

# Speculations on Vampire Physiology and DNA

A monograph by D.C. Rhind, BSc, BEd, MA, author of the Agent Samurai, Vampire-Hunter Series (<http://dcrhind.ca>)

To consider this properly, one must separate reality from myth in what is known of vampires. Vampirism is the result of a virus. There is no deal with the Devil, no mystic spiritualism, no innate aversion to religious artifacts, no morphing into bats, wolves, rats, or strange mists. Mirrors reflect light waves, the same light waves that the eye's retina perceives. If a vampire casts no reflection, then you couldn't see one. Ergo, vampires cast a reflection. They are not undead. That term arises from a belief that the vampire died and came back as a vampire. The fact is that the vampire never truly died; he was merely altered by the viral DNA.

Movies and television over the past two decades have taken to portraying vampires as "changing into vampire form" before feeding; eyes turning black; exaggerated ridges forming on the forehead, sometimes the face. The general effect is to give the vampire a more demonic look, increasing his image as a monster. While entertaining, it ignores the reality (and the logic) that a vampire would not survive long among humans if he were scaring them away. The vampire's success extends from his talent for glamour. The virus tends to eradicate imperfections, making him (or her) more attractive. Enhanced by the ability to hypnotize potential victims, he becomes a much more successful predator than a veritable Klingon with fangs.

The initial and most crucial to survival trait created by the vampire virus is the separating of the arterial pulse and the coronary pulse, making the arterial pulse independent. If the heart stops and the arterial pulse continues independently, the vampire will live, but in a very weakened state until the heartbeat resumes. In the tradition transformation from human to vampire, the human is weakened by the removal of a large quantity of blood, which is then replaced by the blood of the infecting vampire. Vampire blood has a highly narcotic effect on humans. The rush from a massive dose of vampire blood invariably results in a myocardial infarction or heart attack. If the virus is able to initiate the separation of the arterial and coronary pulses, the victim will survive and, in time, the viral DNA will restart the heart. Over time – several weeks – the vampire traits will develop. The retractable upper canines come first, since they are essential to feeding. The rest: strength, healing ability, mental abilities such as mesmerism, develop more slowly.

It is very important at this stage to back up a step to "If the heart stops and the arterial pulse continues independently." In most cases, the virus cannot make the arterial pulse continue independently. This is why vampires are rare, and why the trait seems more common in Eastern European bloodlines, and those from ancient Celtic stock, a bloodline that also originated in Eastern Europe.

But what if the virus is introduced in a lesser dose – enough to, say, heal a serious wound, but not enough to trigger a coronary? What if the virus has sufficient time to spread through the system, making changes slowly? Such a person would begin to take on certain vampire traits – increased healing, heightened senses, increased strength and speed, and enhanced mental abilities – without the major changes associated with having to feed as a vampire. The teeth would remain human; the digestive system would remain intact and unaltered.

To date, only two such cases have been recorded: that of Michael Cameron, now a vampire, and his wife Carrie, still human at the time this paper was written. Extensive DNA studies have been conducted by Dr. Jonathan McGregor, MD, MDCM, DFP, himself a vampire, and longtime student of traits of the condition, and expert on vampire anatomy.

He has made the following observations on vampire DNA, anatomy, and physiology:

- Some time after the initial onset of vampirism, the stomach rejects almost anything but blood. While any human blood will suffice, the vampire responds best to his original blood type. (While observed and verified by Dr. McGregor, this last premise was initially suggested by Michael Cameron, BSc, BEd). Normal human foods will be rejected and expelled vomitus. The stomach can be conditioned to accept such things as tea and blood mixed with small amounts of wine. As the viral DNA spreads, the colon ceases to function, and begins to atrophy, followed by the ileum and the jejunum. The duodenum remains, functioning mainly in the assimilation of blood components into the bloodstream. Defecation becomes non-existent.

