

# The Gravity of Life

by Andrew K. Fletcher



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Andrew developed a new theory how trees manage to defy a law of physics by lifting fluid up to 375 ft high. The best of our pumps cannot lift a column of water higher than 33 ft. Andrew's theory led him on to postulate that there may be spin-offs for human health and better sleep.

There are 3 pages in all here. On the first two Andrew describes his discovery, and on the third page you can read his article

[The Importance of Gravity to our Health and Wellbeing, and its Relation to Rest & Sleep](#)

If you like to discuss these ideas with Andrew himself and others, you can do so on our Tree Community Message Boards. Andrew is presently a member of The-Tree Community

**unprecedented discovery..... I have  
unlocked the greatest secret of all  
time..... The secret behind the very  
essence of all life on Earth and  
beyond..... A secret which is so  
profound it holds the key to many of the most serious medical  
conditions of our time!.....**

## Introduction

All life on earth developed with one thing in common: Earth! The constant forces are gravity, and the energy from the sun. The most abundant resources are minerals and water.

Plants and animals alike, all depend on the properties of water for transporting minerals and nutrients. Because life is based on water, in that everything alive started from a few drops, life must have evolved by finding the easiest and most

direct pathway, after all liquids are very good at finding the most direct route possible. Yet, at first glance, everywhere one looks life appears to have chosen the least likely of paths, if it is trying to overcome the effects of gravity. Would trees, with species like the giant Californian redwoods (*sequoia sempervirens*), towering over a hundred metres high have chosen a vertical direction? How then have plants and animals harnessed the constant pull of gravity in order to thrive and grow?

On a summer day a large oak tree may take up a hundred gallons of water or more, enriched with minerals and nutrients from the soil. At first glance it is doing so against the pull of gravity, producing flow rates, which cannot be explained or shown by working models based on osmosis, capillary action or root pressure. So how are trees doing it?

## Explanation

Over 95% of the waters drawn in at the roots of a tree evaporate into the surrounding air through the leaves by transpiration. The evaporated moisture contains no minerals. However, the water remaining inside the tree contains a variety of mineral salts dissolved from the soil, together with sugars produced by the tree. The transpired water results in a concentration of salts and sugars within the leaves. Concentrating a liquid, (sap), which contains substances that are heavier than water, must result in the production of a heavier solution than the pre-transpired liquid. Because of the resulting imbalance in density the heavier solution is drawn towards the base of the tree, due to the effect of gravity (maple syrup, latex and amber are evidence for this). Downward flowing sap occurs predominantly within the phloem vessels. When an excess of concentrated liquid is produced during favourable weather conditions, the downward flowing sap forms new tubes from the cambium, as it is forced down by gravity, in a continual cycle of growth.

In hard woods, sap flows from cell to cell through openings or perforations, in the membrane between abutting vessels.

In soft-woods, the sap flow controls movable valves, or pits - (thin areas), in the walls of conducting tracheids. Concentrated pulses of sap may eventually be found to be present in some xylem vessels, as gravity inevitably finds the most direct route, with the least resistance, to the ground.

But for every action there must always be a reaction, and the reaction in this case is that the downward flowing liquid behaves exactly like a plunger in a syringe. As it flows down it causes the entire contents of connected tubes filled with the less dense liquid to be drawn up.

Here we have a simple power source, which is driven purely by evaporation, posture and gravity.

The forces produced by this phenomenon are easy to demonstrate in simple tubular experiments. The main forces are produced at the head and tail of the falling solutions. The head produces a positive force, or pressure, and the tail produces a negative pressure. I believe that the positive force within the mineral laden sap is responsible for the formation of the tubular structures found in timber. The positive force prevents tubes from closing.

As more sap flows through the same pathways, some of the sap is used to strengthen the tubes which will eventually become strong enough to resist the negative pressures. The tree transports the dilute solution of water and minerals to the leaves using these tubes. Thereafter becoming what we call the xylem vessels.

As the concentrated liquid falls towards the ground, minerals are locked away as timber, while the mineral laden liquid arriving at the roots is inevitably re-diluted by the dilute solution drawn from the soil. The imbalance in the liquid is corrected as it becomes lighter or less dense than the downward flowing sap and begins its journey back to the leaves, where the process continues, providing the tree with a constant supply of water and nutrients.

In the autumn, when the leaves have fallen, the circulation is altered as a greater positive pressure is exerted towards the roots, because transpiration has ceased and therefore fluids flowing towards the top of the tree would be compromised. At this time of the year root growth would be most productive.

As fluid channels begin to offer resistance, the sap must find alternative routes. The new directions may be vertical or horizontal, but always in the path of least resistance. Eventually tubes become redundant and new tubes are formed. Fluids of different specific gravity have been observed to flow in both directions, simultaneously while in the same tube. In fact this 'transpiring gravitational flow system' is able to operate without tubes and has been attributed to causing the oceans to circulate (Atlantic conveyor system).

