

Structure-Function Claims for Bio-pH with Scientific Documentation

Benefit	Scientific Documentation
<p>Bio-pH granules are safe when used as directed.</p>	<p>Food & Drug Administration. 2006. Grant New Dietary Ingredient (NDI) status to Bio-pH®.</p> <p>Schindler-Horvat, J, Parman, T, Green, C.E. Acute Oral Toxicity of a Nutraceutical (Alka-Plex Granules, aka Bio-pH) in Male and Female Sprague-Dawley Rats. Stanford Research Institute study M384-05, July 2005</p> <p>Schauss, A. MEM Endpoint Dilution Using L-929 Mouse Fibroblast Cells assay. American Institute for BioSocial and Medical Research (AIMBR) and AppTec Laboratory Services, May 2004</p> <p>Brown, S. Case Study – A Novel Therapy for Interstitial Cystitis, Nutrition Education and Consulting Service, May, 2003.</p> <p>Burns RW. 2007. No serious adverse events from 10 years of use. pH Sciences anecdotal data.</p>
<p>Bio-pH granules raise pH levels (reduces acidity levels) of body fluids, including urine, blood, and stomach.</p>	<p>Cooper E. 2006. Elite bicyclist study using two levels of Alka-plex® (aka Bio-pH) supplementation. Unpublished study, pH</p> <p>Gural M. 2001. The effect of Tummy Tamer™ on urine pH. Unpublished study, pH Sciences.</p> <p>Burns RW, Lund CL. 2003. pH Control™, its effect on urine acidity and implications on blood acidity. Unpublished study, pH Sciences.</p> <p>Konturek JW, Beneke M, Koppermann R, Petersen-Braun M, Weingartner U. The efficacy of hydrotalcite compared with OTC famotidine in the on-demand treatment of gastroesophageal reflux disease: a non-inferiority trial. Med Sci Monit. 2007 Jan;13(1):CR44-9.</p> <p>Thomson AB, Kirdeikis P, Zuk L. Comparison of 200 mg cimetidine with multiple doses of antacid on extent and duration of rise in</p>

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	gastric pH in volunteers. Dig Dis Sci. 1999 Oct;44(10):2051-5.
<p>Bio-pH granules help the body maintain a healthy acid-base balance.</p>	<p>Lindinger MI, Franklin TW, Lands LC, Pedersen PK, Welsh DG, Heigenhauser GJ. Role of skeletal muscle in plasma ion and acid-base regulation after NaHCO₃ and KHCO₃ loading in humans. Am J Physiol. 1999 Jan;276(1 Pt 2):R32-43.</p> <p>Goldfinch J, McNaughton L, Davies P. Induced metabolic alkalosis and its effects on 400-m racing time. Eur J Appl Physiol Occup Physiol. 1988;57(1):45-8.</p> <p>Lobo DN. Fluid, electrolytes and nutrition: physiological and clinical aspects. Proc Nutr Soc. 2004 Aug; 63(3):453-66.</p> <p>Sa pir DG, Chambers NE, Ryan JW. The role of potassium in the control of ammonium excretion during starvation. Metabolism. 1976 Feb; 25(2):211-20.</p> <p>Frassetto L, Morris RC Jr, Sebastian A. Potassium bicarbonate reduces urinary nitrogen excretion in postmenopausal women. J Clin Endocrinol Metab. 1997 Jan;82(1):254-9.</p> <p>Wiederseiner JM, Muser J, Lutz T, Hulter HN, Krapf R. Acute metabolic acidosis: characterization and diagnosis of the disorder and the plasma potassium response. J Am Soc Nephrol. 2004 Jun;15(6):1589.</p> <p>Khanna A, Kurtzman NA. Metabolic alkalosis. <i>Respir Care.</i> 2001 Apr;46(4):354-65..</p>
<p>Bio-pH granules moderate the effects of age-induced metabolic acidosis.</p>	<p>Frassetto L, Sebastian A. Age and systemic acid-base equilibrium: analysis of published data. <i>J Gerontol A Biol Sci Med Sci.</i> 1996 Jan;51(1):B91-9..</p> <p>Alpern RJ, Sakhaee K. The clinical spectrum of chronic metabolic acidosis: homeostatic mechanisms produce significant morbidity. <i>Am J Kidney Dis.</i> 1997 Feb;29(2):291-302.</p> <p>Frassetto LA. Effect of age on blood acid-base composition in adult</p>

