

The coca plant or coca shrub commerce essay

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BIO100 Research Project Cynthia Martinez Abstract Coca leaves also known as Erythroxyllum Coca, is the main ingredient in Cocaine. Coca plant use dates back to 1000B. C. when people used coca leaves for medical reasons. Coca leaves chewed, smoked, or brewed as a tea has been found to help cure illness, and help deal with pain. This plant is typically found in places such as Bolivia, Peru and Northern Argentina. Over the years, there have been many describing the negative and the positive effects of the Coca leaves. There are many questions on the subject of coca leaves, and even with all the research completed, many of questions still have not been answered.

The Coca Plant The Coca Plant or coca shrub (*Erythroxyllum coca*) is the primary ingredient in Cocaine. The Coca plant is a shrub that grows from 12 to 18 feet tall. It has reddish branches and a white colored bark is a white colored. The leaves are oval shaped with a smooth glossy surface; the colors are typically a vibrant green or a brownish green depending on where it is grown. Cocaine comes from the extracted juices of the Coca leaf. Because of the Coca leaf's role in the development of cocaine, it has received a negative reputation and has become the subject of much controversy. According to Juan C. Negrete "Coca Leaf Chewing: a Public Health Assessment" 4 million people in Bolivia, Peru and Northern Argentina frequently chew the leaves of the Coca Bush. There have been many studies surrounding a trend relative to coca leaf chewing and people who live in high altitude living. Several scientists have found that the coca chewers use the leaf to improve high altitude living conditions. They might chew to help deal with the difficult climate changes and working conditions that people like the Andean people have. Some other suspected people who chew coca leafs are to help deal with cold temperatures and low pressure conditions. (C. Negrete, 1977). It is <https://assignbuster.com/the-coca-plant-or-coca-shrub-commerce-essay/>

more commonly used and accepted as part of their culture. Because it is so commonly used they feel that chewing coca leaves is the same as smoking a cigarette or drinking caffeine. Because it is so commonly used, they feel that it has some effect on social behaviors in the countries that use them. (C. Negrete, 1977). This plant has been the center of some very controversial arguments. This has been augmented over for centuries even earlier than 1722. When a priest by the name of Father Antonio Julian published a book describing the benefits of the coca leaves and how it is a better alternative for coffee or tea (Kilham, 2010). People were trying to decide on whether the coca shrub is harmful or not. There have been several studies that question the effects of the coca leaves, however all the questions on this plant have not been answered. According to Victor B. Stolberg, there are several different varieties of the Coca Shrub. The two main species of the Coca shrub are mainly found and grown in Western South America; they are usually grown for commodity over a large region (B. Stolberg 127). The earliest evidence of people using the coca plant is 1000 B.C. Archaeologists have found mummified human remains that are from northern Chile; they are said to belong to the Alto Ramirez Culture. With Radioimmunoassay they were able to suggest that coca was popular and regularly used. Over the years they have found many different mummies that come from different parts of the area; for example, the Nazca, and Peru, people have been found buried with small bags of coca leaves also known as Chuspas. (B. Stolberg 128). It was not until later that they found that the mummified humans from northern Chile and Coastal Peru have been chewing the Coca leaves; they indicated this by dental analysis they have discovered that a large amount of the people had suffered tooth decay. Archaeologists have found paintings

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on a Moche ceramic vessel that painted the whole process of extracting lime from small items and mixed it with the coca leaves so it could be chewed. They also showed that the first leaves of the harvest had to be offered to the Gods before they can be used by the people. Archeologists have found that in the Pre-Inca society they found that the use of coca leaves was a way to prove of high class. They would use the Coca plant was a trade they would also transport the coca plants to areas where they are not cultivated to make a larger profit (B. Strolberg 129). After the Pre-Incas, The Inca Empire used the agricultural production, the main crop being the Coca Plant became the wealth that expanded the empire. They also used the coca leaves as ritual offerings by throwing them into the river by the Inca Priests as a prayer to take away all illnesses in the empire. They felt that it helped because they would use the Coca Leaves for medical purposes to help cure colds, fatigue, pain and hunger. (B. Strolberg 130). The coca plant was introduced into Spain In 1532 When Francisco Pizarro led a small army into Peru and conquered the Inca Empire. Then the Charles V, at the time was the King of Spain saw that the Inca's corn fields and the Coca Plant were there they made their most profit. The King then ordered the increase of production and began to sell it with different parts of the country. Once it was in Spain it was used by everyone no matter the wealth. It became part of their medical practice, it was used to cure disease and it was largely taxed on. Because it was very popular to chew coca leaves in Spain other cultures have adopted the habit such was the Andean Culture. (B. Strolberg 131). During the 1880s Coca leaves was seen as a very beneficial alkaloid when treating patients they felt that the alkaloids the coca leaves provide were able to cure some sever disease and illness. May products were made form extracts of this <https://assignbuster.com/the-coca-plant-or-coca-shrub-commerce-essay/>