## **Early attempts at lifting water**

The story goes that the reigning Grand Duke of Tuscany had ordered a well to be dug to supply the ducal palace with water. The workmen came upon water at a depth of 40 feet, and the next step was to pump it up. A vacuum lift pump was erected over the well, and a pipe let down to the water, but the water was found to rise to a height of 33 feet and no more, in spite of the most careful overhauling of the pump mechanism. It was at this stage that Galileo was consulted. While the famous philosopher was unable to offer a solution, he at least indicated the problem. Here above the 33 feet of water was seven feet of vacuum. The limit for raising water by suction in a tube appeared to be thirty-three feet.

Why should there be this limit when trees are observed to ignore it?

By introducing a loop of tubing, instead of a single tube, to simulate the internal structure of plants and trees, and suspending it by the centre, the problem of raising water above the 33 feet limit is solved. The reason a loop of tubing succeeds where a single tube fails is because the cohesive bond of water molecules is far stronger than the adhesive qualities of water observed in Galileo's lift-pump problem. Using a loop of tubing enables water molecules to bond to each other in an unbroken chain. It helps to picture the unbroken loop of water as a cord instead of a liquid, supported by a pulley in the centre with tension applied to both ends.

The columns of water held in both sides of the tube exert a downward force due to the weight of the water contained in the tube. This force causes the water molecules in the tube to be stretched, causing the water to behave like an elastic band. In order to demonstrate this affect on water molecules I repeated the experiment shown in figure 1 without the added saline solution, the two open ends of the tube at ground level were removed from the demijohns, exposing them to the air.

Though the tube contained water, it did not flow from either side of the tube. In fact the opposite effect was observed; the water level in both sides of the tube immediately rose to a new level about half a metre from the ends of the tube. Even more surprising the water columns stayed there suspended by the cohesion between the water molecules.

In order to try to upset the balance I then blew up one side of the tube, causing the water level on that side to rise. I then released the pressure and the water returned to the same equal level. This observation offers an exciting explanation to the problem of explaining why water does not pour from the wound when a tree is felled.

However, the present laws of physics state that water cannot exist in its liquid form below 4.6 torr, yet the water remains in the tube. Only when the tube is lowered, or if a bubble appears at the top of the loop of tubing does the water flow out from the open ends.

## **THE BRIXHAM CLIFF EXPERIMENT**

***This experiment successfully demonstrated fluid transport to a height, which exceeds the current accepted limit of 10 metres and how this applies to the way that trees draw water to their leaves.***

### **Apparatus**

48 metre single length of clear nylon tubing, 6.35 mm inside diameter x 9.5 mm outside diameter (type used to draw ales in the brewery trade), two clear glass

demijohns, a large tray, 50 mls of concentrated salt solution with added red food dye, 50ml syringe minus the needle, sufficient degassed or previously boiled and cooled water to fill the tubing, the demijohns, and for adequate top ups. Adequate nylon cord to hoist the tubing and pulley to the desired height, a small pulley and adhesive cello-tape.

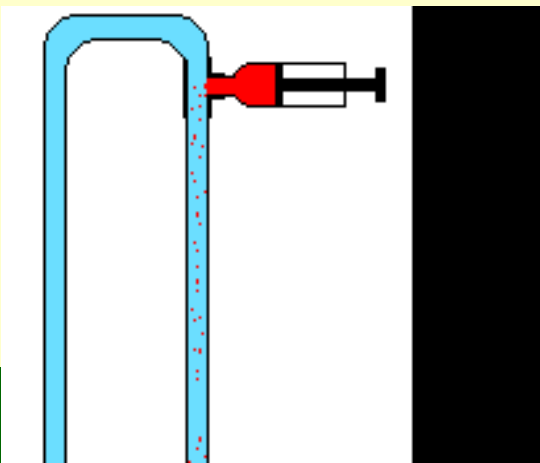
## Method

The two demijohns were filled to the brim with the water and placed in a suitable tray to catch any displaced water. The length of tubing was half filled with the water by siphoning. This was achieved by submerging one end of the tube in the water filled demijohn placed on a table. When the water reached the centre of the loop, the open end of the tube was capped with a thumb. The end of the tube in the demijohn was removed and the 50 mls of coloured salt water was introduced via the large syringe. The demijohn was then re-filled to the brim and the tube was re-submerged, making sure that no bubbles were introduced by adjusting the height of the unfilled side of the tube. By removing the thumb, the remaining length of tube was filled and again capped, making sure that no air was trapped inside the tube. At this point the demijohns were, refilled. The capped end of the tube was then inserted into the other water filled demijohn and both ends secured at an equal level, with cello-tape, again making sure that no air was allowed to enter the tube.

