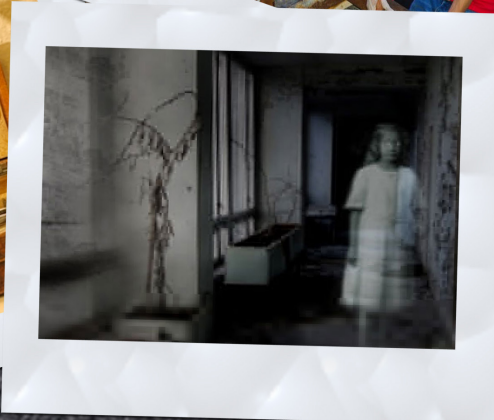


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SPHYGMO 2014

# *Sphygmo Is...*

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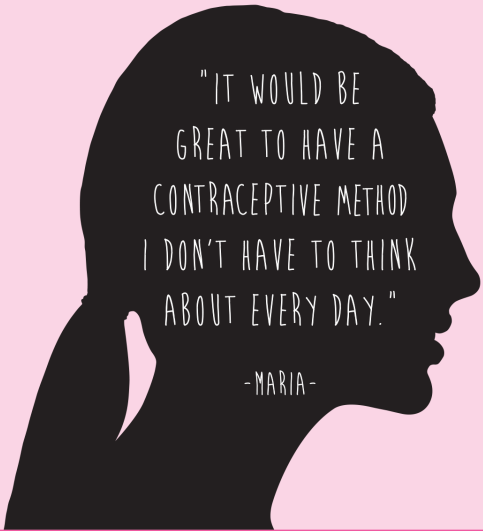
# *A Word From The Editors...*

Sphygmo is the magazine to read for fun, between studying studying from your lecturer's slides and going through a 1000+ page medical book. This year our aim was to fill it with some interesting facts that are medically related. We want to spook you with scary hospitals, make you laugh with some remedies and touch your hearts with some voluntary work. A lot of hard work is involved in this magazine, and so we appreciate your feedback a lot. As blood pressures may start to rise with the stress of exams, don't worry, just grab a Sphygmo. No, of course not to see how hypertensive you are.... just to relax, and read something you like!

While keeping our goal that of keeping this magazine light and fun to read, we also wanted to share some awesome facts and target different aspects of life. We wish to take the opportunity to thank you for reading this edition of Sphygmo and we invite you to read previous releases of Sphygmo plus other publications released by MMSA by visiting our ISSUU page. Enjoy!

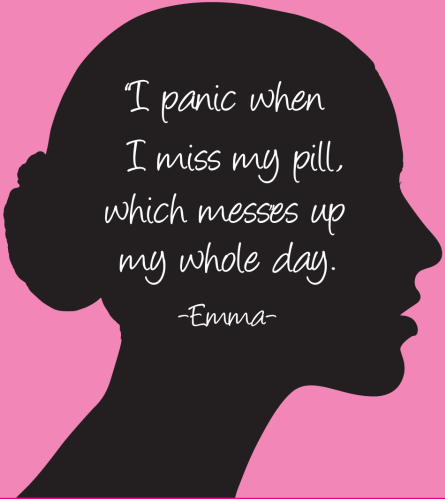
Editors - Leonard Callus and Melise Mifsud.





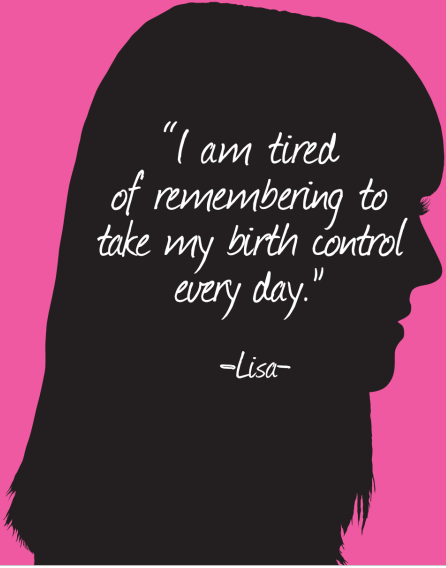
"IT WOULD BE  
GREAT TO HAVE A  
CONTRACEPTIVE METHOD  
I DON'T HAVE TO THINK  
ABOUT EVERY DAY."

-MARIA-



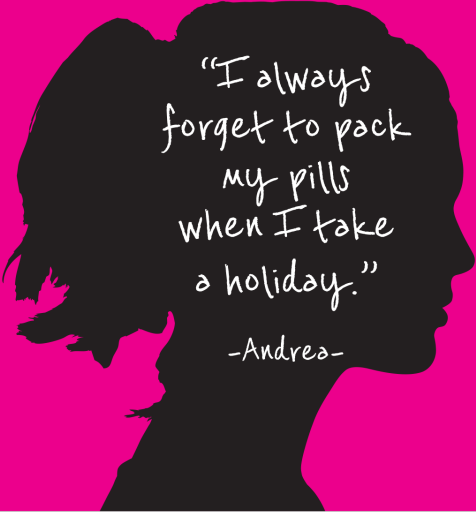
I panic when  
I miss my pill,  
which messes up  
my whole day.

-Emma-



"I am tired  
of remembering to  
take my birth control  
every day."

-Lisa-



"I always  
forget to pack  
my pills  
when I take  
a holiday."

-Andrea-

Daily pills may not always be the right solution for your contraceptive needs.

Ask your doctor for more information about the **new, non daily, long acting** and **reversible** intrauterine contraceptive system.



Bayer HealthCare

# Haunted Hospitals

by Melise Mifsud

All of us medical students will end up working in a hospital. But did we ever wonder if we will ever work in a hospital as creepy or scary as one of these ?