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	<p>humans: role of age-related renal functional decline. Am J Physiol. 1996 Dec;271(6 Pt 2):F1114-22.</p> <p>Frassetto L. Diet, evolution and aging--the pathophysiologic effects of the post-agricultural inversion of the potassium-to-sodium and base-to-chloride ratios in the human diet. Eur J Nutr. 2001 Oct;40(5):200-13.</p>
<p>Bio-pH granules moderate the effects of stress-induced metabolic acidosis</p>	<p>Sahlin K. Metabolic factors in fatigue. Sports Med. 1992 Feb;13(2):99-107.</p> <p>Alpern RJ, Sakhaee K. The clinical spectrum of chronic metabolic acidosis: homeostatic mechanisms produce significant morbidity. Am J Kidney Dis. 1997 Feb;29(2):291-302.</p> <p>Frassetto L. Diet, evolution and aging--the pathophysiologic effects of the post-agricultural inversion of the potassium-to-sodium and base-to-chloride ratios in the human diet. Eur J Nutr. 2001 Oct;40(5):200-13.</p> <p>Maurer MR. Neutralization of Western diet inhibits bone resorption independently of K intake and reduces cortisol secretion in humans. Am J Physiol Renal Physiol. 2003 Jan;284(1):F32-40.</p> <p>Sebastian A. Estimation of the net acid load of the diet of ancestral preagricultural Homo sapiens and their hominid ancestors. Am J Clin Nutr. 2002 Dec;76(6):1308-16.</p> <p>Peters EM, Handjiski B, Kuhlmei A, Hagen E. Neurogenic inflammation in stress-induced termination of murine hair growth is promoted by nerve growth factor. Am J Pathol. 2004 Jul;165(1):259-71.</p>
<p>Bio-pH granules aids the body in the removal of acidic waste from cells.</p>	<p>Frassetto L, Morris RC Jr, Sebastian A. Potassium bicarbonate reduces urinary nitrogen excretion in postmenopausal women. J Clin Endocrinol Metab. 1997 Jan;82(1):254-9.</p> <p>Lindinger MI, Franklin TW, Lands LC, Pedersen PK, Welsh DG,</p>

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	<p>Heigenhauser GJ. Role of skeletal muscle in plasma ion and acid-base regulation after NaHCO₃ and KHCO₃ loading in humans. <i>Am J Physiol.</i> 1999 Jan; 276 (1 Pt 2):R32-43.</p> <p>Goldfinch J, Mc Naughton L, Davies P. Induced metabolic alkalosis and its effects on 400-m racing time. <i>Eur J Appl Physiol Occup Physiol.</i> 1988;57(1):45-8.</p>
<p>Bio-pH granules support healthy liver and kidney function.</p>	<p>Alpern RJ, Sakhaee K. The clinical spectrum of chronic metabolic acidosis: homeostatic mechanisms produce significant morbidity. <i>Am J Kidney Dis.</i> 1997 Feb;29(2):291-302.</p> <p>Frassetto L, Morris RC Jr, Sellmeyer DE, Todd K, Sebastian A. Diet, evolution and aging--the pathophysiologic effects of the post-agricultural inversion of the potassium-to-sodium and base-to-chloride ratios in the human diet. <i>Eur J Nutr.</i> 2001 Oct;40(5):200-13.</p> <p>Demigne C, Sabboh H, Remesy C, Meneton P. Protective effects of high dietary potassium: nutritional and metabolic aspects. <i>J Nutr.</i> 2004 Nov;134(11):2903-6.</p> <p>Wiederseiner JM, Muser J, Lutz T, Hulter HN, Krapf R. Acute metabolic acidosis: characterization and diagnosis of the disorder and the plasma potassium response. <i>J Am Soc Nephrol.</i> 2004 Jun;15(6):1589-96.</p>
<p>Physiological aging of the lungs pushes the acid-base balance in the body toward acid which is moderated by Bio-pH granules as a dietary supplement.</p>	<p>Brijker F, van den Elshout FJ, Heijdra YF, Bosch FH, Folgering HT. Effect of acute metabolic acid/base shifts on the human airway calibre. <i>Respir Physiol.</i> 2001 Jan;124(2):151-8.</p> <p>Krausz S, Sullivan SF. Cardiorespiratory effects of hypothermia and bicarbonate alkalosis. <i>Pflugers Arch.</i> 1980 Oct; 388(1):79-81.</p> <p>Frassetto L, Morris RC Jr, Sellmeyer DE, Todd K, Sebastian A. Diet, evolution and aging--the pathophysiologic effects of the post-agricultural inversion of the potassium-to-sodium and base-to-chloride ratios in the human diet. <i>Eur J Nutr.</i> 2001 Oct;40(5):200-13.</p>

