

Understanding Cocaine Addiction According to Chinese Medicine Theory

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ABSTRACT

Introduction: Cocaine is the most commonly used illicit stimulant drug in Europe. Auricular acupuncture has been used as a form of treatment for drug addiction since the early 1970s.

Discussion: Cocaine addiction affects all the solid (*zang, yin*) organs: Lung, Liver, Heart, Spleen and Kidney, causing a complete *zang fu* disharmony. Within cocaine addiction theory, these five patterns can be grouped into two cycles: the first cycle involves the Lung, Heart and Spleen. The second cycle involves the Lung, Kidney and Liver.

Spirit aspect: Cocaine addiction is rooted in artificially inflating the *po* for it to dominate over the Heart. This creates a false generation in the Lung, which temporarily increases the mother-son relationship between the Lung and Kidney. An addict is reminded of the empty high by the *zhi* and relayed across the mind by the *yi*.

Treatment strategies: The NADA protocol is a 'cookbook' strategy and acupuncture points located on the body should be used as well.

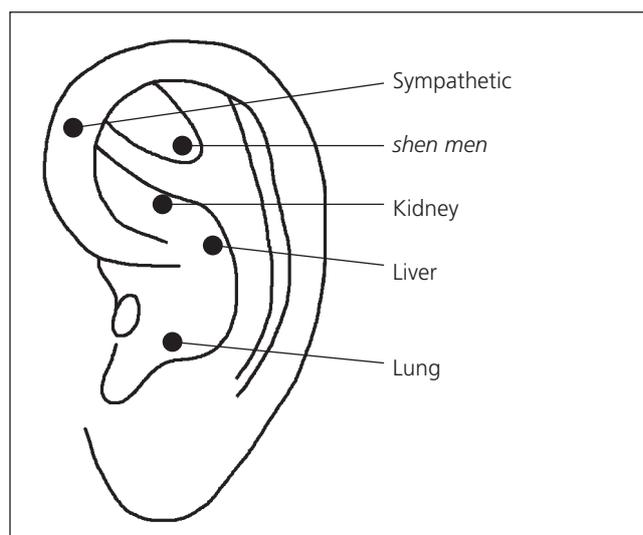
Conclusions: The use of Chinese medicine therapy can decrease the number of patients being admitted to hospital with drug related illnesses, benefit society in reduced crime rates and benefit the addicts themselves.

INTRODUCTION

Cocaine is the most commonly used illicit stimulant drug in Europe (European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) 2014). Cocaine was cited as the primary drug for 14% of all reported clients entering specialised drug treatment in 2012 (55,000), and 18% of those entering treatment for the first time (26,000) (EMCDDA 2014). In 2012, 2,300 first-time treatment entrants in Europe reported primary crack cocaine use, with the United Kingdom accounting for around two-thirds of these (EMCDDA 2014). Auricular acupuncture has been used as a form of treatment for drug addiction since the early 1970s when Wen and Cheung (1973a, 1973b, 1973c) found it to be effective in the treatment of opiate addiction. During the 1980s Michael Smith and his partner Walter Bosque developed an auricular acupuncture protocol at the Lincoln hospital in New York's South Bronx area. This later developed into the auricular acupuncture

system, the National Acupuncture Detoxification Association (NADA) protocol. The NADA protocol represents a 'cookbook' approach to drug addiction treatment. It is made up of five auricular points; *shen men*, Sympathetic, Kidney, Liver and Lung (figure 1).

Figure 1 The five NADA points (Given 1997).



A number of randomised controlled trials have tested the NADA protocol on cocaine addicts, but have concluded with mixed results (Lipton, Brewington and Smith, 1994; Otto, Quinn and Sung, 1998; Bullock, Kiresuk, Pheley, Culliton and Lenz, 1999; Avants, Margolin, Holford, and Kosten, 2000; Killeen et al, 2002; Margolin, et al, 2002). A systematic critique of these studies could not conclude with a definite answer as to the effectiveness of the NADA protocol on cocaine addiction, but did note a number of study design failures (D'Alberto, 2004).

