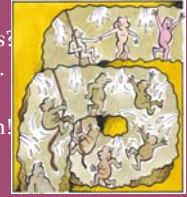


Colon Hydrotherapy and the Chemistry of Wellbeing

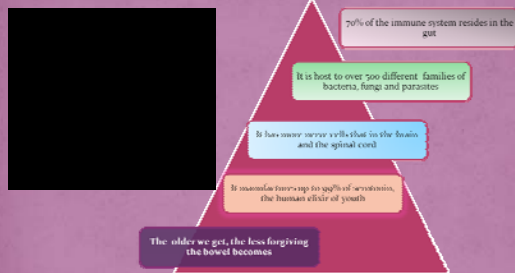
Galina Imrie, MA Ed
AACL MMX

Agenda

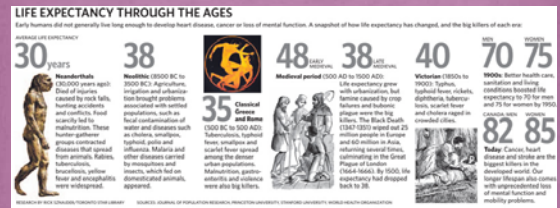
- Why the bowel?
- Our love affair with rejuvenation.
- How can the gut keep us healthy?
- What happens in the gut as it ages?
- CR and high protein rollercoasters.
- The ups and downs of roughing it.
- This is where rehydration comes in!
- Colon hydrotherapy and the alchemy of successful ageing.
- Always listen to your gut!



Why the bowel?

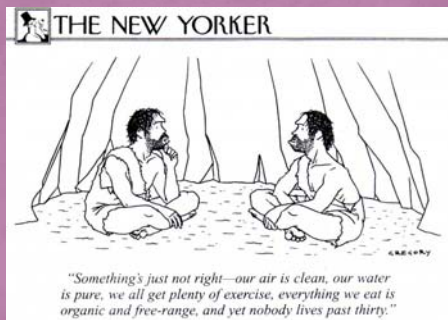


Our love affair with rejuvenation (1)



We now live on the average 30 years longer than our grandparents. Our ambition is to live till 100 and beyond. How can we achieve successful ageing? And what's the gut got to do with it?

Our love affair with rejuvenation (2)



Our love affair with rejuvenation (3)

Why do we age? The main theories of ageing at a

Year	Proponent	Chief element of theory
1908	Rubner	Metabolic rate influences ageing
1928	Pearl	Duration of life varies with energy expenditure
1956	Harman	Free radical theory of ageing
1959	Sollard	Somatic mutations of DNA theory
1963	Orgel	Error (transcription or translation) catastrophe
1968	Bjorksten	Alteration of structural protein cross-linkage
1968	Cerami	Glycation of reducing sugars with amino groups
1978	Zs-Nagy	Cell membrane ageing, dehydration and reduced permeability
1983	Dilman	Neuroendocrine loss of receptor sensitivity
1989		Mitochondrial theory of ageing
1995		Telomere shortening hypothesis of cell ageing

Source: Colonic Diseases, Edited by Timothy R Koch MD, p. 97 © Humana Press Inc 2003

Our love affair with rejuvenation (4)

Membrane theory of ageing: Cellular ageing = Dehydration

Residual heat (heat not dissipated from cellular membrane following transmission of impulses by nerves)

Reduction of membrane fluidity and permeability and increase in membrane density

Decrease of K^+ membrane permeability and retention of excess K^+ ions by the cell

Our love affair with rejuvenation (5)

Membrane theory of ageing: Intracellular ageing = Dehydration

Increased condensation of intracellular colloids

Decrease in the intracellular colloid osmotic pressure

Loss of water contents from cell and reduction of deformability

Increased damaging action of O₂-free radicals on the cytosol

Our love affair with rejuvenation (6)

Dehydration = negative changes in the intracellular pH

Weakening of the cytosol and increased intracellular density

Deviation from maintenance of optimal intracellular pH balance

Reduction of enzymatic activity/denaturation of enzymes

Decreased rate of protein synthesis and accumulation of waste products ("cellular garbage")

So where do we go from here?