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	<p>Lin RY, Rehman A. Clinical characteristics of adult asthmatics requiring intubation. J Med. 1995;26(5-6):261-77.</p>
<p>Bio-pH granules neutralize the acids generated internally by sustained physical activity (or “exercise-induced metabolic acidosis”).</p>	<p>Hoheisel U, Reinohl J, Unger T, Mense S. Acidic pH and capsaicin activate mechanosensitive group IV muscle receptors in the rat. Pain 110(1-2): 149-57, 2004.</p> <p>Robergs, RA, Ghiasvand F, and Parker D. Lingering construct of lactic acidosis. Am J Physiol Regulatory Integrative Comp Physiol 289(3): R904 - R910, 2005.</p> <p>Boning D, Strobel G, Beneke R, and Maassen N. Lactic acid still remains the real cause of exercise-induced metabolic acidosis. Am J Physiol Regulatory Integrative Comp Physiol 289(3): R902 - R903, 2005.</p> <p>Greenhaff PL, Gleeson M, Maughan RJ. Diet-induced metabolic acidosis and the performance of high intensity exercise in man. Eur J Appl Physiol Occup Physiol. 1988;57(5):583-90.</p> <p>Reidenberg MM, Haag BL, Channick BJ, Shuman CR, Wilson TG. The response of bone to metabolic acidosis in man. Metabolism. 1966 Mar;15(3):236-41.</p> <p>Portington KJ, Pascoe DD, Webster MJ, Anderson LH, Rutland RR, Gladden LB. Effect of induced alkalosis on exhaustive leg press performance. Med Sci Sports Exerc. 1998 Apr;30(4):523-8.</p> <p>Lindinger MI, Franklin TW, Lands LC, Pedersen PK, Welsh DG, Heigenhauser GJ. Role of skeletal muscle in plasma ion and acid-base regulation after NaHCO₃ and KHCO₃ loading in humans. Am J Physiol. 1999 Jan; 276 (1 Pt 2):R32-43.</p> <p>Ljunghall S, Joborn H, Rastad J, Akerstrom G. Plasma potassium and phosphate concentrations--influence by adrenaline infusion, beta-blockade and physical exercise. Acta Med Scand. 1987;221(1):83-93.</p> <p>Goldfinch J, Mc Naughton L, Davies P. Induced metabolic alkalosis and its effects on 400-m racing time. Eur J Appl Physiol Occup</p>