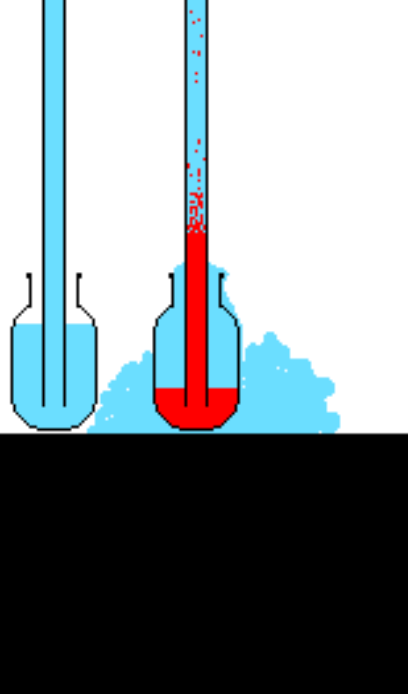
A length of the nylon cord equal to that of the length of tubing used was passed through the pulley, provided a safe ground level means to hoist the loop of tubing to the desired height. The pulley and the main nylon cord was hoisted to the desired height and secured at the top of the cliff on a separate length of cord. Adhesive cello-tape was wrapped heavily around the two sides of the loop of tubing 15cm from its centre to secure one knotted end of the main nylon cord, which ran through the pulley for the purpose of lifting the tube, taking care not to reduce the tubes diameter. The cello-tape was used to bind the cord to the tube.

Coloured insulation tape was used to secure both sides of the tube together providing an excellent ascent measurement when placed at one-metre intervals.

## The Brixham Cliff Experiment



The centre of the tube was then gently hoisted, taking care to keep the ascent as smooth as possible. As the tube was raised the salt solution began to fall, due to the influence of gravity; this caused one of the demijohns to start overflowing indicating a positive pressure, while the second demijohn began to lose water at the same rate indicating a negative pressure. The emptying



demijohn received frequent top ups, until the salt solution arrived at the overflowing demijohn and the flow stopped.

## Conclusion

The fifty mls of salt solution caused the water in the tubes to circulate. The amount of water displaced and collected in the tray represents approximately the volume of water held in one side of the tube. Which meant that the fifty mls of salt solution had lifted water from one demijohn to the height of 24 metres and caused water many times its own weight and volume to rise. *(I have used as little as 10 mls of coloured salt solution in the*

*same experiment with a slower rate of decent but with similar displacements of water).* Initially the experiments were tested at lower levels of elevation. 24 metres vertical lift was achieved when demonstrating the phenomenon before an audience of journalists and Forestry Commission scientists at the Overgang cliff, Brixham, July 1995.

## Bench demonstration (pictured above)

For the purpose of demonstrating this phenomenon use a scaled down two metre high version of Fig 1. Substituting the demijohns for small narrow necked bottles. The type of tubing used to oxygenate aquariums is ideal for this purpose. A two-mil syringe minus needle, filled with coloured salt solution, connected to a T piece via a short length of tube, may be added close to the centre of the elevated tube to introduce salt solution intermittently while the tube is elevated, providing multiple demonstrations. Furthermore, the tube used in the salt free side of the experiment, (return side), may be of a larger bore size. Soft wall, silicon tubing shows visible signs of distortion when the saline solution is allowed to flow through it. The side containing the saline solution expands while the other side contracts, again indicating the presence of both positive and negative, pressures.

The experiments shown have been repeated using a variety of substitutes for salt solution, such as strong tea solution, fruit juices and milk etc. in order to relate directly to plants and animals. The flow rates achieved using different solutions, produced different rates of flow.

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## **Umbrella Plant Experiment, (*Cyperus alternifolium*)**