plant, such as candies, medication, and soft drinks like Coca-Cola that was sold in the United States. They found that these substances do not cause or have any addictive qualities. (B. Strolberg 138). Strolberg described today's major countries that are known for commonly chewing coca leaves are Bolivia, Argentina, Brazil, Chile, Colombia, Ecuador, and Venezuela. Using the coca plant is a part of their culture it is mostly used by men. It is commonly used and exchanged with social greeting or gatherings such as business. Some describe the effects to be the same as a cup of coffee or an aspirin tablet because it is so frequently used (B. Strolberg 133). Today there are different ways of using the coca plant. You can chew it which is most commonly used for brewed it as a tea and smoke it. The way that people chew the coca leaves is that they get a dried leaf and put it between their cheek and gums and moisten it with their saliva, they really do chew on the leaves rather than suck out the juice from the coca leaves. They sometimes add lime which is produced by lime stones or burning seashells in the middle of the leaves to separate and accelerate the amount and rate that the leaf's alkaloids are released, which is usually cocaine (B. Strolberg 133). Although coca is being debated over the negative and positive side to using coca leaves. Coca is a huge part of Andean and Peru's culture that Juan C. Netrete M. D. Head of the department of psychiatry at McGill University, in Montreal described a traditional coca chewer that are construction or mine workers day had they start chewing early in the morning and chew all through their work day. During the days they are not working they start chewing late at night and typically when they chew they also drink. When they chew they typically have a quid of leaves in their mouth at 2 to 3 hours at a time in total they chew a quid 3 to 4 times a day. A quid is a typically 50 grams of dry

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leaves which is equivalent of 250 grams of Cocaine, and they making it into a ball place in-between there gums and their teeth suck on it throughout the day. On average a person may chew 10 grams and higher depending on the person. (C. Negrete 284). One hypothesis people have concerning the coca chewing leaves is that it reduces the workers fatigue, hunger and thirst; enabling them to work more. Most people have this hypothesis because the majority of the people that used coca leaves have said it is used because of that purpose (C. Negrete 285). He also did a survey to see if using coca leaves has no effect on the level of education a person has. He found that 2 percent of people in Peru is said to have only a high school education, 60 percent of the people were reported to have not completed school. When they surveyed the Non- Chewer, asking the same questions they found that 22 percent to have said that they have a high school education and only 18 percent have not completed a high school education and is considered illiterate (C. Negrete 283). He did find a trend between education levels and chewing or using coca leaves, there was a high percentage of people that use coca leaves didn't graduate high school. However this isn't enough evidence to officially say that coca leaves have an effect on the education of the individual. One major concern that the public has about the coca plant is that it can cause weight loss or loss of appetite, which can also result in malnutrition. In this article "Coca Chewing and Diet" by Roderick E. Burchard, he performs a study that tests the theory that Coca Chewing reduces appetite. He conducted his research based in the study a professor named Carlos Gutierrez Noriega. His Study was on the harmful effects that Coca Chewing had on the health of the Andean people and he got great recognition for this. In Roderick's tested the hypothesis by finding individuals

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with nearly the same living conditions that are coca leaves chewers and non-coca leaves chewers. Before conducting the actual survey 3,513 people that were randomly drawn individuals in the Bolivian area, asking them if they believe that Coca leaf chewers eat more or less than non-coca eaters. Out of that survey they found that only 7 percent of the people that they questioned believed that chewers ate more than non-chewers. And 48 percent believed that they ate more, 34 percent believed that they ate the same. One of the main goals of this research was to find out what effect Coca leaves had on their everyday life and they felt the best way for them to start to understand this was to look at how it is affecting their eating habits because it is used so frequently among the Andean people. For their study they picked 50 pairs of Coca leaf chewer and non-Coca leaf chewers. They were picked from 3 high altitude areas, and 2 middle areas, because they wanted to also test why they were using it and to see if the altitude had an effect on the usage of the Coca leaves. Out of the pair of 50, 25 were male and 25 were female. They took into consideration for the pairs to match the economic status, religion, age, marital status and other general knowledge. Through the test they were frequently before, after and during they did a series of tests that include chemical analysis of blood and urine samples, and 4 hour glucose tolerance test. They also conducted tests on categorizing different foods and hot and cold items. The participants reported every day to describe every aspect of what they did during the day in the major thing was what they ate. During the study Burchard reported that all the participants together ate 35 different foods. The coca chewers ate for that 14 of those foods they tend to eat potato, rice, broad bean, bread, meat, fish, cheese, peanuts and many more whole some foods. And they ate less of