- With the elimination of most dietary impurities, the function of the liver becomes greatly reduced. While its haemopoietic functions remain, its role in detoxification is greatly reduced. Thus, since it produces much of the body's heat, the body temperature of a vampire will be, on average, about 4°C or 7°F less than a human's.
- The immune system, as it is known in a human, becomes obsolete, and will atrophy. The spleen, notably, will disappear within a year of the onset of vampirism. The vampire has no need of antibodies or the various leucocytes and lymphocytes associated with the bodies attack on foreign material, such as bacteria and viruses. The vampire DNA, itself, will simply not tolerate the existence of foreign material.

- Excess adipose tissue begins to be eliminated soon after the onset of the virus. The virus tends to cause the elimination of all unnecessary flesh (and organs), making the system more efficient – thus the ability to, under normal conditions, exist on approximately one pint of blood a day. The virus also returns any lost elasticity to the skin, resulting in a more youthful appearance. This seems linked to blood. Should the vampire reduce his blood intake, this effect will be reversed, allowing the vampire to appear to age. Superfluous intake of blood results in a more youthful appearance.

- As mentioned above, vampires can sustain themselves on one pint of human blood per day, especially if it is of a matching blood type. When there has been excessive stress or a need to heal, the vampire will require more. The ability to fast is also an acquired skill. A vampire used to regular intake, never fasting, will experience blood-withdrawal symptoms, notably emotional distress, exaggeration of the vampire traits such as paleness, shadowing of the ocular orbitals, and uncontrolled extension of the upper canines. The urge to feed can become obsessive. It requires practice in fasting to gain mental discipline over these reactions. Unnecessary overfeeding can result in a form of addiction to such behaviour – a very dangerous trait in a vampire.

- Vampire DNA causes excessive absorption of magnesium into the skin and subcutaneous tissues, making the skin excessively photo-reactive. The skin will initially smolder, giving off a smoke-like vapour. This is mostly water vapour, the result of rapid massive dehydration, but it is the precursor of fatal combustion of the vampire's tissues. Use of protective clothing and a strong sunblock containing zinc can help prevent this reaction in all but the most extreme situations.

- The presence of the sun overhead seems to have a gravitational effect on the mind of a vampire, causing the onset of coma until the effect is reduced. While most vampires seem catatonic from shortly after sunrise until sunset, there have been individuals who can remain conscious until the sun is closer to zenith, regaining consciousness about two hours after the sun passes zenith. This seems a trait in the vampire's DNA because the spawn of these vampires usually present the same trait. It has also been speculated that those rare humans who rarely sleep more than four or five hours a night might, as vampires, be able to remain conscious longer after sunrise, and regain conscious after only four or five hours of dormancy.

- In most cases, the DNA of the host virus becomes dominant. If an individual is infected by the blood of more than one vampire, the DNA of the oldest vampire will become dominant. One observed exception (there may be more) is that of Michael Cameron. While the cause is unknown, his own DNA has remained dominant, even though all expected vampire traits are present. One theory is that, due to his being infected in his youth and the amount of time the virus had in his system before his heart was stopped, resulting in his transition to vampirism, the vampire viral DNA merged with his own in a unique manner, giving it the characteristics of much older vampire DNA. There is also speculation that he is the result of a relatively pure ancient Celtic bloodline, making this atypical DNA recombination possible.

- Vampire fangs extend and retract from the tooth sockets, by means of small expanding muscles. This trait usually takes a few days to develop. In the exceptional case of Michael Cameron, the change seemed almost immediate upon his turning, no doubt due to how long the vampire DNA had been at work in his system. Likewise, claw-like nails extend on the fingers as needed. There has been observable inconsistency about this latter trait. In some vampires, it seems to not exist. In some it comes naturally. In Michael Cameron's case, it did not show up immediately, and required conscious effort on his part (as shown in *Immortal Samurai*). It has been speculated in Michael's case that, as a superior martial artist and swordsman, he was not reliant on vampire traits for survival in battle. Extending this line of conjecture, it might be theorized that vampires forced to fight against difficult opponents with only nature's weapons, would extend their claws out of instinct, just as the feeding urge extends the fangs. Those never pressed into such a situation might never acquire the ability to extend their claws, the trait atrophying from lack of use. This line of speculation is supported by the anecdotal evidence of vampires whose claws seem perpetually

extended. If a vampire chose to keep his claws extended, perhaps the ability to retract them becomes lost. It might also be suggested that certain psychopathic types might lose the ability to retract their fangs. Vladimir Chernov (as portrayed in *Once A Samurai...*) seems to fit this profile.