It is important that researchers and practitioners understand the mechanisms of cocaine addiction within the theories of Chinese medicine. There is little or no mention of addiction within the four major classics of Chinese medicine, *Nei Jing* (Treatise Classic of Internal Medicine), *Shang Han Lun* (Treatise on Cold Damage), *Wen Bing Xue* (Warm Disease Theory) and the *Jin Kui Yao Lue* (Synopsis of the Golden Chamber) (Jian and Seifert, 2000; Unschuld, 2003; Mitchell, Ye and Wiseman, 1999; Luo, 1995).

The Shang Han Lun does mention sickness of a drinker, but its exact interpretation is unclear and it is not known whether this is related to alcoholism or not (Mitchell, Ye and Wiseman, 1999). The great physician Li Dong Yuan created a formula to deal with the side effects of too much alcohol, called Ge Hua Jie Cheng Tang (Pueraria Flower Combination). In more recent times, a large number of Chinese were addicted to opium. There exists some literature on opium addiction during the Qing dynasty. Modern treatment for addiction stems from the treatment of former soldiers who were opium addicts. When they were later wounded it was discovered that patients who received acupuncture as an analgesic had a lessened drug craving. Later Wen and Cheung (1973a, 1973b, 1973c) began their research into auricular acupuncture and addiction. Today, there is no Chinese medical literature on cocaine addiction, a recent South American import. Illegal substances are still available in China, but exact prevalence rates are unknown (World Health Organisation (WHO) 2004). It is not the aim of this paper to address the social-political issues that lead people to cocaine addiction, but instead to discuss the mechanisms of cocaine addiction within the theories of Chinese medicine and offer a possible inexpensive and successful means of treatment for drug abusers.

DISCUSSION

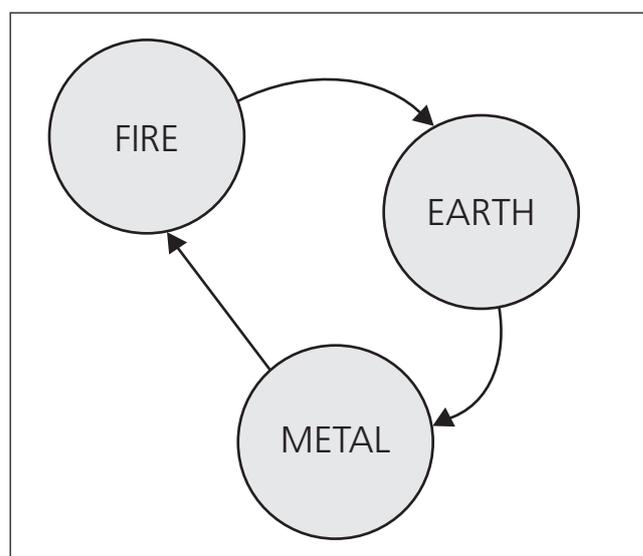
In Chinese medicine theory, cocaine addiction affects all the solid (*zang, yin*) organs: Lung, Liver, Heart, Spleen and Kidney, causing a complete *zang fu* disharmony. The manifestation of symptoms will differ from person to person, but will include a collection of the following: nervous excitement, depression, euphoria, restlessness, irritability, tremors, vertigo, nausea, vomiting, hypotension, hypertension, abdominal cramps, exophthalmia, mydriasis, paranoia, peripheral vascular collapse, tachypnoea, tachycardia, chills, fever, renal infarction, atherosclerosis of the kidney, renal scleroderma, Henoch-Schönlein purpura and renal failure as a result of rhabdomyolysis, coma and death (WHO, 2004; Anderson, 1998; Smith, 1979; Smith, 1985; Brewington, Smith, and Lipton, 1994; Maclean and Lyttleton, 1998; Crowe, Howse, Bell and Henry, 2000). Cocaine addiction leads to five distinctive patterns. These five patterns are an adaptation of a previous categorisation listed by the author (D'Alberto, 2004). They are:

1. Lung *qi* deficiency,
2. Heart *yin* deficiency,
3. Spleen *qi* deficiency,
4. Kidney *yin* deficiency, and
5. Liver *yin* deficiency.

