often unknown and management can be highly frustrating, despite appropriate therapy recurrence is common.

LUT disease may lead to urinary obstruction, which is a life-threatening problem that requires immediate veterinary attention.

An essential part of treating these diseases is increasing water consumption to promote the production of dilute urine.

For non-obstructive or post-obstructive LUT disease Oralade Cat can assist in recovery and maintenance by increasing fluid uptake and thereby increase wash-out of sediments, decreased risk of recurrence. Alleviate pain and straining and maintain dilute urine as recommended.



## Divorced Barbie Doll

One day a father gets out of work and on his way home he suddenly remembers that it's his daughter's birthday.

He pulls over to a Toy Shop and asks the sales person, 'How much for one of those Barbie's in the display window?'

The salesperson answers, 'Which one do you mean, sir?'

'We have - Work Out Barbie, Shopping Barbie, Beach Barbie, Disco Barbie, Ballerina Barbie, Astronaut Barbie and Skater Barbie, all of which cost \$19.95 each and we also have Divorced Barbie, for \$265.95'.

The amazed father asks: 'Why is the Divorced Barbie \$265.95 and the others only \$19.95?'

The annoyed salesperson rolls her eyes, sighs and answers:

'Sir...Divorced Barbie comes with: Ken's Car, Ken's House, Ken's Boat, Ken's Furniture, Ken's Computer, and one of Ken's Friends'



## When We Need Regulation

ACVMG, as part of the whole MPI system are the regulators and looked upon often in the industry much like referees in sporting arenas, absolutely necessary for things to function correctly but open to much, often unjustified, criticism by the personnel they oversee.

While we regularly talk of over regulation there are times when some control is essential. The recent M bovis outbreak and the failure of the NAIT system has shown the ramifications of not paying attention to due process. In rugby there is a concerted effort to change tackling habits by heavily penalising anything over a certain level, dangerous or not; this is all about reducing risk, much like the NAIT system was intended to do and exactly what a lot pharmaceutical regulation is about.

Much in the same way as sports people always try to get around the rules farmers tended to bend the NAIT rules and marketeers in the pharmaceutical industry have long proven adept at this skill.

There is a massive opening in the pharmaceutical industry for such tactics with disinfectants being unregistered and nutritional supplements exempt from regulation. Because of the total lack of regulation in the disinfectant field the area is rife with spurious claims and customers need to be aware and demand proof of fit for purpose.

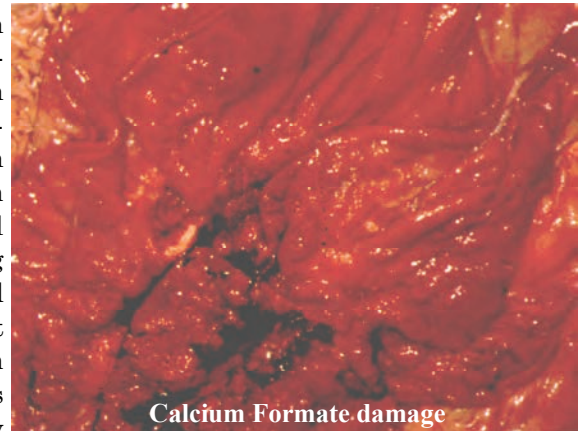
In the nutritional supplement field there should be a little more protection as product exemptions from registration should be sought and these are dependent upon claims made on the label and in advertising. However the referee is often unsighted and many slip under the radar.

This is especially common nowadays in the oral calcium field and this season there appears to be a plethora of products flooding on to the market, exempt from registration as nutritional supplements but claiming milk fever treatment and prevention. The sheer fact that they are exempt from registration means there is no proof of efficacy or safety being assessed and, while claims may be limited legally, there is often a perception of proof simply because the product is in the market place.

One such product recently launched in the New Zealand market has a technical information sheet claiming prevention of milk fever and treatment of hypocalcaemia and hypophosphataemia; these are definitely claims that should require registration approval and so seems to be in breach of regulations.

The same product claims to provide glucoplastic energy. Apart from the fact that energy supplied is a miniscule 2.5 MJ, not enough to overcome the proven lowered feed intake of all oral calcium salts, the term itself sounds like something made up by the marketing division.

The term glucogenic is well known in nutrition, a glucogenic amino acid is an amino acid that can be converted into glucose through gluconeogenesis. This is in contrast to the ketogenic amino acids, which are converted into ketone bodies. The gluconeogenic pathway converts pyruvate into glucose. The major non-carbohydrate precursors are lactate, amino acids, and glycerol, none of which are listed in the ingredients.



Calcium Formate damage

The product information sheet proudly list “free from calcium chloride”, which sums up the amount of knowledge of calcium supplementation for hypocalcaemia, very little.