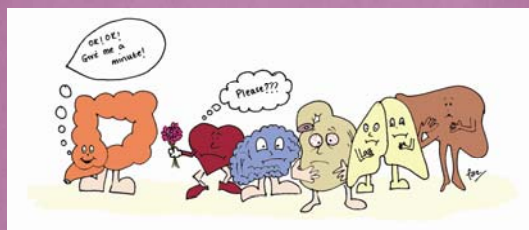
Our love affair with rejuvenation (7)

The body's many cries for water



Drinking but not absorbing? Absorbing but not assimilating? Assimilating but not eliminating? Where are we going wrong?

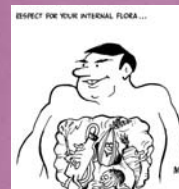
How can the gut keep us healthy? (1)



"Sex is interesting, but it's not totally important. I mean it's not even as important (physically) as excretion. A man can go seventy years without a piece of ass, but he can die in a week without a bowel movement."

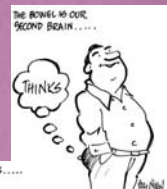
Charles Bukowski

How can the gut keep us healthy? (2)



"There's something sexy about a gut. Not a 400-pound beer gut, but a firm, taut, I love that."

Sandra Bullock



MAKE SURE YOU HAVE DAILY BOWEL MOVEMENTS.....



How can the gut keep us healthy? (3)

The face is the darling of antiageing cosmetologists:



No expense is spared to keep the brain young and happy:



Sex life is, as always, the winner:



In the plethora of anti-ageing solutions, there has been little advancement in the bowel care

How can the gut keep us healthy? (4)

However, despite all this.... The gut-wrenching statistics:

However, for the bowel it's same old... Same old....



In the UK, every 30 minutes someone dies of colorectal cancer. (3)

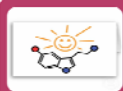
It's the second biggest cancer killer of over-50s in both the UK and the USA. (3)

30% of funds spent yearly for care of the institutionalised elderly is required for patients who have disorders of defaecation. (1, p.95)

It has been estimated that within the United States, constipation accounts for 2.5 million doctor visits, at least 100 000 referrals to gastroenterologists, and more than 38 000 in-patient hospitalizations per year (4)

What happens in the gut as it ages? (1)

Endogenous factors



Reduction of the density of enteric nerves (1,100)

- Reduction of serotonin production in the ENS (4)
- Abnormal gastrointestinal motility, secretion and sensation
- Constipation, sometimes accompanied by faecal incontinence
- Dehydration in all instances, both in constipation and in incontinence



Reduction in lactase production in the small intestine (5)

- Small bowel bacterial overgrowth
- Sugars reach the large intestine - bacterial overfermentation - bloating, gas, diarrhoea
- Large bowel dehydration is almost always the consequence

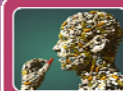


Chronic bacterial imbalance in the colon results in the permanently high level of the phagocytic activity (1,98)

- Exposure of the colon to ROS/free radicals/oxidants produced by the phagocytes is increased;
- Oxidative damage - causes cell destruction
- Accelerated ageing, chronic diseases and cancer may follow
- Increased toxic load contributes to dehydration of the extracellular space.

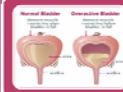
What happens in the gut as it ages? (2)

Environmental factors



Increased use of supplements and medications, including painkillers and antidepressants

- Reduction of gastrointestinal motility and suppression of feedback
- Increase of the toxic load on the liver and on the intestine
- Chronic constipation and tissue dehydration



Reduction in water intake due to decreased thirst reflex and weaker bladder

- Increase in bowel transit time
- Increased uptake of water from the large intestine causing dehydration
- Dehydration, constipation and increase of toxic load on the intestine



Reduction of appetite, fear of constipation, smaller portions and less fibre result in low residue diets

- Longer transit time, less fibre in stools cause the formation of diverticulae
- Diverticulae weaken the bowel muscle and increase inflammation potential
- Constipation and unsatisfactory evacuation, increased toxic load
- Chronic dehydration and pressure on the pH balance in the intestine cause dysbiosis

Calorie restriction & high protein rollercoaster rides

Calorie Restriction Diets, or shortcut to longevity and lower risk of diabetes and cardiovascular disease

Animal protein and fat restriction
Low GI carbohydrates
Eating food raw or minimally cooked
Avoiding exercise (too many free radicals)



"Excessive calorie restriction causes malnutrition and can lead to anaemia, muscle wasting, weakness, dizziness, lethargy, fatigue, nausea, diarrhoea, constipation, gallstones, irritability and depression" (7)

High Protein Diets, or shortcut to achieving and maintaining weight loss easily

Eating around 0.8 to 1 g of animal protein per 1 lb of body weight
Vegetables which are low in starch are allowed
Resistance exercise is recommended



Diets high in animal protein increase risk of inflammatory bowel disease in middle-aged women (8); the other risks for both sexes are bad smells, irregular bowel movements, constipation, haemorrhoids, increased allergic response.