To help understand cocaine addiction, these five patterns can be grouped into two cycles, using five phase theory. The first cycle involves the Lung, Heart and Spleen. The second cycle involves the Lung, Kidney and Liver. Starting with the first cycle, as cocaine is snorted through the nose, it enters the Lung where it impairs the

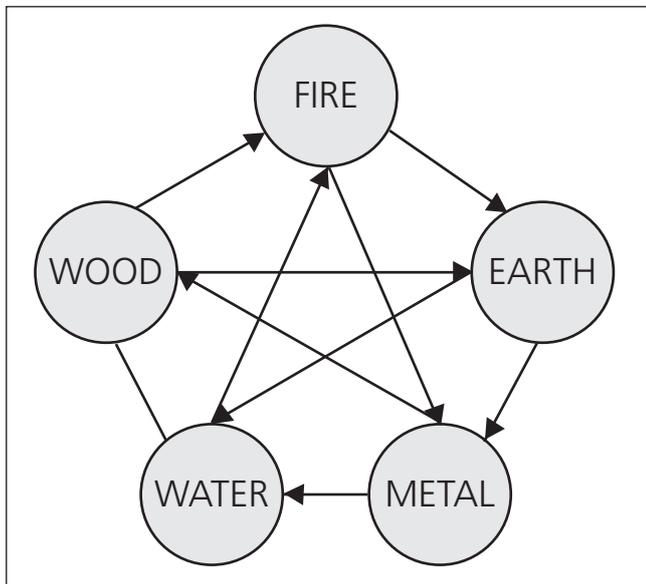
Lung's dispersing and descending function. Symptoms manifest instantly with nasal obstruction or rhinorrhoea with a thin watery mucus and sneezing. The Lung *qi* will be damaged with symptoms of peripheral vascular collapse, tachypnoea and tachycardia. As Lung *qi* is deficient, *wei qi* will be weakened causing the pores to open with spontaneous sweating and making the body susceptible to colds with flu-like symptoms. The Lung governs *qi* and controls the channels and blood vessels. This is essential in aiding the Heart in circulating blood; hence peripheral vascular collapse and tachycardia are both associated with the Lung and Heart. Together, the Lung and Heart distribute cocaine to the entire body. The pattern moves from the Lung to the Heart via the insulting sequence of five phase theory (figure 2).

Figure 2 The generating and insulting sequence of the Lung, Heart and Spleen.



Cocaine then proceeds to damage Heart *yin* creating an Empty Fire pattern (Dale, 1993) with symptoms of insomnia, vertigo and sweating. Sweat itself is attributed to Heart *yin*, with the mechanism of a deficient Spleen allowing it to 'leak' out. Heart *qi* will also be damaged, with symptoms of anxiety, peripheral vascular collapse, tachycardia and excitement. As the abuse of cocaine depletes Heart *yin*, it allows Heart Fire to rise. Within the controlling sequence of five phase theory, the Kidney regulates and controls the Heart (figure 3). The excessive Heart Fire requires more *yin* to regulate it, leading to a further deficiency of Kidney *yin*. This is known as Heart insulting Kidney, just as the Lung insults the Heart. Secondly, the Kidney and Heart have a unique relationship, known as the 'mutual assistance of Fire and Water' (Maciocia 1989). The Kidney is the greatest *yin* organ, is associated with Water and is housed in the Lower Burner, whilst the Heart is the greatest *yang* organ, is associated with Fire and is housed in the Upper Burner. Together, these two organs' relationship helps regulate *yin* and *yang* within the body. An imbalance of one will naturally affect the other.