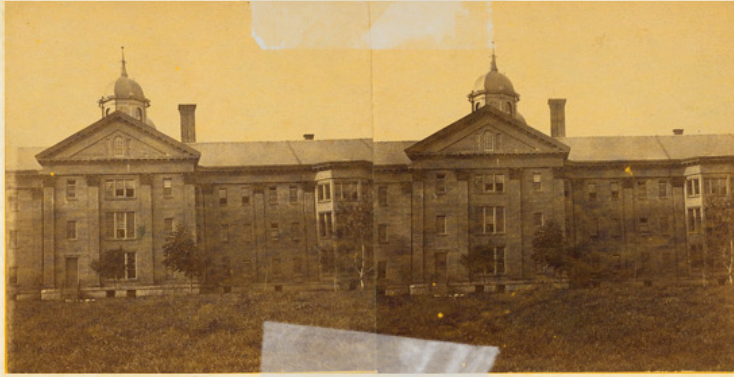


**High Street Ghost House-** Right in Hong Kong, this was what a mental hospital was known as. Many have reported supernatural tales or claimed that they have heard the sounds of a woman crying. In Sai Ying Pun (the actual name of the hospital), you could have also heard mysterious footsteps, or who knows, you could have met the man on the second floor. Who's this man, you ask ? No one knows, it is only known that he used to burst into flames. Creepy, no?

**Nocton Hall-** From Hong Kong, we go to England. Nocton Hall was used as a military hospital, both in World War 1 and World War 2. So of course, this hospital would have seen many soldiers who were injured at war. So how come was a young girl seen in this hospital? Many have claimed to see her crying at half past four in the morning a particular bedroom. According to this tale, this young girl was a servant that was raped and murdered by Nocton Hall's owners' son before this hall became a hospital.



**Beechworth** or as it was known Mayday Hills Lunatic Asylum- Mysterious deaths and disappearances surround this hospital. The laboratory was filled with shelves containing several body parts. A superintendent also used to believe that the moon caused insanity and thus would only go out during the night with an umbrella. Whats more mysterious is the death of a young girl who was thrown from a window.... her case remains unsolved.



**Taunton State Hospital-** Served as a psychiatric hospital, and also housed serial killers. Jane Toppan had confessed to murdering 31 people while working there as a nurse. Doctors and nurses used to take patients to the basement in order to carry out satanic rituals. Many years later, people claim they feel uneasy when approaching the door and many have claimed to see a shadow of a man along the hospital walls.



**Athens Mental Hospital-** A mystery, that one can count as quite scary, surrounds this hospital. For a period of time, it was used as a hospital for the insane. It was known for curing violent criminals. No one knew anything about the patients, everything was kept in strict confidence. In order to get to know something about the patients, you needed permission from the state of Ohio. There are almost 2000 people buried, but not a single name is found, every headstone is marked only by a number. As if the nameless headstones are not mysterious enough, something creepier had to happen in this hospital. A patient went missing and her body was not found until a year later in an abandoned ward. If you happened to go to this hospital in Ohio, make sure to look for the stain on the floor, which has been there for more than 30 years; and yes, this stain denotes the place where the corpse of this female patient was found!

# Doctors of Horror

by Julia Shaaban

*In an age where doctors were considered next to God, held up at the pinnacle of moral behaviour, whose word was considered the gold standard of medical practice... There are a select few who threaten to ruin the reputation of the profession.*

**Dr Hawley Harvey Crippen** was a criminal, and an unsavoury one at that. Hanged as a murderer at Pentonville Prison, London, Dr. Crippen was born in Michigan, USA 1862, a man of small stature, mild and well mannered. Trained in homeopathy originally, he travelled to the UK in his early twenties to train as an eye and ear doctor. He married a Polish/Russian woman who went by a pseudonym, Cora Turner (née Kunigunde Mackamotzki), an aspiring music hall singer. She was loud, overbearing and a control freak, who made no secret of her numerous extra marital affairs. In 1897, Crippen moved to London with his wife, working to treat the deaf, and fell for an attractive typist called Ethel Le Neve. In 1905, they moved again, this time to a northern district of London, and one day came home to find Cora in bed with one of his lodgers. An affair between Le Neve and Crippen ensued.

Feb 1st 1910, Cora disappeared. Crippen claimed she had gone back to America and had died there. But, Cora's friends suspected something amiss. After police investigation and searching of the house, Crippen and Le Neve got scared and fled to Brussels. Cora's body was found underneath the house in the coal cellar wrapped in Crippen's pyjamas. The body had been dismembered with no head, limbs, bones, genitals and traces of hyoscine that Crippen used to poison her, remaining. The trial revealed his thorough approach as to how he disposed of his wife's body; the skeleton and limbs were removed and incinerated on the kitchen stove. The organs were dissolved in acid in the bath, and her head placed in a handbag and thrown overboard when Crippen was on a daytrip to Dieppe, France.

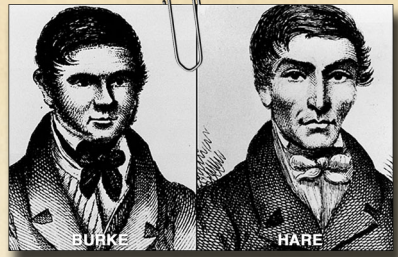
Upon arrival in Canada, then under British rule, having left Antwerp with Le Neve dressed as a teenage boy, they were apprehended by police from Scotland Yard following a tip off from the ship's captain, Captain Henry George Kendall. Had he sailed back to his home country, the US, he may very well have escaped being arrested upon arrival in the harbour. Sailing to Canada could have been his undoing. The motives for the murder were never really confirmed, but hyoscine at the time was used as an aphrodisiac or depressant. It has been postulated that he gave her an overdose and panicked when she died.

At the Old Bailey, he was tried and found guilty. Despite trying to claim that he didn't know about the body, a pathologist, Bernard Spilsbury, confirmed that a scar corresponded to an operation for an oophorectomy Cora previously had. This was used to demolish his claim of ignorance. He did manage to convince the jury of Ethel's innocence and so she was acquitted. There have since been disputes as to whether he did kill his wife or not; there is the issue of accidental overdose. It does seem odd that a man who so meticulously and carefully disposed of certain parts of her and then left the torso buried in the cellar of his home, and press reports from the time don't rule out any further murders. There are some that have supposedly found evidence that Cora wasn't the mysterious body buried in the cellar. Mitochondrial tests showed that the haplotype didn't match those who claimed to be her distant relatives. Some scientists even claimed to have determined the body to be male. The conviction relied solely on the presence of a scar, which was found to have hair follicles. The defense at the time used this fact in court. He was hanged at the age of 48 yrs, 9 am November 23rd 1910. He went to the gallows seemingly quite calm, smiling as the cap was put on his head. He died instantly on the gallows and was buried in the prison graveyard.