The ups and downs of "roughing it"

To bulk up on fibre...

- Fibre does make us poop a lot....



Or not to bulk up, after all?

- But it creates new problems....



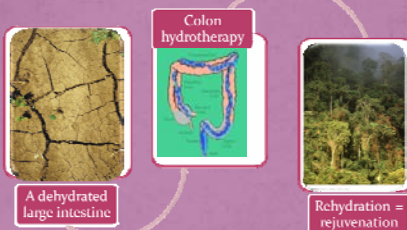
High-fibre diet can cause increased constipation, abdominal pain and distension in a hypomotile colon often requiring hospital admissions (12)

- Faster feeling of fullness and reduction in appetite
- Slows down digestion in the stomach and the small intestine
- Appears to reduce cholesterol levels
- Is promoted as a safe weight-loss mechanism
- Bulks up stools reducing toxic load
- Is believed to have a role in the prevention of bowel and breast cancers

- The relationship between dietary fibre and colorectal cancer is not straightforward and high fibre diet may encourage cancer of the colon. (13)
- Fibre can encourage appetite
- Fibre reduces absorption of nutrients
- Fibre can cause colon dehydration
- Insoluble fibre contributes up to 500 calories per day to our energy needs.

This is where rehydration comes in (1)

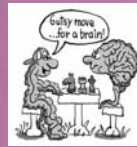
The large intestine is a unique ecosystem in our bodies; access to it is difficult; rehydration is crucial for this arid, remote area, but often critically missing



Colon hydrotherapy has been around, in different formats, for quite a long time. Generations of naturopaths have been talking about "intestinal toxemia", "toxic dumps" and "auto-intoxication". But in 1996, when the full function of the enteric nervous system came to light, the cold war with the bowel should have ended for good.

This is where rehydration comes in (2)

The Enteric Nervous System – the brain that runs the gut, our second most intelligent organ



"What brains do is control behaviour,"
"The brain in your gut has stored within its neural networks a variety of behavioural programs, like a library. The digestive state determines which program your gut calls up from its library and runs." (14)



What's unique about the ENS?

- It can function even if the vagus nerve is cut off
- The cells of the enteric nervous system can regenerate themselves
- It manufactures and uses 95% of serotonin to ensure the peristaltic movement
- It causes the liver, the gallbladder and the pancreas to start releasing digestive enzymes, bicarbonate and bile
- It remembers stresses experienced during pregnancy and in early childhood.



SO WHAT IS CONTEMPORARY COLON HYDROTHERAPY?

This is where rehydration comes in (3)



Contemporary colon hydrotherapy is a process of controlled introduction of filtered water into the large intestine through the anus and the rectum, with the purpose of

- ensuring viability of the bowel flora
- rebalancing the immune response
- regulating the transit time and the excretory function
- re-establishing the brain-gut connection.

- helping remove excess wastes
- rehydrating the large intestine
- decreasing the toxic burden on the liver
- helping rebalance digestive juices in the whole GI tract and the digestive organs
- fine-tuning the function of enteric neurotransmitters

Colon hydrotherapy and the alchemy of successful ageing (1)

Colon hydrotherapy helps remove excess environmental and metabolic wastes and products of fermentation (gases)



Excess ingesta are removed from the colon

- Unprocessed foods of all groups: fibre, proteins and fats
- bacteria, parasites, fungi



Metabolic wastes are removed in the process

- Non-recyclable blood wastes (damaged RBCs)
- Denatured proteins – remnants of dead cells
- Excess gases are removed too



Chemical wastes are also washed out

- E numbers, preservatives, colourings, additives
- Contraceptives, anti-inflammatories, antidepressants, painkillers, street drugs, inhaled fumes