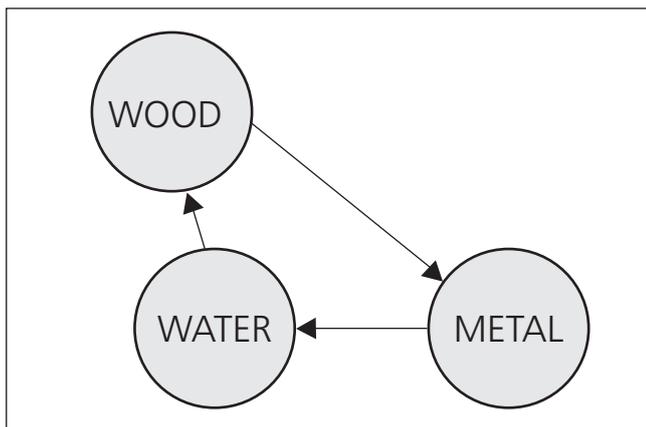
Figure 3 The generating and controlling sequence of the five phases.



Heart (Fire) is the mother of Spleen (Earth) (figure 2). A deficiency of the Heart will lead to a weakened Spleen. The deficient Spleen cannot produce enough post-heaven qi to satisfy the body's requirements. Additional qi is sourced from pre-heaven qi or essence housed in the Kidney, thus depleting Kidney yin. A weakened Spleen will in turn lead to a weakened Lung, the son of Spleen. The cycle reverts back to the Lung, which perpetrates the cycle of deficiency.

Starting back at the Lung for the second cycle, a deficiency of the Lung (Metal) inhibits its ability to generate the Kidney (Water), leading to a deficiency of Kidney yin (figure 4). Coupled with this, many addicts are involved in excessive sexual activity that drains jing (Essence), which further exacerbates the empty Heat pattern, as essence housed in the Kidney is the source of yin. Symptoms manifest as night sweats, paranoia, fear and in severe cases renal infarction, atherosclerosis of the kidney and renal failure (Crowe,

Figure 4 The generating and insulting sequence of the Lung, Kidney and Liver.



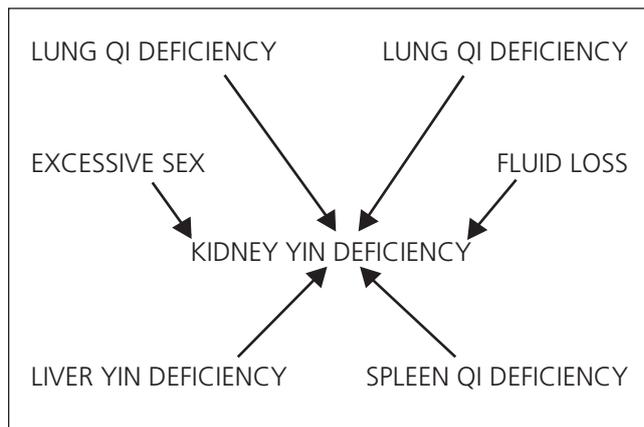
Howse, Bell and Henry, 2000). The abuse of sex that results from the empty Heat pattern increases the yin and jing (Essence) deficiency. With some abusers, the addiction to drug-induced sex is a primary motivation for the abuse of cocaine. The empty Heat pattern causes exuberant yang which increases erectile function in men and a heightened sense of feeling in women. These people may be actually addicted to the empty Heat pattern itself (Given, 1997; Smith, 1985; Dale, 1993).

In turn, a deficiency of Water will lead to a weakness of Wood, causing a deficiency of Liver yin (figure 4). Yin is unable to regulate yang, allowing yang to rise and become disruptive. This causes the pattern Liver yang rising and displays all the classic drug abuse symptoms; irritability, euphoria, anger, depression, restlessness, tremors, hypotension, hypertension, exophthalmia and mydriasis. Mydriasis (dilation of the pupil) is termed 'Wind orbiculus' in TCM and illustrates the Liver's involvement (Yuan, 2000). This provides a useful means of diagnosing current cocaine addiction. The Liver is the main branch organ involved in drug addiction cases because of these classic drug related symptoms. Liver yang rising further exacerbates the Heat pattern and yin depletion. The Liver then insults the Lung, weakening the Lung further, which again perpetrates the cycle of yin deficiency (figure 4). As well as receiving yin from the Kidney, the Liver also gains yin from jing (Essence), stored in the Kidneys, hence the saying the 'Liver yin and Kidney yin have the same root'.