*Perhaps a more famous pairing were the Scottish murderers Burke and Hare.*

William Burke and William Hare were found to be responsible for some of the worst murder cases in Scottish history. Sixteen people were killed over the course of 12 months, in the West Port district of Old Town, Scotland.



They were reported to the police by two of Burke's lodgers who went to the police after having discovered the dead body of visitor Madgy Doherty, under a bed.

Burke was Irish, married with a family. He came to Scotland as a 'navvy' or navigational engineer in 1817. He met Helen M'Dougal and lived with her for many years. He eventually became a shoe maker. The evidence against Helen was less convincing than that of her husband. She was reported to have believed Burke to be a grave robber, a slightly less sinister way of obtaining bodies, albeit illegal. Commentators, do however believe she was complicit in some way.

Hare also was a navvy around the same time, and married a widow, Margaret Hare, who had acquired a lodger's house upon death from her husband. She was later found to be involved and knew about these murders. They met when Burke became a lodger at Hare's house, using fellow lodgers as their next victims, before moving onto more vulnerable people that they enticed from the streets. They even had a trademark method of killing by suffocation, later called 'Burking'.

Dr Robert Knox was a member of the Royal College of Surgeons, Edinburgh. He purchased 17 bodies from Burke and Hare, and did so on a 'don't ask don't tell' basis. There was no evidence that any forensics team could gather, as the victims were suffocated. It seems odd that such a well respected surgeon would not notice the difference between a cold, stiff cadaver from the ground and a fresh body just killed, not to mention the number of bodies procured in that fashion in such a short space of time. Knox was widely thought to be complicit and was labelled as a butcher, destroying his reputation.

Knox was an anatomical researcher, and to fulfil his dreams of a professorship, had to compete with his rivals. That's when Burke and Hare came a-knocking with fresher bodies than those being imported from illegal body snatchers elsewhere in Scotland.

Initially, the body of a lodger that had died of natural causes was sold for a high price, £8-10 and with relative ease. Once they knew they had a nifty way of realising a lot of cash, they started to murder. From January to October 1828, three men, twelve women and one child were killed. Three murders were notable, Mary Paterson, who was thought to be a prostitute and a local beauty, James Wilson who was well known on the streets and Madgy Docherty who was the only body to be examined by the police.

Burke and his lady accomplice Helen M'Dougal were tried for murder, while Hare and his lady accomplice Margaret Hare were granted immunity in return for being witness in favour of the prosecution.

The trial commenced in 1828, highlighting the illegal trade of bodies in Britain. It opened up questions about the ethical standards of medical men at the time for obtaining bodies to practice on as well as the lack of protection of the poor at the time. On the 28th January 1829, Burke was hanged, and then publicly dissected at Edinburgh Medical College. Dr Knox escaped prosecution and later moved to London. It was because of these murders that the Anatomy Act of 1832 was passed to combat trade of corpses and so the numbers of corpses available increased.

# Weird & Scary Medical Inventions

by Stephanie Farrugia

If you think modern medicine is rough, keep reading and see just how far we've come. Below are six medical devices used in the past that are downright creepy and will have you squirming in your seat!

## 1. Stricture Divulsor

A stricture divulsor was used by doctors on male patients to dilate their urethra when it became too narrow to allow proper urine flow. This instrument was inserted through the tip of the penis into the urethra and then, a screw present in the handle of the apparatus was turned, separating the blades and dilating the urethra as much as possible. To make things worse, if blood was seen to flow out during the procedure, it was considered as a good sign. This apparatus can be considered as the torturous version of the catheter.



## 2. Dental Key

Before anesthetic was in use, having a dental extraction was far more horrific than today and this explains why people held off the treatment until they could not bear the pain anymore. The dental key was used to clamp the tooth with its clasped end. Then, by rotating the key on the other end, the tooth was pulled out of the gum from the roots. Oh the pain!



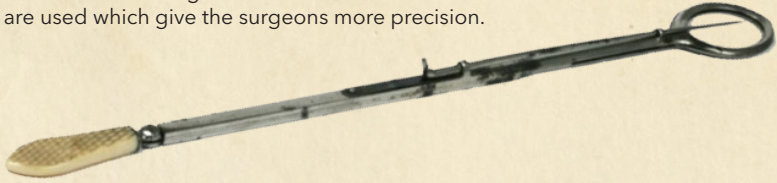
## 3. Spermatorrhoea Ring

In the Victorian ages, masturbation was seen as unhealthy. Therefore in order to discourage sexual pleasure for men, doctors invented this scary looking device. The ring was fitted around the penis and fastened with a screw and each time the man would get sexually aroused the engorgement of the organ would come in contact with the sharp metal spikes, obviously stopping the process. Talk about killing the mood!



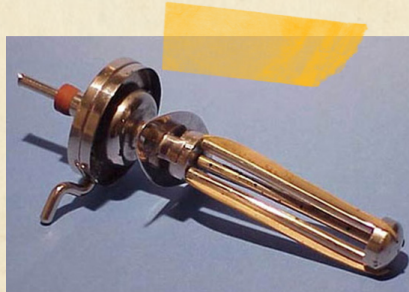
#### 4. Tonsillotome

Also known as the tonsil guillotine, this apparatus was used in tonsillectomy procedures. The loop of the device was placed around the tonsil to be removed and the pointy forks were inserted into the tonsil, holding it in place. Then, the tonsil was cut using guillotine's blade. This procedure led to a lot of bleeding and sometimes did not even remove the whole tonsil. Nowadays, scalpels are used which give the surgeons more precision.



#### 5. Vaginal Washer

If you think men had it bad, with the stricture divulsor and spermatorrhoea ring, this next one will make you think otherwise. The vaginal washer was created to, shockingly enough, cleanse the inside of the vagina. Not only does this device look like an egg beater, but it worked like one too! Basically, it had a water spraying tube on the inside of the device and scrapers on its outside that rotated. Ow!



#### 6. Artificial Leech

Invented in the 19th century, this creepy device was used for blood-letting. The blades were rotated using the handle to cut a wound in the patient's skin. Then, the cylinder would be used to create a vacuum that sucked up the blood. A similar device used later on in the 20th century, the scarifier, had spring loaded blades, and if warmed up, it drew up blood faster.



# Experience in Voluntary Work

by Kyle Citia

**"Peace begins with a smile"** - Mother Theresa: this was the quote chosen for this year's voluntary experience in Barcelona.