Calcium chloride is the most effective salt as it is acidogenic and, because it is the only common salt where the anion is smaller than the calcium ion, it is the only salt that can stimulate mobilization of the cow's own body calcium.

The big problem with calcium chloride is with the administration and only the oily emulsion has proven to be both effective and safe.

Calcium propionate was mooted in the 90's but was spectacularly unsuccessful, simply because of the fact that, not being acidogenic, massive amounts were required to raise blood calcium levels.

Calcium boluses, not a startling success in Europe over the years, have also suddenly appeared. Once again none are registered so claims should be limited, and that is just as well. Toxicity can be a problem.

Normally boluses are quite mobile in an active rumen but, when gut motility is inhibited like in a cow with milk fever, they sit against the villi and can cause quite severe reactions.

## Welfare is the Issue

While issues such as antimicrobial resistance have come to the fore in recent years it has also not been unnoticed that animal welfare is now looking as a huge issue for the veterinary profession. One of the arguments for keeping certain critical antimicrobials in veterinary hands has been animal welfare and veterinarians are now being looked upon more and more as animal welfare custodians.

Although practices such as firing of horses disappeared from the veterinary vade mecum decades ago, and issues such as detailing puppies and even breeding brachycephalic dogs have come to the fore lately, there is also much more scrutiny on farming practices. It has taken a long time for pain relief to be mandatory for dehorning for example, but now we shudder to even think of how blasé both farmers and veterinarians were in the past when doing this. Is electro-ejaculation still practised? Male students especially would cringe at the thought of it.

Treatment regimens also need review, the old adage that the cure was worse than the disease can often be trotted out in the dairy cow world. Nowhere is this better exemplified than in the field of oral milk fever therapy; the profession needs to lead the way here.

Despite evidence that is two decades or more old there are still products in the market place that have proven to be harmful, and more are appearing.

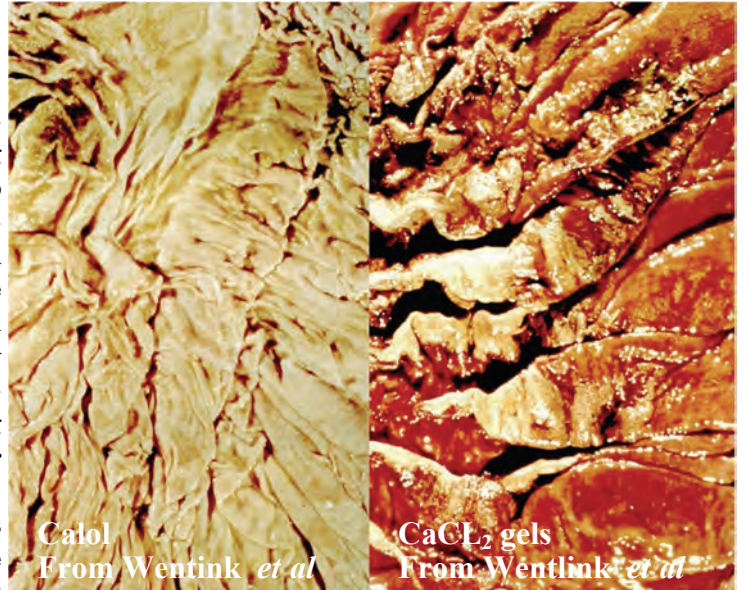
Calcium chloride has long been known to be highly irritant to mucosa but so have other calcium salts; certainly calcium formate has long been under suspicion. Some salts admittedly are less irritant

but this may be because they are quite insoluble so they have no beneficial effect, their only role being long term low level calcium supplementation.

Of the calcium salts available to the market only calcium chloride can possibly mobilize the cow's own body calcium by slight acidification of the blood. The reasons for this have been well documented so the real argument is not what salt to use but how to apply calcium chloride.

Clearly calcium chloride gels are quite severe and, in fact, many years ago their use was banned in certain European countries on animal welfare grounds. Those Vikings not only are better than us in the level of antimicrobial use, but it also seems they are ahead on animal welfare issues.

This has not happened here but the evidence overseas is very strong. The big problem in a farming situation is that cows, being



prey animals, do not readily show pain and many farmers also are extremely slow at recognizing it. The NAIT fiasco shows that many farmers do not even want to know.

But it is not only the gels that have this problem. Until recently we were spared the calcium boluses and their deleterious effects but it has also been documented that boluses have a negative impact on mucosal integrity. When one considers that boluses will sink to the floor of the rumen and be in constant contact with the one area of mucosa it is obvious that they are prime instigators of ulceration.

"It's all about the economy," was the catch phrase that won Bill Clinton an election, likewise "it's all about the cow" should be the issue in the minds of veterinarians recommending oral milk fever remedies. Is this remedy the best for the patient's well-being or am I recommending it because of competition from the farm shop?

