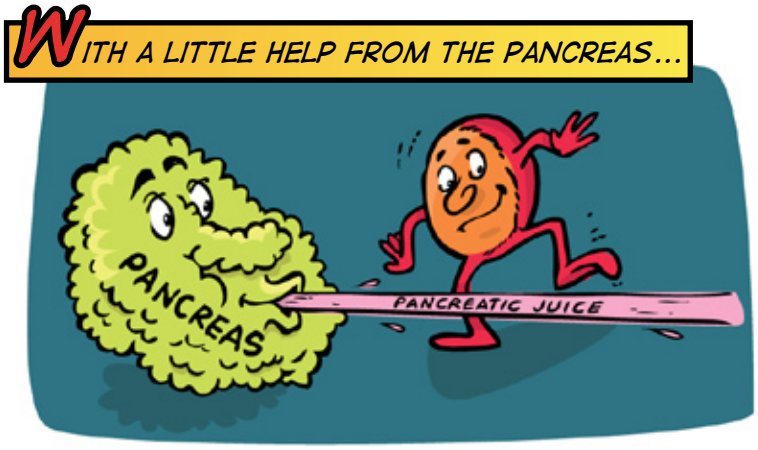
THE SMALL INTESTINES

We're entering a series of switchbacks—like a road that zig–zags down a steep mountain. We're sliding gently into the small intestine.

Ooops! Sorry, I forgot to warn you to keep a firm footing. That blast of juice from the pancreas is like standing in front of a fire hose. Here, let me help you up. All that chewing and vigorous stomach action signaled the pancreas to be prepared. This partially–digested food mixture entering the small intestine is highly acidic. It's the job of the pancreas cells to quickly neutralize this acid. For digestion to continue in the small intestine, we need only a slightly acidic environment. The pancreas meets the challenge—a strong acid mix from the stomach stimulates the pancreas to brew a highly alkaline (high enough in bicarbonates) mix. That blast took the bite out of the acid.



This juice is rich in enzymes too. Feel those enzymes go to work—there are still food particles that need to be broken down smaller before the body can absorb and use them. With the right acid/alkaline balance those enzymes set to work like beavers. Let's look at how crucial this acid/alkaline balance is to your health.

Everything in the world is made of atoms. Atoms have varying numbers of electrons circling the nucleus. The atoms you consume—animal, plant and mineral—are always either giving up or receiving electrons as part of the digestion and metabolism processes. This leaves atoms with either a positive or a negative charge. These charges are called ions. One of the electrical systems that keep us healthy is based on the exchange of ions. In body fluids, when a hydrogen ion, which has a positive charge, is donated an acid is created. When a hydrogen ion is removed, the resulting charge is negative and a bicarbonate is created which

is alkaline. The degree of acidity or alkalinity can be measured as a pH value. A pH of 7 is neutral. Below 7 is acidic and above 7 is alkaline.

To keep us cells healthy, we need a slightly more positive charge inside than the fluid outside that nourishes us. The fluid that we bathe in should have a higher degree of alkalinity or higher negative charge. Our ability to keep our membranes strong to allow nutrients to flow freely in and wastes to flow freely out depends on electricity and pH levels.

Here's the problem. A strong acid mixture is needed in the stomach to properly digest foods. There's no problem as long as we are able to neutralize those acids after the food bolus leaves the stomach.

MEASURING PH

Many health practitioners measure pH to help determine whether the body is creating health or disease. Litmus or pH paper can be purchased to measure the pH of both saliva and urine.

Saliva pH measures the body's ability to ionize minerals. To maintain health, when saliva pH is taken at 2 hours after eating it should range from 6.4 to 7.4.

Urine pH measures the body's struggle to maintain the crucial alkalinity or negative charge of the blood. To maintain health, urine pH should range from 5.8 to 6.8. Urine pH should be more acidic (lower pH) mid–morning and late evening. It should be least acidic (higher pH) mid–afternoon.

To determine whether you are overly acidic, check with a knowledgeable health practitioner to obtain a guide for measuring your pH at regular daily intervals for at least two weeks.

To neutralize acids, we must have enough minerals. Minerals are crucial to the process of keeping our electrical system operating efficiently. It's tough to get the minerals that keep us alkaline when soils are too acidic from artificial fertilizers, when air is often acidic from exhausts, when water is often acidic from stagnation, pollutants and added chemicals and ... when you get too stressed, that creates acids too!