This experience was organized by the Zebbug parish priest, Fr Daniel Cardona, where he suggested to do voluntary work with the Sisters of Mother Theresa. This opportunity was open for anyone above the age of 18 and places where one could first serve. The final group was made up of 12 members including myself, coming from various localities.

After the group was finalized, preparations started immediately in February of 2014. First we started to contact the sisters from various cities in Europe; Palermo, Ireland, London and Barcelona. After long discussions we agreed on Barcelona. This decision was based on one particular reason: the sisters of Mother Theresa told us that if we agreed to go that summer, they would organize, for the first time, a children's summer camp, since they were unable to do it all by themselves due to lack of resources.

During these two weeks, we had two main responsibilities; preparing and serving lunch for homeless people (known as 'Soup Kitchen') and preparing activities for the Children's summer camp. Most of the homeless people were immigrants but there were also Spanish people who have been negatively affected by the recession. Regarding the summer camp, the sisters accepted first those children that had certain disabilities, such as autism, and those coming from poor socio-economical families. Helping out in the soup kitchen made me realize how lucky and blessed I am, and moreover made me appreciate the most basic things in life. The kids reminded me of how the simplest things in life, such as happiness and love, are more worthwhile than material things. Furthermore, the Sisters of Mother Theresa, through their hospitality with us as well as with others, taught us to take a selfless approach towards others and to give without expecting anything in return.

This opportunity was also a means through which one can attain spiritual fulfillment. Through this unforgettable experience I am more willing to do further challenging voluntary experiences. I urge those interested in carrying out charitable work abroad to do so, as it has proved to be more rewarding and satisfactory than anticipated.



# *Voluntary Work & Its surprising Benefits*

*by Georgiana Farrugia*

Voluntary work has long been considered an altruistic activity that is purely intended to promote good or improve the quality of life of other members within a community. Personally, I get a lot of satisfaction from volunteering, even more so considering there is no financial gain whatsoever... but lending a helping hand goes far beyond that.

It is understandable that with our busy lives as medical students it can be quite difficult to dedicate time to volunteering. However, there are a lot of benefits radiating from this noble act. One of the commonly known benefits of voluntary work is the massive impact it has on a variety of communities. Unpaid volunteers are often referred to as the 'heartbeat of society' or the 'glue that holds non-governmental organizations' together. It is only once you embark on such an amazing journey, you will begin to realise that even helping out with the smallest tasks can make a real difference to the lives of people...(or animals!).

Having said this, engaging in voluntary work can also benefit *you* directly in many ways. To start with, it aids in broadening your support networks and in boosting your social skills. Moreover, as many studies have demonstrated, helping others kindles happiness so it is not very surprising that volunteering also serves as a boost to your mental health. In fact, this type of work has been proven to reduce the risk of depression through combating social isolation as well as reduction of stress and anxiety. It also helps in providing a better perception of self-worth, as well as in developing a significant sense of pride and accomplishment in life.

Ultimately, volunteering can serve as a huge investment to both your personal and professional development, for it empowers you with a renewed creativity, constant motivation and a superb sense of vision. There is ample need to highlight the fact that it is in itself a great opportunity to practice important skills such as teamwork, communication, problem-solving, project planning and task management. It is more likely to feel comfortable stretching your wings at the start of your journey as a medical student once you have already majored in these skills in a volunteer position first.

Above all, voluntary work can be thought of as an energising escape from your daily routine as a medical student...so I definitely recommend you start searching around for opportunities to do some good, both on a local or on an international level. However, don't limit yourself to just organisation or a specific type of role. From my previous experiences I can confirm that sometimes an opportunity will look great on paper but in reality, it turns out to be quite different from what you initially expected. Remember, you will be donating your valuable time, so it's vital that you ultimately enjoy what you are doing.

Always bear in mind that the most valuable skills to a fruitful volunteering experience are compassion, an open-mind, a warm heart and above all, willingness to carry out your role via a positive, caring and empathic approach.

# Strange & Unusual Old Remedies

by Stephanie Farrugia & Stephanie Pullicino

*Ever had a minor ailment and did not know what you could do about it? There are a surprising number of odd but simple and effective ways to quickly resolve your problems...*

## **Aloe Vera**

Mum was onto something when she cut the Aloe Vera leaf and spread it over your sunburn! Aloe Vera's healing properties can be used to soothe and help in the healing of sunburns and burns in general, to soothe psoriasis, eczema and dry skin when used topically. Its soothing, pain-relieving properties are thanks to the hydrating effects, minerals and vitamins that reduce inflammation on skin and moisturize it. In addition, this miracle skin saver can also be used cosmetically as a make-up remover, face wash and exfoliator!

## **Milk**

Although no reasonable explanation has been found, applying some milk to a burn has shown to relieve the burning sensation, possibly thanks to the cooling effects of cold milk that may help to reduce the high temperature of the inflamed part of the skin and the alkalinity of the milk also helps relieve the pain. This has been tried and tested, so take our word for it!

## **Almond Oil**

Oil obtained from almonds is rich in vitamins, minerals and essential nutrients that are beneficial when consumed but also when applied topically. Almond oil protects against harmful UV rays, revives skin and has soothing properties. It can reduce signs of ageing by renewing skin cells and decreasing dark circles under the eyes thanks to its high vitamin E content which delays damage to cells due to its antioxidant properties. It can also be applied to hair to reduce dryness and make it softer by hydrating and moisturizing it.

## **Olives**

Olives can relieve symptoms of motion sickness particularly seasickness. Some studies show that motion sickness causes increased saliva production, which can make you nauseated. Compounds in olives called tannins dry out the mouth and can help soothe any uneasiness. Have a couple at the first signs of nausea; chewing on a lemon might also fit the bill.

## **Mint Leaves**

A lot of breath fresheners available on the market have mint as their main ingredient. Mint leaves are great at freshening up your breath instantly due to their strong and cooling effect. Munching on a few leaves of mint or taking a cup of mint tea will do the trick at keeping bad breath at bay.

## **Cucumber**

Similarly to mint, cucumbers contain phytochemicals that kill bacteria in the mouth which are responsible for causing halitosis (i.e. bad breath). Try it by pressing a slice of cucumber to the roof of your mouth with your tongue for a few seconds. Cucumber also has cooling effects, making it a perfect natural solution for cooling not only eyes, but skin in general.