## Astrology and the Colonoscopy Report

During my check-up I asked the Doctor,

"Do you think I'll live a long and healthy life then?"

He replied, "I doubt it somehow. Mercury is in Uranus right now."

I said, "I don't go in for any of that astrology nonsense."

The doctor laconically replied, "Neither do I. My thermometer just broke."



## It's All About Stockmanship

Oral dosing of cattle with muscles weakened by low calcium levels is certainly an exercise in stockmanship. There are hazards aplenty whether a liquid, a gel or a bolus is used. The success of Calol as an oily emulsion has always had other companies looking for weaknesses and the fixation of how it is thick and often slow to pour; this is actually a strength and is deliberate!

Marketeers for many companies in the 90s spent a lot of time on emphasizing how quickly a preparation would pour out of a bottle and this was exactly the wrong approach.

Farmers are time poor in the spring time and are susceptible to any tactic that looks like the therapy is faster and easier and so readily accept such marketing. However a cow down with milk fever has compromised muscle activity resulting in a reduced swallow reflex.

The upshot of this is that there is a real hazard of drenching directly into the lungs.

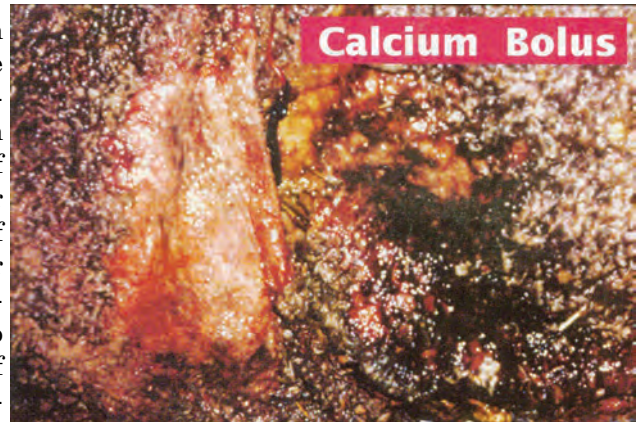
A slower application is preferable, and the target should not be how quickly the remedy can be applied to the cow but how quickly the cow herself gets up. This is the real measure of stockmanship.

The proof has been in the pudding over the years and we no longer see the emphasis on fast pouring type of marketing. However this is not the end of the story. In the latter parts of the 20th Century boluses came into vogue for a myriad of types of supplementation for ruminants.

For the fit healthy animal boluses are often very practical but the reason they have not been a raging success in the milk fever market is the fact that muscle atony can have a very deleterious effect in their safety, in two ways.

The most obvious one is gut stasis means the bolus lies in the ventral part of the rumen, with a strong concentration of calcium salts in direct contact with the gut wall. There have been recorded instances of severe reactions in cattle in Europe from such bolus administration.

The other recorded problem is oesophageal obstruction. In humans many people take tablets without a glass of water to wash them down but we are advised not to as the



odd time there is an issue. Cattle don't normally get the glass of water and there is normally no issue. However oesophageal obstruction is real in cattle, particularly when the oesophagus is impeded by a swollen mediastinal lymph node.

With the lack of muscle tone in hypocalcaemia this risk is dramatically increased and the consequences are severe. This is due to the fact that the oesophagus is the most unprotected part of the digestive tract and strong calcium salts lodged there burn severely causing irreversible damage.

As with the fast pouring products, when treating hypocalcaemia the risk to animal welfare is far too high to consider convenience over stockmanship.

## The Project

I called my old school friend. He said he was working on a special project, 'Aqua-thermal treatment of ceramics, aluminium and steel under a constrained environment.'

I was impressed. Later I realised that the idiot was washing kitchen utensils in warm water, under the supervision of his wife.



## Mother

"Why doesn't your mother like me?" a woman asks her boyfriend.