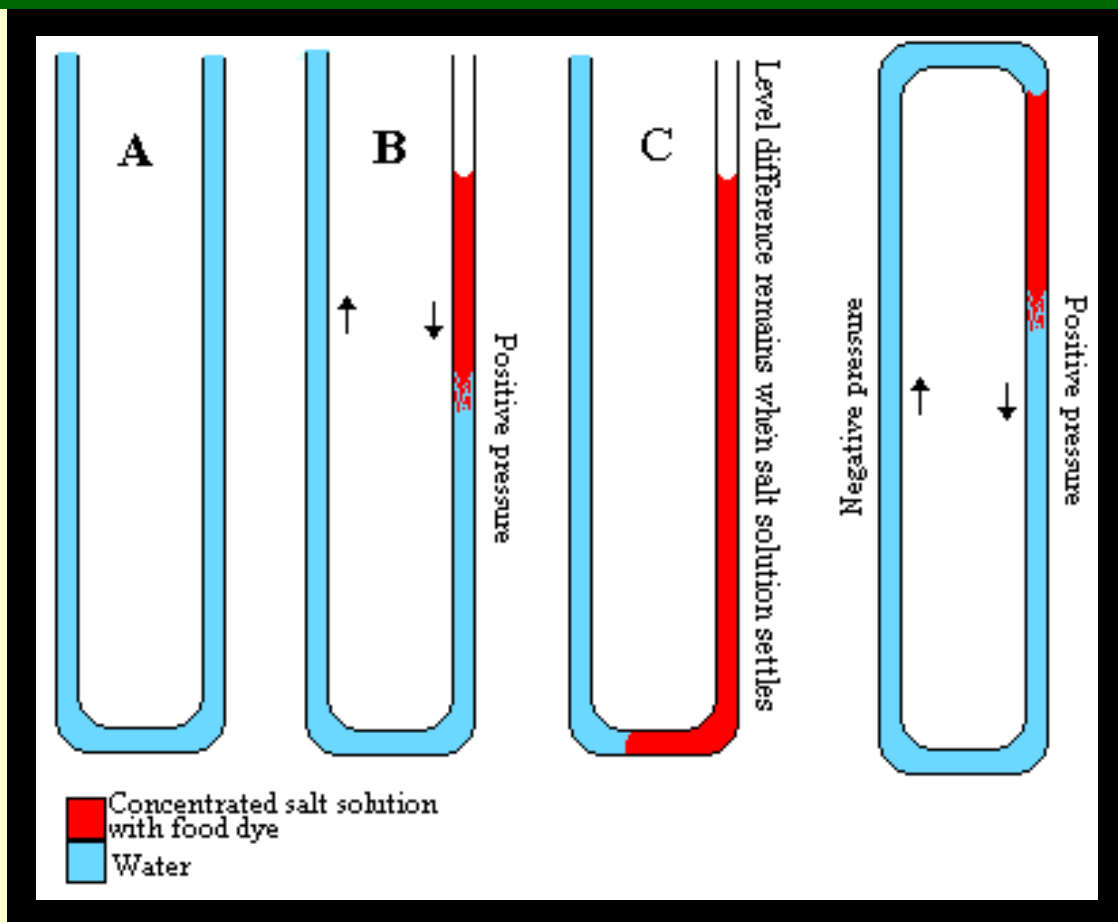
In order to demonstrate that liquids of higher concentrations move through plants in relation to the constant pull of gravity. Take a freshly cut stem about 15cm long, with leaves intact, from an umbrella plant. Place the cutting upside down, in a glass container of water. After several weeks the umbrella plant starts to grow roots from what was the top of the plant and new stems are produced, as the shoots grow vertically in the normal way. The liquid processes involved within the plant for both root and leaf production, must have travelled from one end of the cut stem to the other. Indicating that gravity has an important influence.

When relating back to trees, the negative pressure, observed in the demijohn with the falling water level, provides us with a clear understanding of the mechanisms involved in drawing water through the roots from the soil. The positive pressures caused by the weight of the column of water held in the tree, plus the additional influence of gravity acting on the concentrated solutions, induced by the loss of moisture at the leaf, provides the roots with sufficient power to penetrate the earth.

### **Explanation for fluid exuding from a cut stem.**

To demonstrate this effect, fill a vertically held open ended u tube with water, Fig 2A, and add a little coloured concentrated salt solution to one side, Fig 2B, the level of the salt solution will drop causing the opposite side to overflow. Imagine the loop of tubing is one of many tubes in the stem of a freshly cut plant or tree with roots in the soil. The overflowing water represents the xylem sap rising under the influence of the positive pressure, generated by gravity acting upon the concentrated sap in the phloem tube.

This is an important observation that gives a clear understanding of why plants and trees continue to grow upwards.



Little or no cross contamination takes place between liquids in the clean-water-side and the coloured saline side of the tube. Fig 2 C, I have left this experiment suspended for five days and it appears to remain stable. Circulation within an enclosed system, Fig 3, eliminates siphon as an explanation, demonstrating that flow occurs inside and would continue to do so if the tube was pressurised.

The thin columns of water in trees are known to brake, making a cracking sound through a stethoscope. Cavitation occurs immediately the bead of water separates. The formation of gas at the uppermost part of the raised loop of tubing, Fig 1, caused both columns of water to fall towards the ground and form a new level of 33 feet. The space above the water columns is a vacuum.

The circulation in trees continues, despite continuous cavitations, which means that they are able to refill or repair the vacuum. The internal part of a tree is a network of veins, or tubes, most of which run vertically. However some tubes run at an angle and some horizontally and provide links to other tubes, which interconnect at random levels. The internal tubular parts of the tree are themselves captivated inside a large tube, which is of course the bark or outer skin.