### **Chewing Gum**

Taking chewing gum before a flight will help ease the pressure caused in the ear, making them 'pop'. This is not due to the chewing gum as such but rather because chewing gum stimulates saliva secretion that encourages one to swallow frequently. The repetitive swallowing neutralises the ear-to-throat connection via the ear's Eustachian canal.

### **Carob Syrup**

Carob syrup (gulepp tal- harrub in Maltese) is a traditional natural remedy for coughs and sore throat. To obtain its benefits, dilute a teaspoon of carob syrup in a glass of hot water. Carob contains vitamin E which helps in treating coughs. Carob tannins contain gallic acid which also works as an antioxidant.

### **Chicken Soup**

Is it just a myth or can this delicious concoction fight against the symptoms of a cold? Research in the American Journal of Therapeutics showed that a chemical found in chicken soup called carnosine helps the body's immune system to fight the early stages of flu. The fact that so many nutrients are present in a soluble form in the soup makes them easier to digest and absorb. Adding a drizzle of olive oil ensures the absorption of fat soluble vitamins (A, D, E and K). Simultaneously, the warm soup's fumes help to increase movement of nasal mucus and enhance actions of cilia which relieve a blocked nose.



# Word-Finder

P E N I C I L L I N S P H P V  
L A R U T A N R E P U S E Y O  
G N I N I A R T A F C A B N L  
G O A E R A H C L T C L A E U  
X E B I M T E O U E O I R B N  
M G U X S M W S S O C H E E T  
S R R L A E K P D I O H B E E  
I U K K R E H L R A L Y M C E  
L S E E G Y E T R A Y O U H R  
O R W E G T A A S D H S C W I  
B Z E M T I H P I E P C U O N  
A Y O I D P K N O X A I C R G  
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M P T O N S I L L O T O M E N

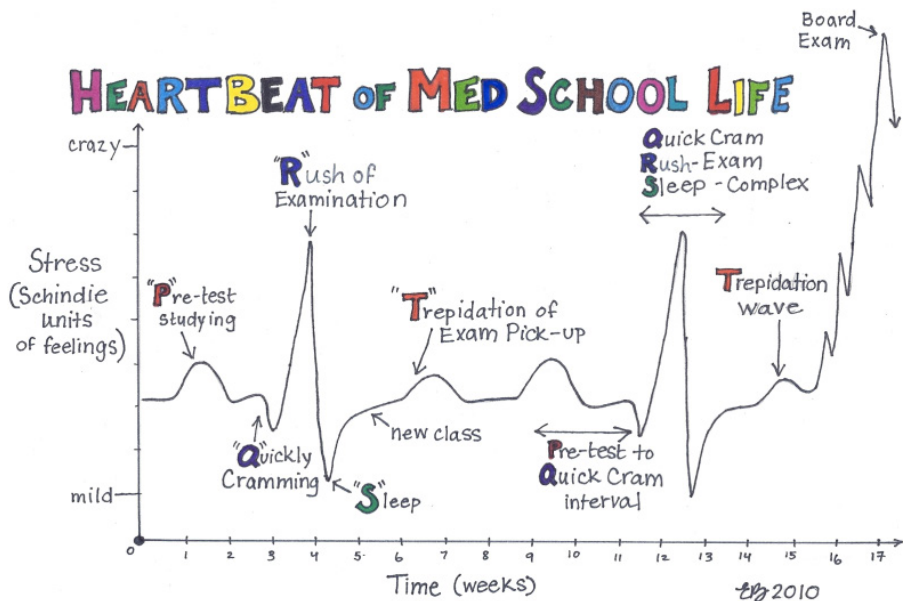
Training  
Metabolism  
Tonsillitome  
Paediatrician  
Viagra  
Penicillin  
Cucumber  
Crippen  
Beechworth  
Burke

Hare  
Knox  
Volunteering  
Werewolf  
Methemoglobinemia  
Bloodletting  
Milk  
Sphygmo  
Fugates  
Hyoscine

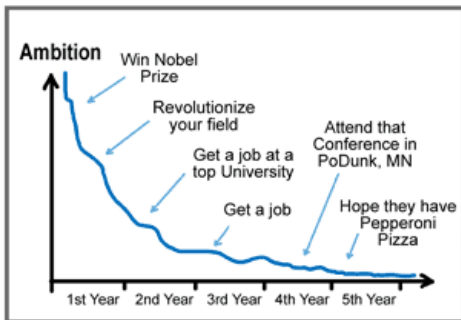
Surgeon  
Pharaoh  
Pacemaker  
Staphylococcus  
Tuskegee  
Supernatural  
Hospital  
Peace  
Calories  
Anaesthesia



# HEARTBEAT OF MED SCHOOL LIFE



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# Doctors of the Past

## Who's Really Healing You?

by Erika Babatunde

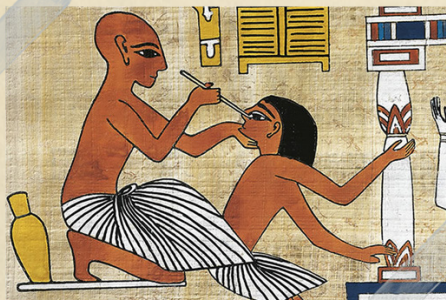
*Before the introduction of modern medicine, many illnesses were often associated with spirituality, God and the Devil. Many spiritual leaders were in charge of helping the sick and treatments often consisted of ritualistic practices, herbology and magic.*

*Many types of physicians have existed over the ages and have all contributed to what we now know as modern medicine. Here are some of the most unique Doctors of the past.*

### The Pharaoh's High Priest Physician

The earliest documented use of medicine by a "Physician" is in Ancient Egypt. The main doctors were spiritual healers called the priests of Sekhet. These were specialists in medicine and carried out many rituals and prayers as treatment. They had knowledge of different medical specialities where each physician was dedicated to one particular speciality. They had insights into anatomy, pathology, nutrition, infection control and also had a role in the production of many medicines.

Imhotep (2600BC), who was a high priest, is the earliest known physician. He made such a contribution to medicine in Egypt, that he was raised to the status of "God of medicine and Health" 2000 years after his death.



### The Barber Surgeon

In medieval Europe, barbers were the medical practitioners of their day. Initially based in monasteries, they were tasked with the upkeep of monks' tonsures (the bald spot on the top of their heads) and performing regular bloodletting (bleeding via an ancient form of phlebotomy). They also looked after soldiers during battle by cutting their hair and amputating their limbs!