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	<p>Physiol. 1988;57(1):45-8.</p> <p>Caldwell JE. Diuretic therapy and exercise performance. Sports Med. 1987 Jul-Aug;4(4):290-304.</p>
<p>Bio-pH granules promote faster recovery from vigorous workouts.</p>	<p>Robergs R, Hutchinson K, Hendee S, Madden S, Siegler J. Influence of pre-exercise acidosis and alkalosis on the kinetics of acid-base recovery following intense exercise. Int J Sport Nutr Exerc Metab. 2005 Feb;15(1):59-74.</p> <p>Cherry PW, Lakomy HK, Boobis LH, Nevill ME. Rapid recovery of power output in females. Acta Physiol Scand. 1998 Sep;164(1):79.</p> <p>Ratel S, Duche P, Hennegrave A, Van Praagh E, Bedu M. Acid-base balance during repeated cycling sprints in boys and men. J Appl Physiol. 2002 Feb;92(2):479-85.</p> <p>Portington KJ, Pascoe DD, Webster MJ, Anderson LH, Rutland RR, Gladden LB. Effect of induced alkalosis on exhaustive leg press performance. Med Sci Sports Exerc. 1998 Apr;30(4):523-8.</p> <p>Greenhaff PL, Gleeson M, Maughan RJ. Diet-induced metabolic acidosis and the performance of high intensity exercise in man. Eur J Appl Physiol Occup Physiol. 1988;57(5):583-90.</p> <p>Sharp RL, Costill DL, Fink WJ, King DS. Effects of eight weeks of bicycle ergometer sprint training on human muscle buffer capacity. Int J Sports Med. 1986 Feb;7(1):13.</p> <p>Costill DL, Verstappen F, Kuipers H, Janssen E, Fink W. Acid-base balance during repeated bouts of exercise: influence of HCO₃. Int J Sports Med, 5(5) 228-231, 1984.</p> <p>Jones NL, Sutton JR, Taylor R, Toews CL. Effect of pH on cardiorespiratory and metabolic responses to exercise. J Appl Physiol, 43 (6) 959-964, 1977.</p> <p>Lindinger MI, Franklin TW, Lands LC, Pedersen PK, Welsh DG, Heigenhauser GJ. Role of skeletal muscle in plasma ion and acid-base regulation after NaHCO₃ and KHCO₃ loading in humans. Am J Physiol. 1999 Jan; 276 (1 Pt 2):R32-43.</p>

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	<p>Sutton JR, Jones NL, Toews CJ. Effect of PH on muscle glycolysis during exercise. Clin Sci (Lond). 1981 Sep;61(3):331-8.</p> <p>Cooper E. 2006. Elite bicyclist study using two levels of Alka-plex® (aka:Bio-ph) supplementation. Unpublished study, pH Sciences.</p>
<p>Bio-pH granules improves performance during workouts.</p>	<p>Matson LG, Tran ZV. Effects of sodium bicarbonate ingestion on anaerobic performance: a meta analytic review. Int J Sport Nutr. 1993 Mar;3(1):2-28.</p> <p>Harmer AR, McKenna MJ, Sutton JR, Snow RJ. Skeletal muscle metabolic and ionic adaptations during intense exercise following sprint training in humans. J Appl Physiol. 2000 Nov;89(5):1793.</p> <p>Portington KJ, Pascoe DD, Webster MJ, Anderson LH, Rutland RR, Gladden LB. Effect of induced alkalosis on exhaustive leg press performance. Med Sci Sports Exerc. 1998 Apr;30(4):523-8.</p> <p>Caldwell JE. Diuretic therapy and exercise performance. Sports Med. 1987 Jul-Aug;4(4):290-304.</p> <p>Wilkes D, Gledhill N, Smyth R. Effect of acute induced metabolic alkalosis on 800-m racing time. Med Sci Sports Exerc, 15(4) 277-280, 1988.</p> <p>McNaughton LR, Dalton, B, Palmer G. Sodium bicarbonate can be used as an ergogenic aid in high-intensity, competitive cycle ergometry of 1 h duration. Eur J Appl Physiol, 80(1) 64-69, 1999.</p> <p>Webster M.J. 2002. Sodium bicarbonate. In: Bahrke M and Yesalis C, Eds. Performance-enhancing substances in sport and exercise. Champaign, IL: Human Kinetics. p 197-207.</p> <p>Greenhaff PL, Gleeson M, Maughan RJ. Diet-induced metabolic acidosis and the performance of high intensity exercise in man. Eur J Appl Physiol Occup Physiol. 1988;57(5):583-90.</p> <p>Reidenberg MM, Haag BL, Channick BJ, Shuman CR, Wilson TG. The response of bone to metabolic acidosis in man. Metabolism. 1966 Mar;15(3):236-41.</p> <p>Jacobs I, Schele R, Sjodin B. Blood lactate vs. exhaustive exercise</p>