The Liver imbalance leads in turn to a disharmony between the Liver, Spleen and Stomach. An overactive Liver exploits the Spleen causing the symptoms of a loss of appetite, abdominal cramping, loose stools and sweating in the day. As the Liver exploits the Stomach, it causes nausea and vomiting. Excessive loss of bodily fluids from sweating, vomiting and loose stools worsens the yin deficiency.

All the above yang organ disharmonies start at the Lung, affect all the yang fu and greatly harm the Kidney, causing the most predominant pattern; Kidney yin deficiency (figure 5).

Figure 5 The factors leading to a Kidney yin deficiency.



There are six mechanisms that deplete Kidney *yin*. A summary of these is given below:

- Lung *qi* deficiency: affects its ability to nourish and generate Water (Kidney) and insults the Heart.
- Heart *yin* deficiency: requires additional *yin* from the Kidney to regulate Fire via the controlling sequence of five phase theory and the mutual assistance of Fire and Water mechanism.
- Excessive sex: drains essence and *yin* housed in the Kidney.
- Fluid loss: vomiting, sweating and loose stools depletes the body's *yin*.
- Liver *yang* rising: drains Water from the Kidney as Water nourishes Wood (son ruins the mother), whilst also draining essence and insulting the Lung.
- Spleen *qi* deficiency: causes a lack of post-heaven *qi*, thereby depleting pre-heaven *qi* housed as Essence in the Kidney and is unable to nourish the Lung, (son of the Spleen).

SPIRIT ASPECT

At the root of addiction lies a reason, a pattern for it to exist in the first place. Some commentators have suggested the source of drug addiction is the *shen* as it is the mind and the commander of the other *zang fu*. It is more complicated than that. From a *zang fu* spirit perspective, the initial inhalation of cocaine through the nose into the Lungs elevates the *po*. The Chinese character for *po* (魄) is made up of the character *gui* (鬼). *Gui* relates to spirits of the Earth, whilst the character for *shen* (神) relates to spirits of Heaven (Rochat de la Vallée, 2013). The *po* is the *yin* spirits attached to Earth, to form and to substance (Rochat de la Vallée, 2013). The in-breath is the physical self, the 'I', our quest for life and presence on Earth connected through the inhalation of breath into the Lung, whilst the out-breath is surrender to the now, Heaven, via the Heart. The Huang Di Nei Jing Su Wen lists a system of categorisations with subcategorisations. The diaphragm divides the body into two distinctive halves, above the diaphragm is *yang* and below it is *yin*. The two organs above the diaphragm are the heart and lung. Within the fourfold subcategorisation of *yin* and *yang* dualism, the Heart is labelled *yin* and the Lung *yang*, as *yang* goes above *yin* (Unschuld, 2003). Cocaine addiction is rooted in artificially inflating the *po* for it to dominate over the Heart. The Heart is *shen*, Heaven and self-love. The artificial inflation and dominance by *po* is due to a disconnect from the Heart, *shen* and Heaven. This Heart disconnect from Heaven creates fear and it is this fear that propels the abuser to seek alternative protection in the disillusion that Heaven has forsaken them. This is done through artificially inflating the *po* by the inhalation of cocaine. This creates a false generation in the Lung, which temporarily increases the mother-son relationship between

the Lung and Kidney, in that the Lung is powerful enough to nourish the Kidney and reduce fear, thereby quelling a lack of self-confidence and self-love born from the addict rejecting their connection to Heaven and *shen*. However, once the effects of the drug have worn off, the real pattern of a Kidney deficiency and fear becomes prominent.

