Journal of Interdisciplinary and Multidisciplinary Research (JIMR)
E-ISSN:1936-6264| Impact Factor: 8.886| UGC CARE II
Vol. 19 Issue 07, July- 2024
Available online at: https://www.jimrjournal.com/
(An open access scholarly, peer-reviewed, interdisciplinary, monthly, and fully refereed journal.)

NATURALLY AVOID SICKNESS AND DELAY AGEING WITH ALKALINE FOOD AND YOGA

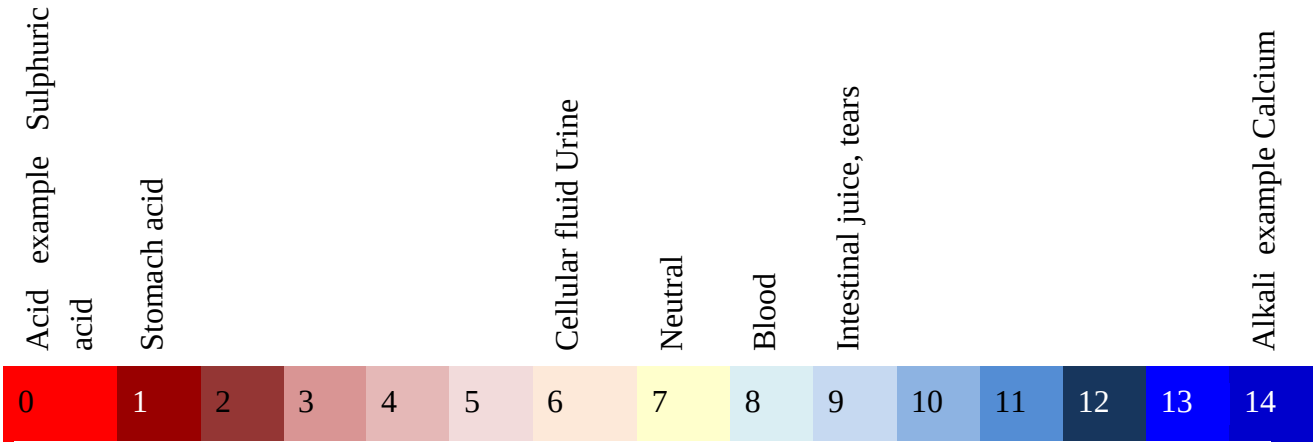
Dr.Mrs. Sangeeta Abhay Patil, Academic Consultant, School of Health Science, Yashwantrao Chavan Maharashtra Open University, Nashik

Discussion

The Almighty God created us with the unique and fabulous chemical industry within our body and we are the managers of this unique chemical industry. The body every moment senses the chemical changes at cellular level and tries to maintain stability for proper functioning. Aperfectly healthy body is determined by the healthy cell. (M.D 2016 January) The Health of cell depends on the Fluid environment in and around the cell. The fluid has a ph either acidic or basic that determines the health of the cell. All the body functions are carried out well in a slightly alkaline medium. (Tamagade June 2016)Blood, saliva, gastric juice, sweat, urine, tears, plasma, pleural fluid, cerebrospinal fluid, synovial fluid, intestinal juices, pericardial fluid etc are fluids present in our body. With every morsel of food that we ingest there are changes in the ph of all the body fluids. Our body is constantly juggling or working to balance the ph either by removal of excess acid from the urine or by the influence of the carbonates and Bicarbonates. As we are the Managers of our own body we have to think wisely and allow the entry of food inside the body.

Ph values of various body fluids:

The body constantly adjusts to maintain the fluid alkaline in nature except gastric juice which is acidic in nature. Ph is quantitative measure of acidity and alkalinity.PH of 1-7 is acidic in nature and 7-14 is alkaline in nature on the scale of 1-14. On an average the body ph is 7.4 which is slightly alkaline in nature. Blood, sweat, lymph have Ph.of 6.5-7.0; intestinal juices, tears have ph 6.7 – 8.0; urine is slightly acidic; Stomach juice is 1.5-3.5.



Journal of Interdisciplinary and Multidisciplinary Research (JIMR)
E-ISSN:1936-6264| Impact Factor: 8.886| UGC CARE II
Vol. 19 Issue 07, July- 2024
Available online at: https://www.jimrjournal.com/
(An open access scholarly, peer-reviewed, interdisciplinary, monthly, and fully refereed journal.)