Barbers were dentists and surgeons and carried out many medical procedures that physicians thought were beneath them such as pulling out teeth and other minor surgeries.

These multitalented barbers catered to the style and health of their customers, advertising their services by putting their blood covered white cloths on a pole outside their shops- the symbol of a modern day barbers pole.

The father of modern day surgery Ambroise Paré, was a barber that later formally trained to become a surgeon.



### **Magic or Medicine**

In the mid-13th century women had a very limited role in healthcare and were mostly nurses and midwives. In fact physicians were all men and medicine was geared toward the rich. However, there were a growing number of female lay healers who catered their healthcare practices towards peasants, women and the lower classes. Many of their practices included the use of herbs.

These women also posed a threat to the church; at the time, females were seen as inherently evil. Their potions and medicine were seen as magic and witchcraft and many were accused of being in alliance with the devil. They were often blamed for causing illnesses and their cures were seen as further proof of witchcraft.

The rise in the witch trials could have been seen as a political motive to counter the male dominated medical profession and the exclusivity to the upper classes as in reality there should be no distinction between those involved with witchcraft or lay healers, who at the end of the day, were providing healthcare to those in need.



# Mythical or Human?

by Sahra A. Haji

## Werewolf or Wolfman Syndrome

In contrast to the mythical creature, this abnormality does not give you sparkling white sharp fangs. It does not give you long scratchy claws. You do not get flashing coloured eyes that change depending on your wolf pack status. And most of all, it not make you howl at the full moon, unless you feel like it of course. So you might ask, for those afflicted with this condition, why on earth are they mistaken for werewolves?

It's because of the ridiculously enormous amount of hair that grows on every possible part of their skin surface, covering up to 96% . This gives the familiar wolfman look. The soles of the feet, palms of the hands and mucous membranes are not usually covered. The more technical term for wolfman syndrome is hypertrichosis or Ambras syndrome . Trichosis meaning the abnormal growth of hair and hyper referring to the increased level of hair growth.

About 50 hairy wolf-like or even lion-like people have been reported from all walks of life since the middle ages. They have come from all over the world. However, far from suffering with the condition and just joining freak shows or a circus to be stared at by the world, some in this modern day and age have used this affliction to their advantage.

- Yu Zhenhuan, a Chinese aspiring rock star that is using his relatively unique look to launch his music career
- The Ramos Gomez brothers, Victor "Larry" and Gabriel "Danny" Ramos Gomez, had starring roles in X-files
- Supatra Sasuphan, a girl from Thailand, stopped getting teased at school because she was entered into the Guinness book of World Records

Hypertrichosis has different forms and severities. It is normally genetic and caused by a chromosomal abnormality. However, rare acquired cases have been caused by drugs and is associated with eating disorders.

## Blue people or Big Smurfs

Thought smurfs were just the little blue people you saw on the cartoon show? Well, think again, sort of. The Fugates were a family that lived in the hills of Kentucky. There were known for been carriers of a recessive genetic trait that led to methaemoglobinaemia. Basically, some of them were blue, literally . The majority of the Fugates were blue and were commonly known as the "Blue-Fugates" or the "Blue People of Kentucky".

The technical reason why it happens: the sufferer doesn't have an enzyme called pyruvate kinase or another called diaphorase I (NADH methemoglobin reductase). As a result, a type of haemoglobin called methemoglobin increases in the blood and you make less normal haemoglobin. Then, the blood in the arteries go from bright red to brown. Caucasian skin goes from pinkish white to blue.

The Fugates probably had a deficiency in the enzyme called cytochrome-b5 methemoglobin reductase, which is responsible for recessive congenital methemoglobinemia.

## Vampire disease

Another disease that has been taken out of context is cutaneous porphyria. Most famously in 1985, the Canadian biochemist, David Dolphin created vampire associations. However, contrary to popular belief, vampire disease does not give you pale skin or fangs or give you a garlic allergy.

However, on exposure to sunlight, you get a sudden burning pain, skin redness, swelling and itching. The fragile skin has blisters that take weeks to heal, scars or skin colour changes from healing blisters and increased hair growth. Therefore, porphyria sufferers would only be able to come outside at night so as to reduce their exposure to light. This is why it's thought that porphyria sufferers contributed to the vampire myth.

Another influence to the vampire myth - although porphyria teeth are not pointy, they can possibly become red.

## Lewandowsky-Lutz Dysplasia (*Epidermodysplasia verruciformis*) - Tree man syndrome

Lewandowsky-Lutz dysplasia or more simply put, tree man syndrome is a systemic skin disorder. It makes the sufferer look like there are tree branches growing in place of arms and legs. The 'branches' are really just their arms and legs but covered in warts. These warts are caused by persistent infection of human papilloma virus and defective cell-mediated immunity.

In 2007, an Indonesian sufferer known as Dede Koswara, had surgery for the disease so he could have 5.8kg of warts removed.

A great example of a tree humanoid is Groot, the fictional character who is part of the Guardian Galaxy.



*Vampirism*

*Tree man Syndrome*

*Wolfman Syndrome*

*Blue People*



# Doctors Gone Bad

by Maria Grazia Grech

## 1. Dr Henry Cotton

Cotton was a psychiatrist who believed that psychiatric disorders were caused by microbial infections. He used to remove organs to cure mental diseases. First he removed the teeth, then the tonsils, and if these failed, other organs including the testicles, ovaries and especially colons were taken out. He exaggerated his success saying he had an over 85% cure rate when in fact he had a death rate of 30% to 45%. Moreover patients were operated on against their will. Although Cotton retired in 1930, some procedures continued to be performed until the 1950s.



## 2. Monster Experiment

A study done by Wendell Johnson and Mary Tudor. 22 orphans were chosen, of whom some were stutterers and some were non-stutterers. The aim of this study was to try and induce stuttering in non-stutterers. The children were never informed of the true reasons of the research project, and while the non-stutterers did not become stutterers, a lot of them ended up falling behind in schoolwork and having self-confidence issues. In 2007 the State of Iowa gave six orphans \$925,000 in compensation.