SUGAR DEPLETES MINERALS

"Mineral imbalance is clearly associated with cancer. Hans Fibiger could only find cancer in mice living in a sugar storage warehouse where mice developed a mineral imbalance."

Cancer, Cause, Cure and Cover-Up,
Ron Gdanski

Remember, only the stomach can tolerate a high level of acidity. Too high an acid level anywhere else in the body is poisonous. When acid levels go up, it makes it extremely difficult for us cells to function. We replace ourselves with ever-weaker cells. This means the dying or aging process speeds up. Get the picture? Human was eating meals with mostly cooked and processed meats and not enough raw or lightly cooked vegetables and fruits ... lots of acids but few alkalizing minerals. Human was eating a lot of bread, muffins, donuts, candy ... again lots of acids but no alkalizing minerals. Human was

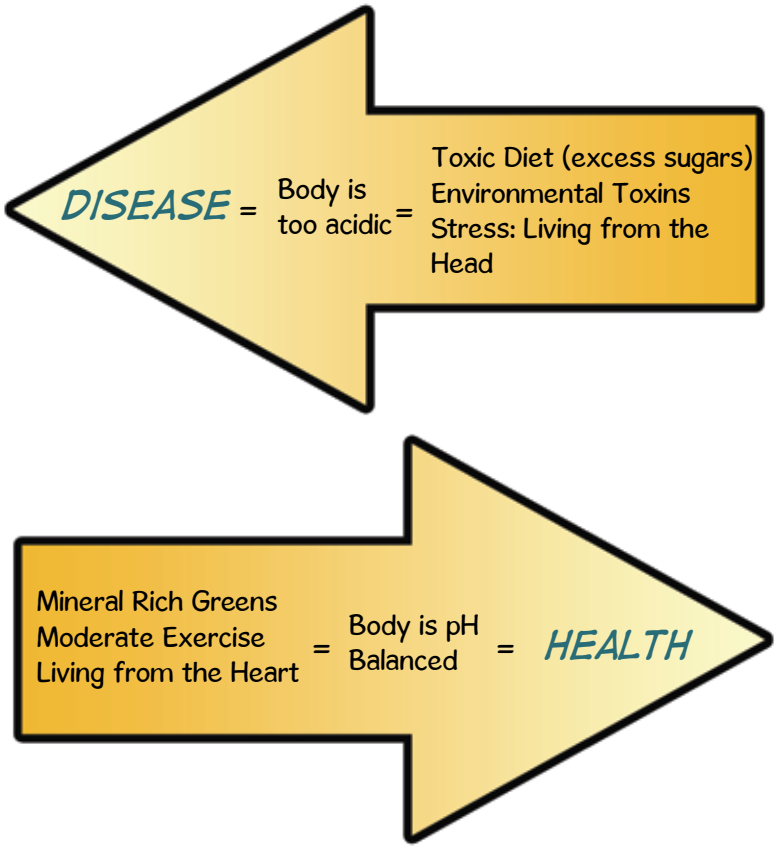
regularly drinking soda pop ... wow, that is highly acidic. I think you get the picture. Us cells can't get enough oxygen either if we get too acidic.

How are you going to get crucial minerals to us? Minerals come from rock. When Human took a mineral supplement made from crushed rock we just couldn't use it. The two most effective ways to get the minerals from rock to us are: 1) Drink water that has rushed and gurgled down a mountain or seeped through rock and soil, absorbing the minerals and bringing them to us as ions or 2) Eat foods that have been nourished by soils rich in micro-organisms or beneficial bacteria. These bacteria eat rocks to form the soil. Then bacteria predigest the minerals in the soil to make them readily available to plants. When the soil is rich in minerals, it resists pests. Pests just aren't able to thrive. It's the same with us—infectious bacteria and other enemies can't invade our membranes when we get the minerals we need. This is true for animals too. Animals that graze on plants that grow in mineral-rich soil will be healthier. Rock dust is the only fertilizer today that truly remineralizes the soil. Plants love the beneficial bacteria and the minerals they get from crushed rock. We love those minerals too ... but only after plants have prepared them for us.

