

FREUD'S EXPERIMENTS WITH COCAINE

By Arthur George Mercieca

Sigmund Freud is generally known as the man who evolved the study of Psychopathology. His method of Psychoanalysis was directed towards the study of the individual's normal and abnormal mental reactions, so as to be able to get down to the basic cause behind each individual's trouble. But besides this contribution to Psychopathology, Freud also did much experimental work with Cocaine, and he very nearly discovered its properties as a Local Anaesthetic.

Freud as a young man was not greatly inclined towards medicine; in fact, after graduating he did not even bother to set up a private practice. But although at the start of his career he was so indifferent, two determining factors caused him to develop an urge to achieve success.

The first factor was Freud's sense of inferiority, and his urge to become important. He lived during a time when the Jews were constantly being humiliated, and made to feel conspicuous. As a young boy, Freud had faced many such humiliations, but perhaps, the one that remained most impressed in his mind was when Freud was walking with his father and a bully came up to them and insulted the older Freud. He could not retaliate. The bully knocked off his father's cap in the street. The old man quietly picked it up and walked away. Sigmund was too proud to give an outlet to these emotions. They remained repressed in him for most of his life, and it was such repressed emotions that instilled in him a strong desire to become a somebody.

The second, and probably the most forceful determining factor was his sudden urge towards financial security; his urgent need to make money. This financial pro-

blem came over Freud rather quickly, and the circumstances that led up to it, also led to Freud's important experiments with Cocaine.

One evening in April 1882, when Freud was still an unknown young doctor, he fell in love with a beautiful girl of 20, Martha Bernays. She was the daughter of a Jewish businessman. Sigmund used to send letters and roses to her daily. Some two months later, he decided that she also loved him and he decided to work in the General Hospital to prepare to set up a private practice. He wanted to achieve economic independence and marry her. But Martha's mother would not accept a son-in-law with no secure position, so she sent Martha to some relatives in a small town near Hamburg, to separate the two young people.

Freud was desperate, that he could not see her. He borrowed money to go to Wandsbek where she was staying. On his return, knowing that he could not see Martha for some time he again felt extremely desperate. He suffered from severe depressions. He was extremely jealous. In him developed a desperate desire to make an unusual discovery, to enable him to make money quickly, so that he would be eligible to marry Matha. Freud tried many experiments, and new ideas of treatment, but each time he failed, and this only added to his desperation.

Once whilst working in the Neurology department, he read an article 'Physiological effect and Importance of Cocaine' by Theodor Aschenbrandt. Freud, being on the lookout for something new, to win him fame and money, was once more inflamed by enthusiasm. He immediately wrote to the only drug firm which was

producing Cocaine at the time. The price per gram was impossibly high for Freud, yet he sent for a gram, hoping to pay for it later. When he received it he started to experiment on himself. On taking the first dose his depressions vanished; he felt that he was again capable of concentrating and working. The results of this early experiment made him feel that he was on the verge of a discovery. He was spurred on by a sudden excitement, and a new avidity for work. He looked up older reports on the drug. He found a paper stating that Cocaine was able to relieve Morphine addiction.

This paper reminded Freud of an old friend of his, who was an assistant at the Physiological Institute, where Freud himself had previously worked. Freud knew that Ernst von Fleischl had been a Morphine addict for some time, and so he suggested to him the use of Cocaine. This produced an excellent effect, which again stimulated Freud with new ideas. Fleischl, to whom money was no problem, supplied Freud with the Cocaine he needed for his experiments.

Once, during the course of his experiments, Freud discovered, that on taking Cocaine the pain of an inflamed gum was deadened. Freud noticed this effect, but he was so absorbed with the anti-addiction, anti-depressive and tonic effects of Cocaine, that he did not bother with its analgesic properties. However he did mention this property on several occasions. In a paper that he published, Freud mentioned the effects of cocaine to overcome depression and complaints caused by nervousness. He also mentioned its effect in augmenting physical and mental strength, and also stated that it was not habit form-

ing. Before closing Freud also mentioned its properties to render the Mucous Membrane insensitive to pain, and that its analgesic properties may be developed some time in the future. Freud also suggested to Leopold von Königstein, a lecturer in Ophthalmology, that Cocaine may alleviate pain in certain eye diseases, such as Trachoma and Iritis.

At this time addiction to the drug started to be noticed. Freud himself never became a Cocaine addict, and this may have caused Freud to persist with his experiments. He still hoped to develop the anti-depression properties of Cocaine. Freud was going in the wrong direction. He was on the verge of a discovery, yet he ignored it.

A few days after Freud had noticed the analgesic properties of Cocaine, on the Mucous Membrane of the gums, he met two doctors, one of whom was Carl Koller. Koller's companion had toothache, Freud tricked a few drops of Cocaine on his gums and the pain was relieved. Koller, noticing this, worked on this property of Cocaine, and evolved its use as a Local Anaesthetic.

Although Freud was aware of the Analgesic properties of Cocaine he lacked interest in this aspect. His experiments were being done expeditiously and in one direction. Consequently Freud was discarding the opportunity of making the discovery that was to produce for Koller the fame and reward he was so desperate to obtain for himself.

References: Gardner Murphy, *Historical Introduction to Modern Psychology*; J. Thorwald, *Triumph of Surgery*; H. Sacks, *Freud, Master and Friend*.