Organs involved in maintain the fine balance of ph

The fine balance of ph is taken care by Lungs, Kidneys and Buffer systems. The organs involved in maintaining the fine balances are Lungs, kidneys, liver, skin and gastro intestinal tract. Factors that affect the acid base balance of our body diet, sleep, activity, stress and diseases.

- The amount of carbon dioxide exhaled, and consequently the pH of the blood, increases as breathing becomes faster and deeper. By adjusting the speed and depth of breathing, the brain and lungs are able to regulate the blood pH minute by minute.
- The kidneys are able to affect blood pH by excreting excess acids or bases.

The pH buffer systems carbonic acid and the bicarbonates work chemically to minimize changes in the pH of a solution by adjusting the proportion of acid and base. The most important pH buffer system in the blood involves carbonic acid (a weak acid formed from the carbon dioxide dissolved in blood) and bicarbonate ions (the corresponding weak base), phosphate buffers, proteins and haemoglobin. (Gupta 2020)All the above try to maintain the body phslightly Alkali. The need of these buffers is vital for sustenance. Death can occur if the ph of blood is lower than 6.8 slightly acidic and higher than 7.8 slightly basic. (Flebo.in 2023)

Acidosis and Alkalosis:

Acidosis: Decrease in the ph. of the cells and body fluids is labelled as Acidosis.When the body cannot remove the excess of acid from the blood it is labelled as Lactic acidosis; cannot remove ketone from blood it is called Diabetic Acidosis; when kidneys fail to remove the acid it is called Renal Tubular acidosis; and when lungs fail to expel carbon dioxide it is called Respiratory acidosis.

Presentation of Acidosis

Mild acidosis	**Moderate acidosis**	**Severe acidosis**
Acne, Mild Headache,	Depression	Crohns disease,
Muscular pain, cramps	Loss of memory & concentration	Skin diseases
Acidity, diarrhoea, bloating	Infections –bacterial , fungal off and on	Rheumatoid arthritis
Hot and Smelling Urine	Asthma	Blood cancer
White coted tongue	Viral infections off and on	Tuberculosis
Disturbed sleep	Urine infections	Thyroid disorders
Not feeling fresh in the morning	Bronchitis	Schizophrenia,

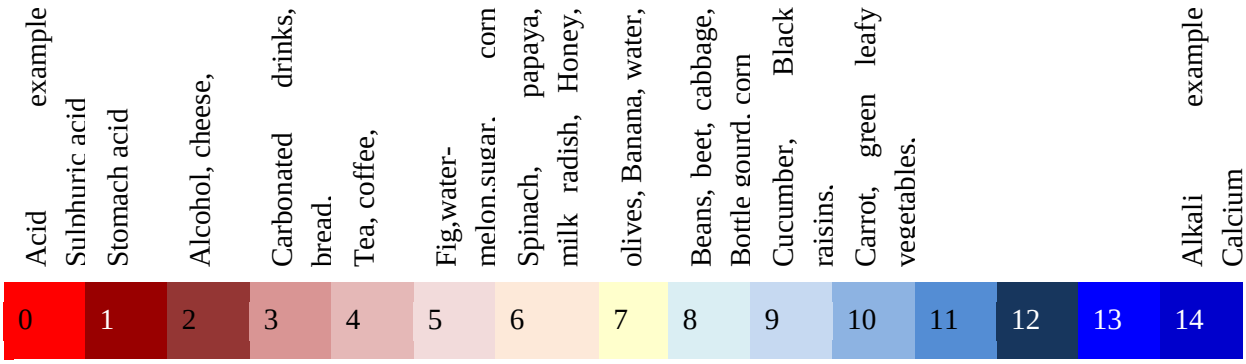
Alkalosis: occurs when there is too much of bicarbonate in your blood called Metabolic Alkalosis or too little carbon dioxide in the lungs called Respiratory Alkalosis. Metabolic Alkalosis symptoms are Confusion, Fatigue, Headache, vomiting, rapid heart rate, loss of appetite, etc. Respiratory alkalosis presents as Difficulty in breathing, confusion, increased sleepiness, and muscle spasms.

Journal of Interdisciplinary and Multidisciplinary Research (JIMR)
E-ISSN:1936-6264| Impact Factor: 8.886| UGC CARE II
Vol. 19 Issue 07, July- 2024
Available online at: https://www.jimrjournal.com/
(An open access scholarly, peer-reviewed, interdisciplinary, monthly, and fully refereed journal.)