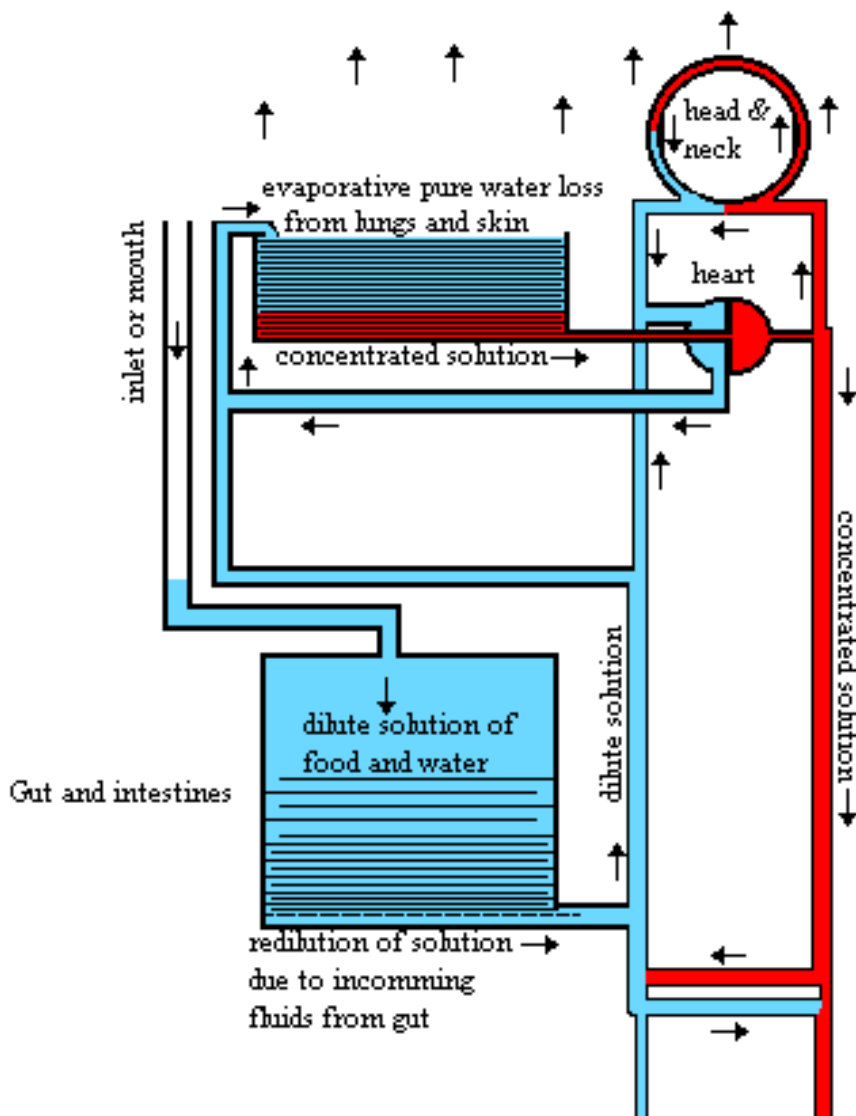
Water columns within the internal tubes of a tree, are continually stressed under a negative pressure, caused by downward flowing concentrated solutions within the trunk and branches. Cavitation occurs because the long thin columns of water are pulled apart. Immediately the cavitation forms, the internal pressures of that tube

switch from a negative pressure to a positive pressure, forcing the more dilute solution in the opposing side of adjoined tubes upwards, Fig 2.B. & Fig 2 C. The downward force causes an increase in the head of water at the top of the tube. It is this increase in the head of water that gives a tree both momentum and direction to follow in its cyclical growth. Furthermore an increase in the positive pressure above the cavitation refills and repairs the vacuum, therefore enabling the tree to continue with water transport, and allowing gas bubbles to percolate upwards and out through the leaves.

This ability of the tree to switch from positive pressure to negative pressure and visa-versa gives us an understanding of the pressures observed in the roots of the tree. The roots being able to drive down through the earth under a positive pressure and expanding forces yet are still able to suck in water under a negative pressure.

**END**

## A simple thought experiment



This thought experiment is designed to clarify the direction and momentum of fluids as they are pulled and pushed through the body by the magnetic or attractive force of gravity.

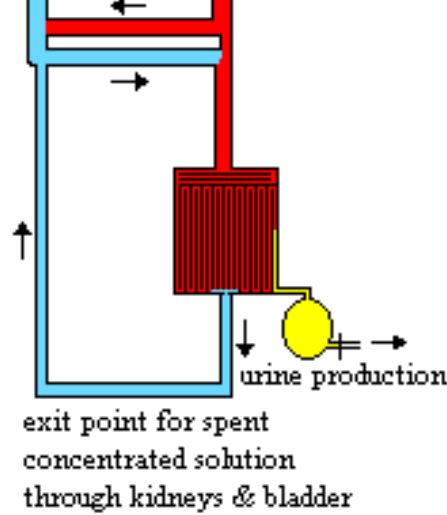
Red represents both high levels of oxygen and concentrated solutions caused by the loss of moisture during the evaporative processes which occur in bodily functions. The alterations in specific gravity

due to incoming fluids from gut



high oxygen content

low oxygen content



which occur in the fluids close to the surface lining of the lungs, respiratory tract and skin, could well be responsible for providing the dissolved oxygen, which we require, with sufficient

force to enter the circulatory system.

Blue represents both low oxygen and a reduction in specific gravity, due to the loss of spent salts in the excreted urine, which is shown as yellow in the drawing. The increase in more dilute fluids from the stomach and intestines, is also anaerobic (containing no oxygen) producing methane as a by-product. Therefore the liquids entering the system from our diet would contain no oxygen, which would undoubtedly cause any blood which passes through to show a significant reduction in oxygen.