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	<p>to evaluate aerobic fitness. Eur J Appl Physiol Occup Physiol. 1985;54(2):151.</p> <p>McCartney N, Heigenhauser GJ, Jones NL. Effects of pH on maximal power output and fatigue during short-term dynamic exercise. J Appl Physiol. 1983 Jul;55(1 Pt 1):225-9.</p> <p>Busse MW, Maassen N. Effect of consecutive exercise bouts on plasma potassium concentration during exercise and recovery. Med Sci Sports Exerc. 1989 Oct;21(5):489.</p> <p>Cooper E. 2006. Elite bicyclist study using two levels of Alka-plex® supplementation. Unpublished study, pH Sciences.</p>
<p>Bio-pH granules decrease the amount of muscle damage and soreness created by vigorous exercise due to the build-up of acids in the muscle.</p>	<p>Haller RG, Lewis SF, Estabrook RW, DiMauro S, Servidei S, Foster DW. Exercise intolerance, lactic acidosis, and abnormal cardiopulmonary regulation in exercise associated with adult skeletal muscle cytochrome c oxidase deficiency. J Clin Invest. 1989 Jul;84(1):155-61.</p> <p>Busse MW, Maassen N. Effect of consecutive exercise bouts on plasma potassium concentration during exercise and recovery. Med Sci Sports Exerc. 1989 Oct;21(5):489.</p> <p>Brien DM, McKenzie DC. The effect of induced alkalosis and acidosis on plasma lactate and work output in elite oarsmen. Eur J Appl Physiol Occup Physiol. 1989;58(8):797-802.</p> <p>Sahlin K. Metabolic factors in fatigue. Sports Med. 1992 Feb;13(2):99-107.</p> <p>Kleger GR, Turgay M, Imoberdorf R, McNurlan MA, Garlick PJ, Ballmer PE. Acute metabolic acidosis decreases muscle protein synthesis but not albumin synthesis in humans. Am J Kidney Dis. 2001 Dec;38(6):1199-207.</p> <p>Vormann J, Worlitschek M, Goedecke T, Silver B. Supplementation with alkaline minerals reduces symptoms in patients with chronic low back pain. J Trace Elem Med Biol. 2001;15(2-3):179-83.</p> <p>Verbitsky O, Mizrahi J, Levin M, Isakov E. Effect of ingested sodium</p>