Dietary products that increase acid or alkali ph.

Note the diet consumed for the day whether acidic diet or alkali/base diet. (Christine Mikstas 2024) Following are the dietary products. (Axe n.d.)

Food that increases the acidity in the body			Food that increase the alkalinity of body.		
Carbonated beverages	Eggs	Citrus fruits	Lemon juice	Leafy vegetables	Fruits
Refined sugar	Tea	Beef	Tomatoes	Beet root	Almond milk
Canned food	Coffee	White bread	Lettuce	Lentils	Coconut oil
Pizza	All Dairy Products	Corn syrup	spinach	Garlic	nuts
Pasta	Cheese	Fried food	Green leafy vegetables	Pumpkin seeds	cherries
All Wheat products	All bakery product	Grains	Mineral water	Pine-apple	Fermented tofu
Soft drinks	Meat	Chicken	Herbal tea	Avocado	Quinoa
Alcohol			Banana	Grapes	Egg-plant



(Ashpare 2023)

How to check for acidosis: Ph. indicators are Litmus paper test, Calorimeter, Arterial Blood gas Analysis in a laboratory, Serum Electrolyte levels.

Factors that contribute to Acidosis:(Allen 2023)

Daily intake of High carbohydrates and fried food	Inflammation, cancer, infections.	Improper sleep
Diabetes Mellitus	Medications	Multiple organ failure
Obesity	Sedentary lifestyle.	High acid food
Stress, anxiety, depression	Strenuous exercise	Low oxygen levels.
Lung diseases	Kidney failure	High estragon levels
Emotional stress	Acidic Diet	

Journal of Interdisciplinary and Multidisciplinary Research (JIMR)
E-ISSN:1936-6264| Impact Factor: 8.886| UGC CARE II
Vol. 19 Issue 07, July- 2024
Available online at: https://www.jimrjournal.com/
(An open access scholarly, peer-reviewed, interdisciplinary, monthly, and fully refereed journal.)

Effect of Acid ph. on the body:

Diets high in acidic foods cause the body cells to break down prematurely and create acid bombs that circulate in the bloodstream to cause havoc in the system. If a person experiences Weakness, low energy, irritability, anxiety, panic attacks, skein diseases, muscle cramps, sleepiness, nausea. (https://annarborholistichealth.com n.d.) Do consult the physician and get the investigations done.

Cellular level: The enzyme activity is ph. sensitive acid ph. hampers the catalytic activity of enzymes. **(Munzel n.d.).** The cell membrane gets disrupted with changes in either acid or basic ph. With low ph. the erythrocyte membrane fluidity is affected as the effect of lipid on erythrocyte is more prominent in acid ph.**(Takeo YAMAGUCHI 1981)**

In acidic Medium the body cells break easily and prematurely hampering the function of the cell.

Obesity / Diabetes When the body is acidic it cause Insulin sensitivity or the cell is insulin resistant. Actually the cell requires insulin for the uptake of glucose but due to insulin resistance more of insulin gets accumulated in the blood along with the sugars. The insulin converts the glucose to fat or converts excess calories to fat. Initially obesity sets in and if not taken care of later Insulin resistance leads to Type II Diabetes Mellitus.

High blood pressure: Excess of salt intake or excess Sodium causes acidic environment causing water retention in the extra cellular space further leading to Hypertension.

Osteoporosis Our body tries to balance the acid environment of the cell to alkali but with a toll to pay. Body utilizes the minerals to balance the excess of acid. Later erodes the bones to pull out the Calcium stores to balance the acid ph. leading to osteoporosis. More calcium in the blood leading to Kidney stones, Gall Stones. Excess acidity forces the body to borrow minerals, including calcium, sodium, potassium, and magnesium from vital organs, bones, and teeth to buffer (neutralize) the acid and safely removes it from the body. As a result, the body can suffer severe and prolonged corrosion due to high acidity, a condition that may go undetected for years.

Reduces Immunity: Infectious agents, cancer cells, fungal infections thrive best in acidic medium thus making the body prone to many diseases. (O'Neil n.d.)

Liver affections: As the liver the main manager who looks after of 1.managing the substances of what the stomach and intestines have absorbed 2. Whatever is excess in the body and our cells don't require comes to the liver.3 All the waste and toxins are taken care by liver and eliminated from the organs of excretion – Large intestines, kidneys. Liver stores the glucose which is in excess as fat or as glycogen in the muscle. Many are suffering from fatty liver Grade I.