Now apply the principles of pressures generated by the tiny pulses of concentrated solutions as they travel through the various tubes of the thought diagram. Personally I find that this simple drawing helps to keep my mind focused sharply on the holistic processes involved in all living things, be they plants or people. Strangely enough there is a similar drawing in most physiology books, which shows the direction of the circulatory system. Judge for yourself by looking at both drawings which way the fluid's flow and how they are driven. As I have said earlier the only way to gain a good understanding of science is to form your own opinions, based on all the evidence you can lay your hands on. If for instance you see an experiment in a paper or a textbook, including this one, providing the experiment is not going to cost you a fortune, set it up. But then you must also try to find an alternative explanation for the processes that you witness.

Urine for instance was used to determine whether fluid transport could be taking place in humans and animals, In a similar process. For example respiration causes water to evaporate from the lungs and respiratory tract. Fluids remaining in the body contain minerals and must therefore be concentrated. Gravity causes the heavy solution to be drawn back through the lining of the lungs and respiratory tract and down through the vessels in the body, carrying dissolved oxygen with it.

Concentrated solutions arrive at the bladder via the kidneys where they are excreted in the urine. However the kidneys are not 100% efficient and some minerals arrive in the lowest anatomical extremities, solidifying as finger and toenails or horses hooves etc. Clippings of which sink when dropped into water.

*Andrew K Fletcher*



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# The Importance of Gravity to our Health and Wellbeing, and its Relation to Rest & Sleep.



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*by Andrew K. Fletcher*

The most powerful force known to man is gravity. A force, that cements all planets to an invisible grid. A force which, here on earth, raised mountains, carved out valleys, hurls molten rock into the air and drives the world's weather and ocean currents. In fact, the very force that shapes everything we are or will ever see. From the time we stand up to take our first steps as children, we sense our correct posture and align ourselves for optimum performance. By standing on our own two feet, we are not struggling to overcome gravity as is currently accepted. In fact we stood up as a species in order to harness and bathe in the earth's gravitational force.

Once this simple and hitherto overlooked concept is accepted, it becomes enlightening to understand how we, the most intelligent of all the species here on earth stand warm blooded and vertical, as opposed to cold blooded reptiles which do not! Yet, in our wisdom we have chosen to ignore the very force that powers all our vital functions when we sleep.

In the last two hundred years or so we have made many advances in science and medicine, We have poured countless £ billions into research and yet answers to debilitating medical conditions which cause untold suffering and premature deaths continue to remain life's unsolved mysteries. Children continue to slip quietly away before they have managed to take a single step. The average life expectancy has remained relatively the same: Three score years and ten or seventy years. Why has this figure failed to change significantly along with the advances in science and medicine? What common denominator does each and every one of us share as we sleep safely tucked up in bed?

Ever since the human race began, people have striven to make life more comfortable and nowhere is this more apparent than in the sleeping quarters of people around the world. Yet, in our endeavours for comfort we have never questioned the angle at which we lay down to sleep? Until now! The rhythms of nature, like the ocean tides, are irrefutably linked to the influences of the Sun, Moon and Earth's gravitational force. It is no coincidence that animals and plants' synchronise the birth of their offspring. Yet, each of us chooses to ignore the power of gravity every night as we lay in our flat bed. How safe is sleep in this position? How can it affect our health and wellbeing?

Baboons and other primate's sleep in anything but a horizontal position in the

branches of trees in order to avoid predators. Cattle and sheep, when given a choice all sleep facing uphill. Birds sleep standing in an upright position, Emperor penguins, for instance, are able to withstand the harsh conditions of Antarctica's winter as they huddle together in an upright posture for several months without food, while awaiting the return of their spouse's. The eggs, which they incubate, are maintained at a temperature near to that of our own body temperature. Clearly then the metabolic rate that maintains our own and every other creatures body temperature is linked, in some way, to the force of gravity, but how?

### **How my work began**

In 1991 I picked up a GCSE Biology book from a Boot-sale. At this time I had no idea where this simple act of interest was going to lead me. I acquired the book to try to find an answer to a question, which was bugging me. That question was simply to understand how trees made use of mineral salts from the soil.

The reason for arriving at this question is very complicated. Brief explanation; I was involved in a plan to irrigate deserts with wastewater or sewage. "OASIS IRRIGATION PROJECT". In desert climates, high evaporation of irrigation water causes a build up of salts at the soil surface. Except where trees are present. Obviously trees are utilising the salts and storing them within the main structure of the tree. This was an intriguing little puzzle, because not only are trees able to lift water to the leaves, they are able to lift minerals from the soil water. But search as I may in my GCSE biology book to find a reasonable answer I found only an incredibly inadequate explanation of fluid transport, which made about as much sense as war and famine. I still find it hard to believe that medicine and science exists on such shaky foundations as Osmosis? Capillary action? Root Pressure?

### **The Birth of A New Theory.**

Within twenty minutes I had discovered what is undoubtedly the most far-reaching single scientific breakthrough of all time. My first reaction to this discovery was "surely It could not possibly be this simple". However following a considerable amount of study I began to realise the significance of what I had discovered and could not find any reference to this phenomenon in any science or medical book.

Einstein, when asked, shortly before he died, if there was anything he had left undone? Replied "All my life I have strove to gain but a glimpse of the order of Nature".

