Mineral Water Rich In Bicarbonates Reduces Serum Cholesterol In Moderate Risk Cholesterol Males

Lysia Gressida, MD,

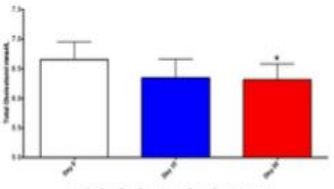
Krida Wacana Christian University Indonesia

Natalia Liem, M.Sc, PhD, Visiting Scientist Singapore General Hospital (SGH), Singapore,

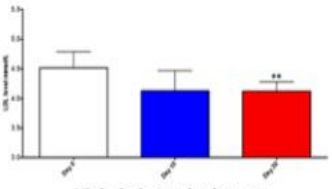
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Abstract

According to World Health Organisation (WHO), the mortality from coronary heart disease in Indonesia reached 138,380 or 10% of total deaths per year in 2014. Dyslipidemias are disorders of lipoproteins, that can be manifested by the elevation of serum total cholesterol, low-density lipoprotein (LDL) cholesterol, and triglyceride concentrations, and a decrease in the high-density lipoprotein (HDL) cholesterol concentration. Hydropinic therapy (drinking of mineral water), in particular water that is rich in natural bicarbonate, has shown to have an effect in reducing cholesterolaemic and lipaemic levels by increasing the lipoprotein metabolism. This study compares the consumption of a mineral water that is rich in natural bicarboante (ARDESY®, France) (MWH), versus a marketed mineral water that is low in bicarbonate (MWL), and their effects in lipoprotein metablosim in high cholesterol males subjects. Twenty-two males with elevated serum total cholesterol, and a mean BMI of between 23.9(±4.4) kg/m^2 were randomised into 2 groups. Each group received either (MWH) (n=14) (sponsored by ARDESY®, France), or MWL (n=8). Subjects drank 1.25 liter of designated water per day for 28 weeks. Three visits were planned at the clinical center post screening, which included first day before mineral water was consumed (V1), 15th day (V2), and 29th day (V3). Results indicated that there was significant reduction in serum total cholesterol (p=0.002) and LDL cholesterol ($p \leq 0.001$) in subjects drinking MWH, but not in the MWL group. There was no significant change in BMI, blood pressure, and urine pH. In conclusion, regular consumption of rich bicarbonated water can significantly lower total cholesterol and LDL-c in moderate risk cholesterol males. Validation in a randomized control trials is currently underway.



High cholesterol volunteers who drank Ardesy for a month showed statistical decrease in total cholesterol



High cholesterol volunteers who drank Ardesy for 15 days & a month showed statistical decrease in their LDL level

Recent Publications

1. Subhash, Vinod & Tan, Shi Hui & Shi Yeo, Mei & Leng Yan, Fui & C Peethala, Praveen & Liem, Natalia & Krishnan, Vaidehi & Yong, Wei-Peng. (2016). ATM expression predicts Veliparib and Irinotecan sensitivity in gastric cancer by mediating P53 independent regulation of cell cycle and apoptosis. Molecular cancer therapeutics. 15. .
2. Vijayasubhash, Vinod & Tan, Shi Hui & Leng Yan, Fui & Liem, Natalia & Peng Yong, Wei. (2016). Abstract 4937: Atm expression predicts ABT-888 and CPT-11 sensitivity in gastric cancer cells by mediating p53 independent regulation of cell cycle and apoptosis. Cancer Research. 76. 4937-4937
3. Xie, Chen & Subhash, Vinod & Datta, Arpita & Liem, Natalia & Tan, Shi Hui & Shi Yeo, Mei & Tan, Woei & Koh, Vivien & Leng Yan, Fui & Wong, Foong & Keong Wong, Wai & So, Jimmy & Tan, Iain & Padmanabhan, Nisha & Yap, Celestial & Tan, Patrick & Kee Goh, Liang & Peng Yong, Wei. (2016). Melanoma associated antigen (MAGE)-A3 promotes cell proliferation and chemotherapeutic drug resistance in gastric cancer. Cellular oncology (Dordrecht). 39.
4. Chang, Michelle & Liem, Natalia & Kee Goh, Liang & Kalaw, Emarene & Lim, Pei Li & Geronimo, Carla & Sim, Allen & Hong Huang, Hong & Chong, tsung wen & Hoon Tan, Puay & Soong, Richie & Cheng, Christopher & Gee Sim, Hong. (2011). Abstract 3210: Profiling of DNA methylation signature for different phases of prostate cancer development. Cancer Research. 71. 3210-3210.
5. Loh, Marie & Liem, Natalia & Vaithilingam, Aparna & Lim, Pei Li & Sabrina Binte Sapari, Nur & Elahi, Eiram & Yu Mok, Zuan & Leong Cheng, Chee & Yan, Benedict & Pang, Brendan & Salto-Tellez, Manuel & Peng Yong, Wei & Iacopetta, Barry & Soong, Richie. (2014). DNA methylation subgroups and the CpG island methylator phenotype in gastric cancer: A comprehensive profiling approach. BMC gastroenterology. 14. 55.
6. Kee Goh, Liang & Liem, Natalia & Vijayaraghavan, Aadhitthya & Chen, Gengbo & Lim, Pei Li & Tay, Kae Jack & Chang, Michelle & Soon Wah Low, John & Joshi, Adita & Hong Huang, Hong & Kalaw, Emarene & Hoon Tan, Puay & Hsieh, W-S & Peng Yong, Wei & Alumkal, Joshi & Gee Sim, Hong. (2014). Diagnostic and Prognostic Utility of a DNA Hypermethylated Gene Signature in Prostate Cancer. PloS one. 9. e91666

Biography



Dr Lysia Matius Gressida graduated with Bachelor of Medical Science from the Christian University of Krida Wacana, Indonesia in February 2011, and later earned her General Practitioner degree in November 2012. Dr Lysia currently works as a General Practitioner in Primary healthcare under the Ministry of Health, Indonesia. Dr Lysia is a registered member of the Indonesian Medical Association. Her experiences included, internship program in Tondano, North Sulawesi, certified courses in Advanced Cardiology, Trauma, and Neurology Life Support. Her primary interests are in preventive medicine and she has a personal advocacy in promoting awareness of maintaining healthy lifestyles through patients education.



Dr Natalia Liem graduated with her Bachelors in Genetics/Microbiology in Queen Mary Westfield College (London), and her Masters in Prenatal Genetics and Fetal Medicine, from the University London College (UCL), before embarking on her scholarship in a PhD program under the University of New South Wales (Australia), in conjunction with Sydney Children Hospital. She obtained her PhD in 2005 in childhood leukemia under UNSW, School of Medicine and proceeded her scientific career with John Hopkins Hospital, both in Baltimore (USA) and in Singapore. Her experiences in medical research included senior research fellow scientist in Haematology/Oncology NUH, Singapore, and associations with other hospitals in Singapore led to her collaborative research with SGH, John Hopkins Singapore and NUS, in the field of breast, prostate and lung cancers. Dr Liem is currently a Medical Science Liaison Executive to Halden United Investments, and holds a visiting scientist position in Singapore General Hospital (SGH), Singapore

Email: lysiamgressida@gmail.com