Bones: Excess of acid gets deposited on the joints causing arthritis. Due to crystallization at the joints the synovial membrane reduces the production of synovial fluid thus causing swelling and immobilisation of joints.

Ageing: To age charmingly and elegantly, after 40 years it is important to keep the interior of

our body alkaline. Acidic ph. of the body accelerates the ageing process. When the person is young and detours away from good healthy habits or having lots of acidic food our body utilizes the mineral resources to bounce back to the balanced ph. Prior to 40 years of age large recourses in the body to bring the body back to health if the person detours away from good healthy habits. (MD. 2015). So to avoid ageing maintain the balanced ph. of the body slightly alkaline i.e. 7.4. After 40, the internal natural buffering pH capacity decreases, and the body becomes progressively acidic[1]. (Aeduddla 2023 Mar 13.)

Early death: Improper ph. balance impacts the health and can reduce the life-span.

How to stay Healthy:

Our aim is to have balanced diet rather than to increase alkaline ph.Human body always prefers to be in Balance.(Refer paragraph two foe all the ph. values)

1. **Sun** exposure is **a must** to help the skin covert the lipid to Vitamin D which further helps in Calcium balance of the body.
2. **Fresh open air** with lots of oxygen:Breathe fresh air as much as you can. The bedroom in fact all the rooms of the house should be well ventilated with sunrays reaching the room.
3. **Drink fresh water** – Always sip water with small crystal of Himalayan Salt which has lot of minerals compared to the table salt which contains only two minerals sodium and chloride. This helps in absorption of minerals in the body.
4. **Temperance** – Eat food not too hot nor too cold.Too hot food disturbs the digestion and gut health. Too cold food slows the digestion process as the food has to be brought to the body temperature and the digestion process begins. (Is eating cold food unhealthy? 2019).
5. Believe and have faith in God of your worship and stay positive
6. **Rest and Sound sleep** is must as during that period the body is rejuvenating and brings back the cells to balance state.
7. **Yoga** – is the best treatment for lifestyle diseases. Can follow Yoga and Pranayama.
    - Walk daily for 10,000 steps + Meditate for 5-10 minutes.
    - Improves liver function: **Dhanurasana** or bow pose (Improves blood circulation, improves digestion), **Arda matseyendrasana, Gomukhasana, naukasana.**(Rohra 2024)
    - Yogasana- **Pavanmuktaasanas** stimulates the gut movements and removes toxins from the body.
    - **Setu bandasana** and **Vajraasanas** helps in digestion of food, improves blood circulation and removes toxins from the body.
    - **Ustraasanas** also called camel pose improves blood circulation and helps in hormonal \balance.

- **Suryanamaskar** improves blood circulation and removes the muscular waste from the body.
- pranayamas (breathing exercise including **Anulome Vilome, Surya Bandana, Sheetali, and Bhramari**) all the pranayama reduce anxiety, breathing causes the removal of carbon dioxide also improves the flow of oxygen to the tissues.
- Frog pose/ **mandukasana** improves kidney function, tones the abdomen, and regulates diabetes.

Exercise and especially yoga maintains the lungs healthy eliminating the toxins from the body and improving blood circulation so that the kidneys purify the blood.

8. **Balanced diet**: To achieve the ph. of body 6.5 which is slightly alkaline we need to consume more of alkali forming food products than acid forming food products. (Wilkins 2024). Our aim should be to have balanced diet not just having alkaline food. Indian food consumed is mostly acidic in nature therefore try to add alkaline food to your daily diet routine. Ideal balance diet should have Non-starchy green leafy vegetable + Coloured salads + Lentils + One grain with more fibre + 1-2 tablespoon of fermented milk (curd / $_{1/4}$ glass of buttermilk).

Conclusion

Human body at all-time tries to balance and maintain the ph. values normal and as required. Only one day acidic diet will not affect the ph. of blood but consistent acid diet with no exercise will definitely overload the kidneys with the work of maintain the ph. balance. A person who eats mostly acidic food has acidic urine as the kidneys work in the effort to remove excess of acid from the body to maintain the balanced ph. Effort should be made to balance the diet with 80% alkaline diet and 20% acidic diet. With the knowledge of ph. values of body fluids, the ph. values of daily food product and Yogasanas try to maintain the balance of food and yoga to stay healthy and young. Most of the food products are acidic in nature, we should make effort to include alkaline food products in the diet daily and perform yoga daily to avoid sickness. Ultimately keeping ourselves fit and young.