A tree loses over ninety five per cent of the water that it draws from the soil into the atmosphere via its leaves. In doing so the water is processed by evaporation at the leaf where dissolved salts from the soil and sugars produced at the leaf are retained and concentrated, while pure water escapes as vapour. This retained liquid, once exposed to the atmosphere during transpiration, absorbs dissolved oxygen, which the

tree needs in order to produce further growth. (A similar process is evident in the lungs of mammals.) Any concentration of minerals suspended in water results in the production of heavier water. Heavy liquids produced in the uppermost parts of the tree must fall towards the roots because of the affect of gravity. But, for every action there must also be a reaction, and the reaction is that any downward flowing pulses of heavy mineral laden sap, will cause a far greater volume of a lighter, dilute solution, in adjoining tubes, to be lifted. Visualise the downward flowing sap as a liquid plunger. (Similar processes are evident in mammals)

Furthermore, the internal pressures in the tree are altered by the downward flowing sap, which generates the positive pressure in front of the concentrated flow (phloem). While the negative pressure follows the flow in the return tubes or the (xylem), Which explains how water is sucked into the tree under a negative pressure and how roots are driven into the ground under positive pressures. Consider the roots and trunk as a continually extending sump and disposal site for the heavy downward flowing solutions. Some of which are used in the continuous cycle of growth, while any remaining heavy liquids which reach the roots are re-diluted by incoming water and flow back to the leaves having become lighter, drawn up by downward flowing concentrated solutions in a continual cycle. (Positive and negative pressures are also evident in mammals.)

### **The Brixham Cliff Experiments**

In order to demonstrate and to prove this theory. I caused water to flow vertically, up to 24 meters, or, seventy-eight feet, in an experiment at the cliffs of Brixham's Overgang car park, near the Zeneca Laboratory, before Forestry Commission Scientists and the local press. According to the established laws of physics, water while inside a tube is unable to be drawn by suction, higher than 10 metres or 33 feet. I achieved this using a single length of stiff nylon tube with both ends open and submerged in two glass demijohns, which remained at ground level. The whole apparatus was filled with degassed water. 25ml of concentrated coloured salt water was added to the centre of the tube, before the centre of the tube was raised up the cliff and formed a giant loop. Which resulted in the salt water in one side of the loop of tubing flowing down, under the influence of gravity into one demijohn, which overflowed, causing the salt free water to be drawn up from the other demijohn in which the water level went down.

All animals, including humans, as do the trees and plants, release water into the surrounding environment. We, for instance, breath out moisture with every breath and shed water vapour in a continual, invisible stream from our skin. However, unlike the trees, we have to eject the salts and minerals when they have completed the circuit, the heavy liquids collect in the bladder via the kidneys, where they are excreted in the urine. Several experiments were performed with urine to see if sufficient weight was present to activate three working models; the tests all proved positive.

Further tests on the specific gravity of urine in relation to posture also back up this research. For example, while resting on a five-degree head down tilt to the horizontal, the specific gravity of urine decreased to a zero reading overnight, while a five degree head up tilt stabilised the specific gravity overnight. Which, at the very least, shows that salts and minerals do arrive in the bladder, via the kidney, due to the affect of gravity on concentrated solutions. During these experiments I monitored the heart and respiration rate of my wife, our two teenage sons, and our three bull terriers, randomly, over several weeks. Measurements were taken while they slept both horizontally and in the inclined position. Over several weeks, it was constantly observed that in all cases the heart rate decreased by around ten beats per minute during inclined sleep, and the respiration rate decreased by four to five breaths per minute when compared to horizontal sleep. These measurements were later repeated and electronically confirmed by a nurse working in the Operation Recovery Room of Derriford Hospital, Plymouth. Yet the circulation and metabolism in all cases was higher in the "inclined" sleep than the horizontal or traditional sleep.

Having very carefully examined the established views on human physiology, my theory has consistently fitted with direction of flow in all of our bodily fluids. It gives us a clear understanding of Starlings Law of the Heart. (Increased venous return, or more blood flowing back under increased force).

## **Humidity**

Humidity was found to be a very important factor in determining the speed at which the inclined sleep therapy works, as any increase in humidity impairs our ability to shed water as vapour. Those people living in a low lying coastal or river valley area, found a dehumidifier very helpful, needing to use it for only two or three hours in the bedroom prior to retiring. A simple solution In order to prove that this simple flow system is in fact a vital part of us. Several volunteers took part in a primary trial and slept with their heads higher than their feet by raising the head end of their beds six inches or fifteen centimetres. With a six foot long bed this produced an angle of five degrees to the horizontal. © Feb1998

All who took part, experienced benefits, some being almost beyond belief. Several people have shown that it is possible to reverse damage to the central and peripheral nervous system, including complete spinal cord injuries and nerve damage caused in chronic progressive multiple sclerosis, including damage to the optic nerve. Varicose veins, leg ulcers, oedema, arthritic conditions, lethargy, muscle wastage (atrophy) and osteoporosis have all responded well to this therapy. However time scales in each case are different. Some respond in four weeks while others may take four months or more. An improved resistance to infection has been observed and I am hoping that this will enable people suffering from immune deficiency disorders to achieve a stronger resistance to seasonal viruses and bacteriological infectious organisms.