Colon hydrotherapy and the alchemy of successful ageing (2)

Unique qualities of water help rejuvenate the environment of the digestive tract



Water has extremely high heat capacity

- It can absorb residual heat not dissipated from the cell membrane
- This may help preserve membrane fluidity and permeability
- This can maintain cell homeostasis and the optimal function of metabolic enzymes



Water is universal solvent for both organic and inorganic molecules and the best suspension medium

- Water can quickly dissolve waste residue of any origin
- As both protein donor and acceptor, it can also help engage excess proteolysis for redox balance in ageing cells



Water forms hydration layer around charged molecules preventing them from settling out of solution or damaging cells

- Water can get rid of reactive oxygen species and balance the immune function
- Water prevents denatured proteins from other charged substances

Colon hydrotherapy and the alchemy of successful ageing (3)

Negative feedback re-establishes the brain-gut connection and supports the longevity of the enteric nervous system



Introduction of water into the colon engages negative feedback

- The brain starts acting in the direction opposite to the change brought by water, engaging mass peristalsis
- Mass peristalsis starts the process of waste removal



Serotonin in the ENS encourages production of enzymes along the whole length of the GI tract

- Enzyme production in the small intestine contributes to better food absorption
- Liver, pancreas and gall bladder also get involved in the process



The enteric nervous cells have the ability to regenerate themselves

- The peristaltic action calls for regeneration of new enteric nervous cells
- This regeneration ensures longevity of the gut ecosystem.

Colon hydrotherapy and the alchemy of successful ageing (4)

Wider physiological and psychological effects of the systemic hydration facilitated by colon hydrotherapy cannot be overlooked



A majority of colon hydrotherapy "regulars" notice an increased feeling of wellbeing

- They exercise more and experience the general positive effects of exercise
- They are more mindful of what they eat
- They know when they need to come for the next treatment



Support of the ENS results in reduction of constipation, faecal incontinence, IBS and bloating

- Digestive comfort is increased
- People tend to follow a more balanced diet, with fewer extremes
- There is a marked reduction in laxative use, resulting in fuller absorption of nutrients

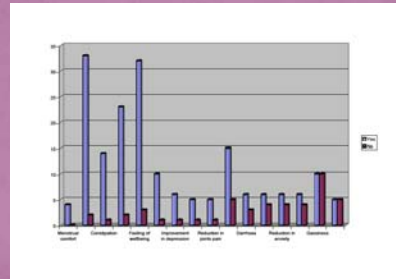


Decrease in headaches and joint pain caused by the rehydration promotes better sleep, reduction in the use of painkillers and higher energy/enthusiasm

- This in turn reduces fatigue, leads on to the liver
- Daily quality of life is improved

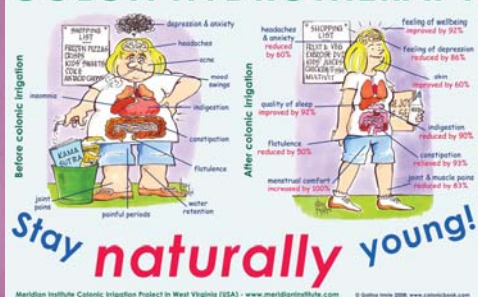
Colon hydrotherapy and the alchemy of successful ageing(5)

Meridian Institute Colonic Irrigation West Virginia Project – Survey (July 2002) (15)



Colon hydrotherapy and the alchemy of successful ageing (6)

COLON HYDROTHERAPY



Thank you for listening to your gut!



I had my first treatment about 3 years ago as a way to detox my body and to try to have better, easier and more regular bowel movements. The first experience was great and for the first year I had another treatment. Then, for the last 2 years, I have had treatments regularly every 3 months and I have not only felt a big difference in how regular and easy my bowel movements are but also in terms of energy levels and all round well being. These regular treatments have also helped me with the basis of a new and healthier way of life where I eat better, exercise more often and better and feel in general healthier.

(Mature male patient)

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Finally, thank you for your attention.



- Galina Imrie
- galina@aquac-clinic.co.uk
- +44 (0) 1628 670 970

- The Chi Centre for Practical Detoxification
- 17 North Town Road
- Maidenhead
- Berkshire
- SL6 7JQ
- U.K