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	<p>bicarbonate on muscle force, fatigue, and recovery. J Appl Physiol. 1997 Aug;83(2):333-7.</p>
<p>Bio-pH granules induce greater muscle alkalinity and supports muscle and athletic endurance (or “time to fatigue”).</p>	<p>Lambert CP, Flynn MG. Fatigue during high-intensity intermittent exercise: application to bodybuilding. Sports Med. 2002;32(8):511-22.</p> <p>Raymer GH, Marsh GD, Kowalchuk JM, Thompson RT. Metabolic effects of induced alkalosis during progressive forearm exercise to fatigue. J Appl Physiol. 2004 Jun;96(6):2050-6.</p> <p>Verbitsky O, Mizrahi J, Levin M, Isakov E. Effect of ingested sodium bicarbonate on muscle force, fatigue, and recovery. J Appl Physiol. 1997 Aug;83(2):333.</p> <p>Sahlin K. Metabolic factors in fatigue. Sports Med. 1992 Feb;13(2):99-107.</p> <p>Cowan RA, Hartnell GG, Lowdell CP, Baird IM, Leak AM. Metabolic acidosis induced by carbonic anhydrase inhibitors and salicylates in patients with normal renal function. Br Med J (Clin Res Ed). 1984 Aug 11; 289 (6441): 347-8.</p> <p>Bushinsky DA. Acid-base imbalance and the skeleton. Eur J Nutr. 2001 Oct;40(5):238-44.</p> <p>Robergs RA, Ghiasvand F, Parker D. Biochemistry of exercise-induced metabolic acidosis. Am J Physiol Regul Integr Comp Physiol. 2004 Sep;287(3):R502-16.</p> <p>Swenson ER. Metabolic acidosis. Respir Care. 2001 Apr;46(4):342-53.</p> <p>Coyle EF. Physiological determinants of endurance exercise performance. J Sci Med Sport. 1999 Oct;2(3):181-9.</p> <p>Bishop D, Edge J, Davis C, Goodman C. Induced metabolic alkalosis affects muscle metabolism and repeated sprint ability. Med Sci Sports Exerc. 2004 May;36(5):807-13.</p> <p>Denning H, Talbot JH, Edwards HT, Dill DB. Effect of acidosis and alkalosis upon capacity for work. J Clin Invest, 9, 601-613, 1931.</p>

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	<p>Wijnen S, Verstappen F, Kuipers H. The influence of intravenous NaHCO₃ administration in interval exercise: acid-base balance and endurance. <i>Int J Sports Med</i>, 5, 130-132, 1984.</p> <p>Swank A, Robertson RJ. Effect of induced alkalosis on perception of exertion during intermittent exercise. <i>J Appl Physiol</i>, 67(5) 1862-1867, 1989.</p> <p>Burns RW, Lund CL. 2003. pH Control™, its effect on urine acidity and implications on blood acidity. Unpublished study, pH Sciences.</p>
<p>Exercise-induced metabolic acidosis causes fatigue which is mediated by Bio-pH based dietary supplements.</p>	<p>Sahlin K. Metabolic factors in fatigue. <i>Sports Med</i>. 1992 Feb;13(2):99-107.</p> <p>Alpern RJ, Sakhaee K. The clinical spectrum of chronic metabolic acidosis: homeostatic mechanisms produce significant morbidity. <i>Am J Kidney Dis</i>. 1997 Feb;29(2):291-302.</p> <p>Frassetto L, Sebastian A. Age and systemic acid-base equilibrium: analysis of published data. <i>J Gerontol A Biol Sci Med Sci</i>. 1996 Jan;51(1):B91-9.</p> <p>Wiederseiner JM, Muser J, Lutz T, Hulter HN, Krapf R. Acute metabolic acidosis: characterization and diagnosis of the disorder and the plasma potassium response. <i>J Am Soc Nephrol</i>. 2004 Jun;15(6):1589.</p>
<p>Bio-pH granules alkalize the acids generated internally by high-protein diet (or “diet-induced metabolic acidosis”).</p>	<p>Frassetto LA, Todd KM, Morris RC Jr, Sebastian A. Estimation of net endogenous noncarbonic acid production in humans from diet potassium and protein contents. <i>Am J Clin Nutr</i>. 1998 Sep;68(3):576-83.</p> <p>Marliss EB. Protein diets for obesity: metabolic and clinical aspects. <i>Can Med Assoc J</i>. 1978 Dec 23; 119 (12): 1413-21.</p> <p>Worthington BS, Taylor LE. Balanced low-calorie vs. low-protein-low-carbohydrate reducing diets. II. Biochemical changes. <i>J Am Diet Assoc</i>. 1974 Jan;64(1):52-5.</p>