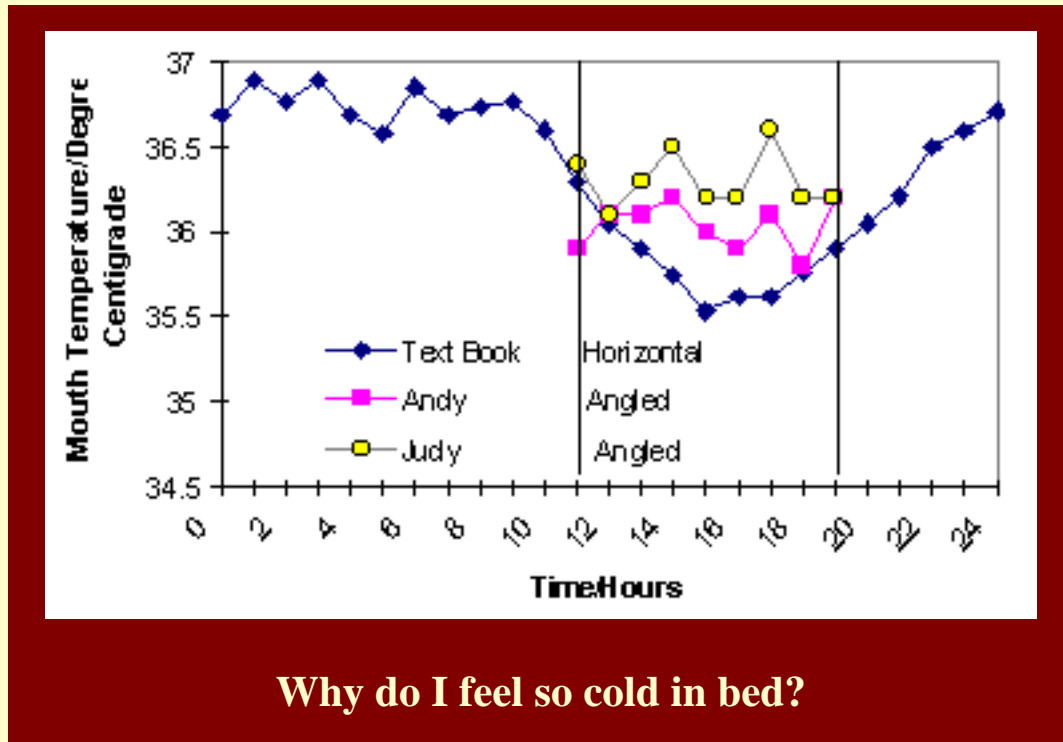
## **Results from Experience**

Since the primary trial, many positive benefits have been achieved using this simple modification to the way that we sleep and sit. It is interesting to note that, during the first few weeks, the body has to adapt to the new sleeping position.

We found that the first week or so feels a little strange and some people experience a slight ache in the spine, that appears to move upwards into the neck, causing a slight stiffening; however, this soon disappears and seems to be a threshold that needs to be passed before the full benefits of this therapy are experienced.

Several participants, including myself, have reported a slight increase in height, suggesting the spine is adopting a more upright posture and is probably due to a gentle easing or stretching in the spine. Muscular aches have been reported and are attributed to an apparent increase in muscular growth and firmness.

Some of the people on the trial, who had previously experienced restlessness during the night, found, during the first few weeks of sleeping on a 5 degree incline, they had a tendency to move down the bed. To give support they put the foot end of the bed against the wall. Many mattresses were found to cause problems due to slippery nylon materials used in their construction and where nylon sheets were placed on the mattress. Another way support was achieved was by placing a duvet under the bottom sheet, until a more relaxed sleep pattern was experienced.



**Why do I feel so cold in bed?**

### **Metabolism and Circulation**

Many who have taken part in this study so far have noticed that they feel warmer in

bed. People who have had cold feet in bed no longer complain of this problem, and many find that they produce less urine during the night, resulting with less frequent visits to the bathroom. This suggests that both metabolism and circulation has increased and, along with it, evaporation from the skin and breath. In order to test this, my wife and I measured our mouth temperature every hour throughout the night.

## **Birth of a New Bed**

The inclined sleep therapy concept is now incorporated in a top quality bed, with a foot board built in, which is available under the name of Naturesway Sleep System, and is under application for a patent. The incline is built into the bed and takes away the risks that are inherent in raising a flat bed, which are:

1. The difficulty of cleaning. 2. The lack of built in stability. 3. The stress put on beds designed for a horizontal position can break. 4. Mattresses can slip off the base of the bed. 5. Mattresses are covered with a slippery material (The Naturesway mattress is covered in a slip resistant fabric to address this problem).

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[http://www.iop.org/IOP/Groups/ME/Archive/newsletter\\_6.html](http://www.iop.org/IOP/Groups/ME/Archive/newsletter_6.html)

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