Here's what Human did to stop burning us with acids, to stop suffocating us from lack of oxygen, and to start the repair process. Human drank lots of alkaline water and freshly pulped or juiced green vegetables. Human also took an ionic mineral supplement. Weaning us off sugar helped too. I say

APPROXIMATE HEALTH PH RANGES	
Saliva	6.4–7.4
Stomach	1–3
Small Intestine Mucous	6.8
Pancreatic Secretion	8.0–8.3
Blood	7.35–7.45
Cellular fluid	~ 6.6
Extracellular fluid	7.34–7.4
Urine	5.8–6.8
Clean water @ 22° C	7
Sea Water	8.1

WHICH DIRECTION ARE YOU HEADING?



weaned because we were addicted. Devoid of nutrients, refined sugar sucks minerals out of us and acidifies us big time. Human saw how this works when cleaning the vegetable juicer with sugar—sugar easily dissolves the mineral residue off the gears or blades! Human finally understood too that breads, pasta—anything made with refined flour—is the same as sugar to us. Once it gets down here we can't tell the difference... we just know these concentrated sugars sap our energy. Human threw us a life preserver when digestion improved allowing amino acids and minerals to make it all the way through the system to us. We finally stopped craving sugar.

The cells of a chicken heart stopped functioning only when French surgeon, Alexis Carrel, stopped changing the liquid surrounding the tissue every day. Kept in a jar, each day the acidic wastes were replaced with a fresh alkaline nutrient mix. Some 28 or more years later, the acidic waste was allowed to accumulate and the heart cells stopped functioning.

We had to be patient as it took months to change from being acidic to alkaline. To keep you alive, it is absolutely crucial that we keep the pH level of your blood constant. To do that, when Human was so acidic, we had to rob minerals from the teeth, liver, joints, muscles—including the heart—and eventually from the bones. These cells were so hungry they took all the minerals we could give them until they replenished what we'd robbed. It was a long time before we had sufficient to keep our fluids alkaline. Thankfully Human was patient and stayed with the program. It's hard to describe how wonderful it feels to be bathed with alkaline fluids again. Now we do what we love to do—transform nutrients efficiently, toss wastes out easily and replace ourselves with healthy offspring!

Back to the enzymes. Watch them go to work in this slightly alkaline mix—see the amylase enzymes breaking down the last bits of carbohydrates—the veggies and grains—to give us energy ... and the protease enzymes finishing the job so Human can use the amino acids in protein—to allow us to build and repair. And, see how those globs of fat floating by are being captured. This injection of juices from the pancreas also contains bile from the gallbladder. This churning action from the intestinal wall mixes the bile with the fats. The fats are emulsified into small droplets allowing the lipases or fat–digesting enzymes to work efficiently. Human doesn't have to worry about fatty build–up in the arteries—these are good fats that keep our membranes strong and working for you! We'll talk more about fats later.

So far, we've seen how important it is to chew foods really well ... like thoroughly—to release the enzymes in the food and allow the enzymes in saliva to digest the carbohydrates. We've seen how the digestion that happens in the early stage in your stomach depends on having enzymes in the food and how well you chew. We've also seen how a strong acidic brew in

the lower stomach is crucial to getting proteins to us cells ... and to releasing the minerals from your food. Now, we've just seen how the alkalinity of this pancreatic and bile juice balances the acid mix from the stomach creating a rich flow of nutrients. I want to stress ... really emphasize, it is important that you create a slightly alkaline environment for us cells to bathe in. If you do, we promise to keep you healthy!

This silky mix is moving on. Get ready to see one of the Wonders of the World as we maneuver the switchbacks of the small intestine.

REFERENCES

The Calcium Factor, Robert R. Barefoot & Carl J. Reich, M.D., 1999. ISBN#0–9633703–2–4

"The Clinical Picture of Hyperproteinemia and Hyperacidity," Dr. Thomas Rau, *Explore! Magazine*, Vol. 6, No. 6, 1996.

"An In–Depth Overview of the Millieu Interior," Robert Greenberg, D.C., *Explore! Magazine*, Vol. 7, No. 1, 1996.

"Deacidification a Basic Therapy," Dr. Med. Michael Worlitschek, *Explore! Magazine*, Vol. 6, No. 2, 1995.

"Acid–Base Regulation, A Fundamental Process in the Organism: Nutritional and Lifestyle Errors Are Decisive Factors," Dr. Med. Renate Collier, *Explore! Magazine*, Vol. 9, No. 4 & 5, 1999.

The Pro Vita! Plan, Jack Tips, 1992. ISBN#0–929167–05–8

Acid & Alkaline, Herman Aihara, 1986. ISBN#0–918860–44–x

Fire in the Water, David Yarrow, 1999. ISBN#1–928820–02–6

"It's the Acid That's Eating You!" Audio tape interview with J. Turner Carson, M.D., Tree of Light Inc., 2000.