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	<p>Alpern RJ, Sakhaee K. The clinical spectrum of chronic metabolic acidosis: homeostatic mechanisms produce significant morbidity. Am J Kidney Dis. 1997 Feb; 29 (2):291-302.</p> <p>Frassetto L, Morris RC Jr, Sellmeyer DE, Todd K, Sebastian A. Diet, evolution and aging--the pathophysiologic effects of the post-agricultural inversion of the potassium-to-sodium and base-to-chloride ratios in the human diet. Eur J Nutr. 2001 Oct;40(5):200-13</p>
<p>Bio-pH granules aid the body in the removal of acidic waste from cells.</p>	<p>Frassetto L, Morris RC Jr, Sebastian A. Potassium bicarbonate reduces urinary nitrogen excretion in postmenopausal women. J Clin Endocrinol Metab. 1997 Jan;82(1):254-9.</p> <p>Lindinger MI, Franklin TW, Lands LC, Pedersen PK, Welsh DG, Heigenhauser GJ. Role of skeletal muscle in plasma ion and acid-base regulation after NaHCO₃ and KHCO₃ loading in humans. Am J Physiol. 1999 Jan;276(1 Pt 2):R32-43.</p> <p>Goldfinch J, McNaughton L, Davies P. Induced metabolic alkalosis and its effects on 400-m racing time. Eur J Appl Physiol Occup Physiol. 1988;57(1):45-8.</p>
<p>Bio-pH granules help the body maintain a healthy acid-base balance.</p>	<p>Lindinger MI, Franklin TW, Lands LC, Pedersen PK, Welsh DG, Heigenhauser GJ. Role of skeletal muscle in plasma ion and acid-base regulation after NaHCO₃ and KHCO₃ loading in humans. Am J Physiol. 1999 Jan;276(1 Pt 2):R32-43.</p> <p>Goldfinch J, Mc Naughton L, Davies P. Induced metabolic alkalosis and its effects on 400-m racing time. Eur J Appl Physiol Occup Physiol. 1988;57(1):45-8.</p> <p>Lobo DN. Fluid, electrolytes and nutrition: physiological and clinical aspects. Proc Nutr Soc. 2004 Aug;63(3):453-66.</p> <p>Sa pir DG, Chambers NE, Ryan JW. The role of potassium in the control of ammonium excretion during starvation. Metabolism. 1976 Feb;25(2):211-20.</p>

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	<p>Frassetto L, Morris RC Jr, Sebastian A. Potassium bicarbonate reduces urinary nitrogen excretion in postmenopausal women. <i>J Clin Endocrinol Metab.</i> 1997 Jan;82(1):254-9.</p> <p>Wiederseiner JM, Muser J, Lutz T, Hulter HN, Krapf R. Acute metabolic acidosis: characterization and diagnosis of the disorder and the plasma potassium response. <i>J Am Soc Nephrol.</i> 2004 Jun;15(6):1589.</p> <p>Khanna A, Kurtzman NA. Metabolic alkalosis. <i>Respir Care.</i> 2001 Apr;46(4):354-65.</p>
<p>The body is better able to utilize electrolytes in an alkali state induced by Bio-pH based dietary supplement.</p>	<p>Allison S. Fluid, electrolytes and nutrition. <i>Clin Med.</i> 2004 Nov-Dec;4(6):573-8.</p> <p>Rehrer NJ. Fluid and electrolyte balance in ultra-endurance sport. <i>Sports Med.</i> 2001;31(10):701-15.</p> <p>Demigne C. Protective effects of high dietary potassium: nutritional and metabolic aspects. <i>J Nutr.</i> 2004 Nov; 134 (11):2903-6.</p> <p>Frassetto, L. Diet, evolution and aging--the pathophysiologic effects of the post-agricultural inversion of the potassium-to-sodium and base-to-chloride ratios in the human diet. <i>Eur J Nutr.</i> 2001 Oct;40(5):200-13.</p> <p>Frassetto LA. Estimation of net endogenous noncarbonic acid production in humans from diet potassium and protein contents. <i>Am J Clin Nutr.</i> 1998 Sep;68(3):576-83.</p>
<p>Certain prescription drugs and trauma push the body's acid-base balance toward drug induced acidosis which can be mediated by Bio-pH based dietary supplements.</p>	<p>Neale R, Reynolds TM, Saweirs W. Statin precipitated lactic acidosis? <i>J Clin Pathol.</i> 2004 Sep;57(9):989-90.</p> <p>Jin H, Meyer JM, Jeste DV. Atypical antipsychotics and glucose dysregulation: a systematic review. <i>Schizophr Res.</i> 2004 Dec 1;71(2-3):195-212.</p> <p>Sandhu GK, Heyneman CA. Nephrotoxic potential of selective cyclooxygenase-2 inhibitors. <i>Ann Pharmacother.</i> 2004</p>