## 3. The Skid Row Cancer Study

In the 1950s, urologist Perry Hudson did prostate biopsies on homeless men without obtaining proper consent, in order to prove that prostate cancer should be caught and treated early. These men were targeted because they were vulnerable and easily duped with promises of food and shelter. They were never informed of the risks which include impotence and rectal tearing.

#### 4. The Tuskegee Syphilis Experiment

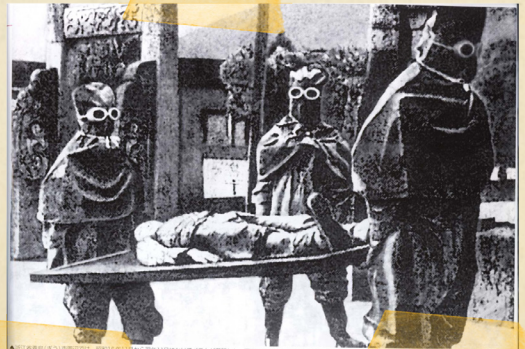
An experiment carried out between 1932 and 1972 by the U. S. Public health service. Patients were mostly poor people who were promised free "health care" but in fact they were being denied treatment in order to observe how untreated syphilis progressed, especially after the introduction of penicillin. This led to a huge number of people dying either from this treatable disease or its complications, infections of the sexual partners of the subjects, and subsequently, children being born with congenital syphilis. Tragically in Guatemala, the study went one step further: people were deliberately injected with syphilis for experimentation.

#### 5. Crimes committed during World War II

20 doctors were tried in Nuremberg for their involvement in human experiments in concentration camps which included: attempting to change eye colour with chemicals; sewing twins together in an attempt to make conjoined twins; and exposing people to unnecessary X-Rays. Doctors were also involved in involuntary euthanasia and/or sterilisation of disabled people and people with mental health issues.

But it does not stop here. In China, Unit 731 was involved in experimentation terrible beyond imagination. Japanese doctors were responsible for carrying out vivisections (dissecting living people without anaesthetic), starving people to death, and deliberately injecting people with diseases such as gonorrhoea. Other experiments included using people as targets to test weapons such as grenades and flame throwers and injecting people with animal blood or saline. They also infected whole villages of civilians with bubonic plague, tularemia, anthrax and cholera.

Interestingly enough while the Americans were horrified by the Germans, only doctors captured by the Soviets were tried. Many were secretly granted immunity by the USA, given that they did not divulge any information to other countries, as their findings were considered valuable.



# Medical Discoveries by Chance

by Vanessa Mercieca

## Penicillin

This must be the most famous discovery by chance which revolutionised the pharmaceutical world back when it was discovered in 1928. Alexander Fleming was working on some samples containing *Staphylococcus aureus* when he noticed that one of the petri dishes containing the bacteria was left open and a blue-green mould had started growing inside. Intrigued, he examined the petri dish and noticed that there were no bacteria growing around that mould. Upon further investigations, he concluded that the mould was *Penicillium notatum* and in the 1940s, Penicillin started being mass produced, saving millions of lives thanks to its antibiotic properties.



## Pacemaker

Even though Wilson Greatbatch did not invent the first implantable pacemaker, his accidental discovery improved its efficacy. Greatbatch was building a small machine which recorded heart sounds when a hardware mistake led him to insert a wrong transistor. Instead of recording heart sounds, the device started giving off regular pulses, very similar to a heartbeat pulse. After two years of tweaking its machinery and making improvements, he patented his device. Greatbatch's pacemaker was a success as unlike the first pacemaker which worked only for three hours, his pacemaker had a lifespan of 18 months!





## Insulin

In 1899, Dr. Oskar Minkowski and his colleague Dr. Josef von Mering wanted to study the role of the pancreas in digestion. They decided that the best way to do this was by removing a dog's pancreas. The dog survived but after a couple of days, they started to notice that flies were attracted to the dog's urine. The two physicians were fascinated by this unexpected event and decided to test the urine. They found out that it contained sugar and therefore concluded that since the dog was healthy before removing his pancreas, they had accidentally given the dog diabetes. They realized that the pancreas had an important role in regulating blood sugar levels. 20 years later, two other scientists discovered that the mysterious substance elicited from the pancreas that day was in fact insulin.

## Viagra

Did you know that the little blue pill, as it is more commonly known, was originally meant to help patients suffering from heart disease? Scientists at the pharmaceutical company Pfizer started synthesizing Sildenafil, otherwise known as Viagra, to treat hypertension and angina. However, patients taking part in clinical studies mentioned that even though they could see no marked improvement in their heart condition, it had a significant side effect elsewhere. Pfizer then decided to scrap its idea to market this pill for angina but rather advertise its virile use resulting in a successful profit to the company.



## Anaesthesia

Commonly known as laughing gas, nitrous oxide has anaesthetic and analgesic effects. However, it wasn't used for this purpose until 1844. Before then, it was used as a recreational drug during parties. Nevertheless, numerous scientists started observing the powers this drug had in changing a person's perception of pain. The first known use of this drug was during a tooth extraction in which the patient claimed she had felt nothing whatsoever during this procedure! It was then that the field of anaesthesia was born and the use of nitrous oxide as an anaesthetic took off.

# *Diet Myths & Tips*

*by Rebecca Galea & Sara Borg Grech*

**Myth:** Don't eat after 8pm

**The theory:** Food eaten early in the day is burned up, while calories taken in late at night are not used up and are turned into fat.

**However:** The body's rate of digestion is the same; morning, afternoon and night. Calories may not be used during the night if you are sitting around and sleeping, but when you do the next morning, the body will start using up those stores that would have been built up. The only reason you may not want to eat at night is because studies have shown that the food choices one makes at night are often unhealthy and excessive. It's more likely that after one comes home after a day at work, ready-cooked food or preserved food is chosen as a fast snack rather than a healthy, nutritional meal. Therefore it would be very useful to shorten the time between meals or even small snacks while at work or school, thereby reducing the chances of pigging out when you get back home.

**Myth:** Small frequent meals boost your metabolism

**The theory:** Eating at regular intervals keeps your metabolism active and so it will burn calories faster and more efficiently.

**However:** The frequency of your meals have no effect on your metabolism. Foods including substances such as caffeine might increase the metabolic rate, but only temporarily and not to an extent that would aid weight loss.