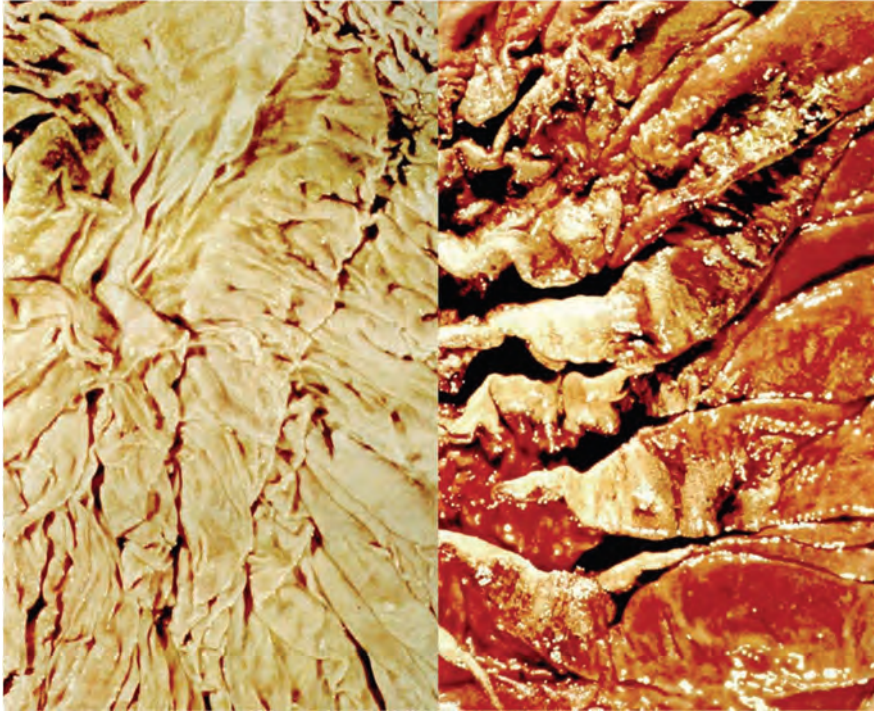
"Don't take it personally," he assures her. "She's never liked anyone I've dated.

I once dated someone exactly like her, and that didn't work out at all."

"What happened?"

"My father couldn't stand her."

## Oral Calcium References



Furll M, Oetzel R. And Schoon H.A. The influence of various calcium chloride formulations on blood calcium levels and calcium excretion in the urine, as well as the tolerance of cows to the formulations. Proceedings of XX World Buiatric Conference, Sydney, 143-146, 1998.

Goff J.P., Horst R.L., Jardon P.W., Borelli C. And Wedam J. Field trials of an oral calcium propionate paste as an aid to prevent milk fever in periparturient dairy cows. Journal of Dairy Science, 79, 378-383, 1996.

Jørgensen R.J., Basse A. And Aslan V. Sequelae to oral calcium chloride gel dosing of cows. Proceedings of XV1 World Buiatric Congress, Brazil, 511, 1990.

Kara et al, Effects of calcium propionate by different numbers of applications in first week postpartum of dairy cows on hypocalcemia, milk production and reproductive disorders, Ital.J.Anim.Sci. vol. 8, 259-270, 2009

Oetzel, R. : Comparative Study of the Influence of Calcium Formulations on the Resorption and Excretion

of Calcium, as well as the Side Effects of Orally Administered Calcium Preparations Observed on Cows. Inaugural Dissertation, Medizinische Tierklinik der Universität Leipzig, 1999

Pehrson B., Svensson C, and Jons-son M. A comparative study of the effectiveness of calcium propionate and calcium chloride for the prevention of parturient paresis in dairy cows. Journal of Dairy Science, 81, 2011-2016, 1998.

Scott D. And Van Wijk N. Comparison in dairy cattle of mucosal toxicity of calcium formate and calcium chloride in oil. New Zealand Veterinary Journal, 48, 26-26, 2000. Schultken A, Investigations on the efficacy of a prophylactic milk fever treatment in cattle. A doctoral thesis for Giessen University 1993.

Stokes & J.P.Goff, Evaluation of Calcium Propionate and Propylene Glycol Administered into the Esophagus of Dairy Cattle at Calving. The Professional Animal Scientist, Volume 17, Issue 2, June 2001, Pages 115-122

Wentink G.H. and van den Ingh T.S.G.A.M. Oral administration of calcium chloride-containing products: testing for deleterious side effects. Veterinary Quarterly, 14, 76-80, 1992.

## Cheap Tyres

Nagy took four tyres to Tony's garage sale and was asking \$30 apiece. Nagy needed to leave for a few minutes, so he asked Tony to watch them for him.

"Sure," Tony said, "but if someone offers less, how low are you willing to go?"

"Try for more, but I will accept \$15," Nagy said, and left.

When Nagy returned, his tyres were gone. "How much did you get for them?" he asked excitedly.

"Fifteen dollars each."

"Who bought them?" "I did!" said Tony







## The Holiday

A travel agent looked up from his desk to notice an old lady and an old gent peering in the shop window at the posters showing the glamorous destinations around the world.

The agent had had a good week and the dejected couple looking in at the window gave him a rare feeling of generosity.

He called them in. "I know that, on your pension, you could never hope to have a holiday so I am sending you off to a fabulous resort at my expense, and I won't take no for an answer.

He took them inside and asked his secretary to write two flight tickets and book a room in a five star hotel. They gladly accepted and were off.

About a month later the little old lady came into his shop.

"And how did you like the holiday?" he asked eagerly.

"The flight was exciting and the room was lovely," she said.

"I have come to thank you, but one thing has puzzled me. Who was that old bloke that I had to share the room with?"