Keywords: - Alkaline food, Yoga Sana, balanced Diet, Ageing, Sickness.

Bibliography

Aeduddla, Yasaman Pirahanchi Rishita Jessu Naraothama. 2023 Mar 13. "Physiology, Sodium Potassium Pump." By Yasaman Pirahanchi Rishita Jessu Naraothama Aeduddla. StatPearls Publishing.

Allen, Suzanne. 2023. Meatbolic Acidosis. Edited by Darragh O'carroll. April 14. Accessed July 19, 2024. https://www.healthline.com/health/acidosis.

Ashpare, Zohra. 2023. HEALTHLINE.COM. Edited by Marengo Katherine. August 29. Accessed July 25, 2024. https://www.healthline.com/health/acid-foods-to-avoid.

Axe,Dr.Josh. n.d. Ancient Nutrition. Accessed July 2024, 2024. https://draxe.com/nutrition/acidic-foods/.

Christine Mikstas, Sonya Collins, Julie Mark, Katie Cameron. 2024. WebMD. February 12. Accessed july 18, 2024. https://www.webmd.com/diet/alkaline-diets.

Flebo.in, blog. 2023. "Normal Blood pH Range: pH Level Changes & Health Problems." https://flebo.in. january 10. Accessed july 24, 2024. https://flebo.in/health/normal-blood-ph-range-ph-level-changes-health-problems/#:~:text=Chemical%20buffers%20like%20carbonic%20acid,7.8%20can%20lead%20to%20death.

Gupta, Ramesh. 2020. Acid base balance - Regulation of pH of body fluids. February 14. Accessed July 25, 2024. https://www.slideshare.net/slideshow/acid-base-balance-regulation-of-ph-of-body-fluids/227908044.

https://annarborholistichealth.com. n.d. Effect of body acidity on Health. Accessed July 17, 2024. https://annarborholistichealth.com/2015-4-29-the-effect-of-body-acidity-on-health/#:~:text=Feeling%20weak%2C%20tired%20and%20having,Suffering%20generalized%20aches%20and%20pain.

2019. Is eating cold food unhealthy? August 13. Accessed july 24, 2024. https://timesofindia.indiatimes.com/life-style/food-news/is-eating-cold-food-unhealthy/photostory/70658663.cms.

M.D, DSc Dietger Mathais. 2016 January. The human body – a giant chemical factory.

MD., Jeannete Graf. 2015. Dermatology learning network. June. Accessed July 16, 2024. https://www.hmpgloballearningnetwork.com/site/thederm/site/cathlab/event/considering-ph-factor-and-aging#:~:text=I%20remind%20patients%20that%20graceful,alcohol%20should%20be%20moderately%20consumed.

Munzel, Ebarhard Schulz and Thomas. n.d. "Intracellular pH: A Fundamental Modulator of Vascular Function." AHAIASA Circulation 124 Number 17 (17). Accessed July 23, 2024. doi:25th October 2011.

O'Neil, Barbara. n.d. How to get Ph balance back to normal.

Rohra, Dr.Divya. 2024. 11 Yoga Asanas For Liver and Kidney Health. Edited by Dr.Ragiinii Shrama. March 18. Accessed July 25, 2024. https://redcliffelabs.com/myhealth/yoga/11-yoga-asanas-for-liver-and-kidney-health/.

Takeo YAMAGUCHI, Masato KOGA, Yoshinori FUJITA,. 1981. Effects of pH on Membrane Fluidity of Human Erythrocytes. Department of Chemistry, Faculty of Science, Fukuoka University,, October 22. Accessed july 23, 2024. https://www.jstage.jst.go.jp/article/biochemistry1922/91/4/91_4_1299/_pdf.

Tamagade, Sandhya. June 2016. "INTERNAL PH IN HEALTH AND DISEASE." Article in Iranian Journal of Pathology · (https://www.researchgate.net/publication).

Wilkins, Drew. 2024. Barbara O'Neill Diet: Everything You Need to Know [2024]. April 04. Accessed july 24, 2024. https://pursueperformance.com/barbara-oneill-diet/#Barbara_ONeill_Diet_Recommendations_for_Specific_Health_Concerns.