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	<p>Apr;38(4):700-4.</p> <p>Inamasu J, Nakamura Y, Saito R, Kuroshima Y, Mayanagi K, Ohba S, Ichikizaki K. Normokalemia and hyperglycemia in subarachnoid hemorrhage patients resuscitated from prehospital cardiopulmonary arrest. <i>Resuscitation</i>. 2002 Sep; 54(3):255.</p> <p>Hameed SM, Cohn SM. Gastric tonometry: the role of mucosal pH measurement in the management of trauma. <i>Chest</i>. 2003 May;123(5 Suppl):475S.</p> <p>Price G. Metformin lactic acidosis, acute renal failure and rofecoxib. <i>Br J Anaesth</i>. 2003 Dec;91(6):909-10.</p> <p>Boelsterli UA, Zimmerman HJ, Kretz-Rommel A. Idiosyncratic liver toxicity of nonsteroidal antiinflammatory drugs: molecular mechanisms and pathology. <i>Crit Rev Toxicol</i>. 1995; 25(3): 207-35.</p>
<p>Bio-pH based dietary supplements reduce acid concentrations in tissue and body fluids with the result that intracellular nutrient transportation may be improved.</p>	<p>Abdoun K, Wolf K, Arndt G, Martens H. Effect of ammonia on Na⁺ transport across isolated rumen epithelium of sheep is diet dependent. <i>Br J Nutr</i>. 2003 Oct;90(4):751-8.</p> <p>Mene P. Transient receptor potential channels in the kidney: calcium signaling, transport and beyond. <i>J Nephrol</i>. 2006 Jan-Feb;19(1):21-9.</p> <p>Wakabayashi I, Poteser M, Groschner K. Intracellular pH as a determinant of vascular smooth muscle function. <i>J Vasc Res</i>. 2006;43(3):238-50.</p> <p>Hayashi H, Szaszi K, Grinstein S. Multiple modes of regulation of Na⁺/H⁺ exchangers. <i>Ann N Y Acad Sci</i>. 2002 Nov;976:248-58.</p> <p>Powell JJ, Jugdaohsingh R, Thompson RP. The regulation of mineral absorption in the gastrointestinal tract. <i>Proc Nutr Soc</i>. 1999 Feb;58(1):147-53.</p> <p>Burton RF. The roles of intracellular buffers and bone mineral in the regulation of acid-base balance in mammals. <i>Comp Biochem Physiol Comp Physiol</i>. 1992 Jul;102(3):425-32.</p>

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<p>Bio-pH granules improve enzyme activity which is very sensitive to tissue acidity conditions.</p>	<p>Eiam-ong S, Laski ME, Kurtzman NA, Sabatini S. Effect of respiratory acidosis and respiratory alkalosis on renal transport enzymes. <i>Am J Physiol.</i> 267(3 Pt 2):F390-9, 1994.</p> <p>Nolan PJ, Knepper MA, Packer RK. Inhibition of IMCD 11 beta-hydroxysteroid dehydrogenase type 2 by low pH and acute acid loading. <i>J Am Soc Nephrol.</i> 8(4):530-4, 1997.</p> <p>Price SR, Wang X, Bailey JL. Tissue-specific responses of branched-chain alpha-ketoacid dehydrogenase activity in metabolic acidosis. <i>J Am Soc Nephrol.</i> 9(10):1892-8, 1998.</p>
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