As the Kidney deficiency is the end cause of cocaine addiction, the *zhi* will be affected. The character for *zhi* (志) is made up of the Heart/Mind (心) with a small shoot above it. This shoot represents something that can form a base from which it is possible to grow and develop in the right way (Rochat de la Vallée 2013). It allows for the development of the person, both physically, mentally and emotionally. It is the root at which the human tree grows into blossom. If *zhi* is weakened then the person does not develop and mature and is stuck, in an addictive cycle of stagnation. *Yi* (意) also contains the character of the Heart/Mind (心) but is the mouth piece of the *shen*, what is moving across the Mind at any one time can be voiced. The *yi* gives form to an image, a thought or intention and then the *zhi* fixes that in the mind. An addict is reminded of the artificial high introduced by the abuse of cocaine by the *zhi*. The empty high is then fixed in the Mind by the *zhi* and relayed across the Mind by the *yi*. It is this that makes it an addiction rather than abuse, as it creates a Spirit imbalance, as the Kidney relies on cocaine to be falsely generated by the Lung. This creates a strong emotional, mental and spiritual addiction, which becomes difficult to break.

In the second century text Huainanzi, it states, 'Human beings are able to cultivate and nourish their vital spirit to quieten the *hun* and *po*' (Rochat de la Vallée, 2013). Therefore, the reverse is true, if a person is unable to cultivate and nourish their *shen* due to a disconnect brought on by an abuse of a substance via the Lung, it allows for a rebellious *hun* and *po*. As mentioned above, the *po* is an inflated sense of self, due to a disconnected *shen*. Whereas a rebellious *hun* is due to a disconnect to the spirits. *Hun* and *shen* are very similar in their relationship to heavenly spirits. 'The *qi* of heaven makes the *hun*, the *qi* of earth makes the *po*' (cited in Rochat de la Vallée, 2013). The *hun* can come and go as it pleases, like a spirit or a dream, it is not restricted by openings or exits, like the *po*. However, by introducing cocaine into the opening of the *po* and artificially inflating it, the Lung insults the Liver, restricting the flow of the *hun* within the body.

We can see that the root of cocaine addiction is in the spirits, which starting with the *po*, go on to damage the rest of the spirits and the *zang fu*. From a shamanic point of view, every plant has a spirit and requires *qi*. The cocaine plant gives the abuser a high in exchange for some of their *qi*, which eventually drains the Kidney. This rule of *qi* exchange is the same in all addictions. The abuser gives up part of their *qi* in exchange for a heightened feeling, euphoria, a kind of peep show into enlightenment, using a substance as a temporary short cut, but with a substantial pay off.

TREATMENT STRATEGIES

The NADA protocol is a 'cookbook' strategy that treats the organ at a generic level, one point for one *zang fu*. It doesn't address the spirit or *jing* aspects of addiction. Therefore acupuncture points located on the body should be used in conjunction with auricular therapy to provide a correct treatment programme based upon a clear pattern analysis. When using the NADA protocol, it is important to use electrical stimulation on the Lung point. This mimics the original research conducted by Wen and Cheung (1973a, 1973b, 1973c) where only the Lung point was stimulated using electrical acupuncture to reduce cravings for illicit drugs. It is also a more natural way of stimulating the Lung to nourish the Kidney. The Lung point lies in the concha of the ear, which is the place of greatest density of vagal innervation (vagus nerve). Blum, Cull, Braverman and Comings suggest that stimulating the vagus nerve causes the release of dopamine and therefore reduces drug cravings. It may also balance the *po* and its dominance over the Heart. 'If there is an abundance of things and essences, then the

hun and *po* are strong' (cited in Rochat de la Vallée, 2013). The use of acupuncture, herbs and dietary advice can help addicts to rebuild their essence and strength so they can break the stagnant cycle of *zhi* and *po* addiction and re-establish a connection to *shen* as well as *hun*.

CONCLUSIONS

The NADA protocol, in addition to body points and herbs, provides a wide range of interventions available to oriental medicine practitioners. Acupuncture is highly cost-effective, with few overheads as equipment needs are negligible, and has no reported side effects. Herbs are equally as cheap and offer an effective way in rebalancing withdrawal cravings for substances such as cocaine and assist in detoxifying the body and rebuilding *yin* and *jing*. The use of Chinese medicine therapy can decrease the number of patients being admitted to hospital with drug related illnesses, benefit society in reduced crime rates and benefit the addicts themselves.

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