- Nocturnal vision is advanced in vampires, facilitated by enlarged iris diaphragms, resulting in greatly enlarged pupils. Depending on lighting, these enlarged pupils can make the eyes seem almost completely black or very red (due to light reflecting off vascular tissue in the retina). This trait may have led to the portrayal of eye changes in movies. It is also noted that the colour of the iris becomes much more pronounced. In blue-eyed vampires, the colour often richens from a typical sky-blue to a deep sapphire blue (notably our much-studied Michael Cameron). It is speculated that this might be an attempt by the vampire virus to make the iris of the already-light-sensitive vampire more opaque to UV light.

- The sexual abilities of vampires have been a subject of much controversy. Most books and movies portray the vampire as non-sexual, sometimes even lacking in bodily fluids. Vampire eyes require moistening from tears as much as human eyes. However, since the virus is transmitted via blood, vampire reproduction is not sexual. They do not produce sperm. Once again, the virus's predisposition to eradicate unused functions and unused organs often means that vampires lose the ability to produce seminal fluid. However, as Michael Cameron's case has exemplified, if the vampire continues to be sexually active after the onset of vampirism, the production of seminal fluid and the ability to release it will continue. Of course, the penis remains functional, as does the clitoris in females. Since even packaged blood is rarely completely pure, the kidneys continue to filter out impurities, as well as excess water. While vampires may only urinate every few days, that function is never lost.

- The psychic ability of vampires creates risks for the vampire. As noted by Lord Anthony Dewhurst, when a vampire kills, he is exposed to the psychic energy and the thoughts of his victim. If it is another vampire, the psychic release is more profound. Lord Dewhurst has found that the act of killing a predatory vampire, one who takes pleasure in killing, exposes him to psychic energy of an extremely negative nature. This energy can be as addictive as the sensations of fear the killer reads in his victims. Vampires who kill other vampires run the risk of acquiring the same addiction that created the predatory vampire. As far as is documented, Michael Cameron alone seems immune to this, most likely due to his advance training in psychic phenomenon by a noted Tibetan Tulku. It has also been speculated that his prolonged exposure to the vampire virus before his actual turning may have enhanced his mental abilities as a human, making them all the more advanced as a vampire. This might also account for his prodigious strength, speed, and healing powers for a fledgling. Indeed, from the onset of vampirism, Michael displayed the traits of a master vampire rather than those of a fledgling.

- The only documented allergy in vampires seems to be to wood, most notably holly. Vampires cannot heal around wood, making wooden stakes effective, so long as the vampire cannot pull them out. A stake through the heart stops the vampire's heart, greatly weakening him. Holly seems to paralyze the area of penetration. Holly through the heart results in completely paralyzing the vampire.

In conclusion, the vampire virus does not create a monster; it merely modifies the former human traits, making the vampire more of what he was as a human. The monster vampire is the result of the virus infecting a human who was already a social predator, whether a sociopath or a psychopath.

Vampires have no need to sleep in coffins or home earth. This belief stems from the notion that the vampire can only defeat death by spending part of his time in the grave.

Vampires are not demonic. They are not repelled by crucifixes. A crucifix would certainly have no fright value on an Islamic, Jewish, or Hindu vampire. Nor, despite ancient folklore, has garlic any repelling effect.

Silver bullets have no more effect than lead or steel ones. Wooden bullets do, especially those made of holly. Wooden bullets, however, unless weighted at the core with a heavy metal, have limited ballistic trajectory.

Being a sociopathic predator results in drawing attention to the existence of vampires. For this reason, most vampires attempt to lead inconspicuous lives, relying on packaged blood. They have developed extensive networks to aid in distribution of genetically engineered blood and blood diverted from usual clinical sources, and also to aid in the transition of fledgling vampires into their new existence.