What does affect the metabolic rate is your body's composition and size. A body which is bigger and more muscular burns more calories than one which is smaller and contains more fat in proportion to muscle. Therefore, it makes more sense to build up muscle than to eat frequently. It has been shown that approximately 50kg of muscle burns about 14 calories daily, while 50kg of fat burns only 2-3 calories, which makes a huge difference in the long run. An important fact to keep in mind is that when you lose weight, part of that weight is also muscle so strength training to maintain muscle mass is imperative to increase your body's ratio of muscle to fat.

**Myth:** Temporary, radical diets are needed for weight loss

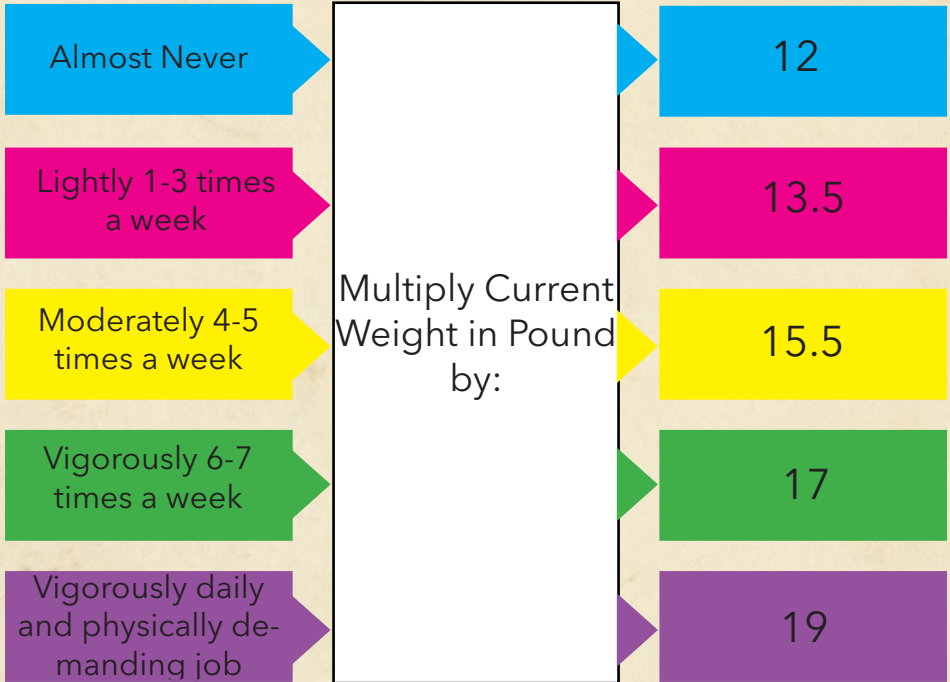
**The theory:** Cutting calories drastically helps you lose weight drastically.

**However:** 2500 calories are the daily requirement for males and 2000 calories for women. Taking in only 1200 calories will therefore result in loss of weight, but not for long. Studies conducted specifically on people who were on this diet showed that the majority regained all the lost weight in a period of 4 to 5 years. It's psychologically very hard to follow such a strict regime for a long time because one would feel deprived and hungry. People who take in even less, were found to

have a greater risk of gallstone disease and other digestive problems.

A more efficient method is to restrict only a little amount of calories and keep up with that lifestyle forever. Cardiologist Thomas Lee came up with an algorithm for the right number of calories for an individual;

Level of Exercise:



The result is the amount of calories one needs to maintain the same weight, for example:

$$140 \text{ pound woman exercises 3 times weekly} := 140 \text{ pounds} \times 13.5 = 1890 \text{ calories}$$

Therefore approximately 1900 calories are needed for weight maintenance. Subtracting that amount by just 200-250 calories a day with no other changes, Lee predicts a loss of approximately 12 kg in one year.

# Doctors Got Talent!

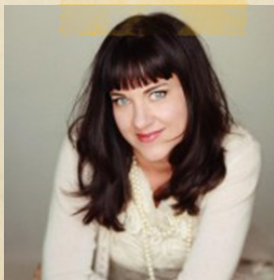
by Melise Miskud

*Are doctors really nerds? Don't they know anything except medical information that they studied by heart? If this is what you think, read this article and it will prove you wrong!*

**A musician : Tom Araya**- He used to work as a respiratory therapist before becoming part of Slayer. Slayer is famous for Raining Blood, Angel of Death and so on. Before he devoted his life to playing the guitar, he used to be in the ER treating asthma attacks or inserting a tube down someone's neck.

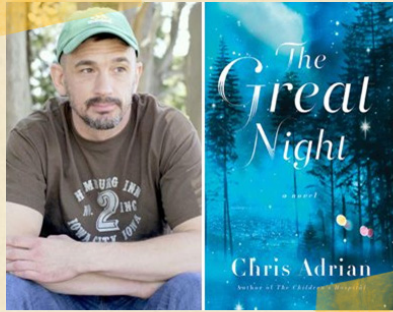


**An artist : Dr Lisa Rankin**- When she saw that where she worked was not giving her enough time to treat patients, she decided to quit medicine. What did she do with her life? She used her talent as an artist, and she was a professional one at that!



**A writer : Richard Mound**- A magazine writer! Not only an endodontist! So while treating your dental pulp, or fixing your dental trauma, he may be thinking of the next article to write... Wonder if he ever used his patients' teeth as inspiration?

**A writer : Chris Adrian**- Apart from working with kids as a paediatrician, this doctor is also able to write... not only prescriptions, but also works as a writer outside hospital environment. Cool, no?



**An actor : Ken Jeong**- You all know this guy, he's from the hangover series! Leslie Chow, the character in this series makes you laugh till your stomach hurts, but guess what? He's a physician in California!



**An actor : Graham Chapman**- Although this actor no longer practises medicine, he graduated from St Barthelmows Hospital Medical School.



*Now we can see that doctors aren't only capable of wearing stethoscopes; they can also dedicate their time to activities you wouldn't even think of!*

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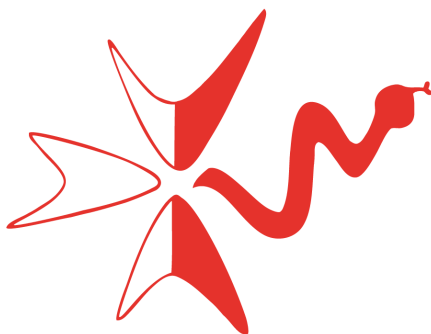
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