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foods like noodles, egg, fat, oil, sugar, onion, pepper, carrots and tomatoes. And the non- Coca leaf chew eat the opposite of that. After their study they found that there is difference in the calorie Intake between the two groups. Coca chewers were regularly higher in calorie intake, than the no- chewers. That they found that surprised them was that even through the men's diets were hypo caloric, the men that chewed the coca leaves were half of the normal calorie intake. They also found that in both categories, chewers and non-chewers the women had a much higher calorie intake. They also found that coca- chewing men has a high intake of vegetables than non- chewers. In the overall study regardless of gender or area they live in they found that coca- chewer had a higher in-take in proteins. Even though they still find errors in their studies, they have come to a temporary conclusion that chewing Coca leaves do not affect the consumptions or the intake of food and nutrition (E. Burchard 1-9). Although In the Andean traditional medical practices, Coca leaves is the major herb that is used to diagnosing and treating different illness and some are still used today. It is estimated that 80 percent of Andeans population used medicine that came from the coca plant (B. Strolberg 135). When it is used in its original form the coca leaf can provide nutritional value for example it can provides vitamin A, riboflavin also known as Vitamin B2, iron and calcium, and may also help to regulate blood glucose levels, these are all thing that is necessary for a healthy body. It can also enhancing the metabolism and helping to reduce the chance of having diabetes (" Coca leaf -," 2010). There are still questions on whether or not it is ethical to give this plant as a form of medicine. In the late nineteenth century most doctors used the coca plant as a way to treat their patience. It wasn't until that cocaine was a popular drug that the doctors decided not to

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give it to make it a form of treatment (B. Strolberg 137). There has been a study by Dr. Paolo Mantegazza, who is an Italian neurologist, he published a paper that recommended the use on coca in the medical field, and he states that it reduced fatigue, increase mood, and support sexual activity. A Physician by the name of Dr. William S. Searle found that it supports stimulated nutrition, increase pulse, respiration, urinary excretion, aided digestion systems and it strengthened the nervous system. Dr. William Oliver Moore claimed it to be "one of the best remedies for cholera" (B. Strolberg 136-137). Although Coca leaves have its positive sides there are also some short and long term negative effects. A study was done by Gutierrez Noriega and Zapata-Ortiz he conducted test that measured that measured the effects that native coca leaves chewers have on cocaine doses and 80-100 grams of dried leaf, what types of effects that it would have on the body. In both cases they found that it is similar that they both have an increase metabolism rate, hyperglycemia. They also found that both the cocaine and the dried leaves both caused a delay in reactions and they are unable to focus in the task at hand (C. Negrete 285). There have been several studies that proved that a Coca leaf does reduce hunger, and because of this it was resulted in lower food intake and they can result in malnutrition. Some of the symptoms of malnutrition caused by the Coca Leaves is their weight and high ratio was unbalanced, their skin fold thickness and their serum levels were off, and cholesterol was significantly lower. There has also been findings by the Cachicoto study that there was a large amount of Coca Leaves chewer that have enlarged livers. However they cannot indefinitely say that Coca leaves causes enlarged livers. There has also have been founded that there has been connections between coca

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leaves and malnutrition, anemia and liver damage. There have been several reports the people who have chew coca leaves have more health problem than non- chewers. There have been claims that have been made by Gutierrez Noriega that coca chewing was responsible for severe cases of neuropsychiatric conditions such as epilepsy, and psychotic states of a delusional and hallucinatory. Studies that he has done have shown that they have more difficulties in social functioning and work performance. They also found that chronic chewers lose the ability to handle complex matter and loose the drive to perform better (C. Negrete 285-286). The coca plant has been used by people for centuries. These studies were only a few of the examples of the major study that scientist are doing on coca leaves to answer the question that a lot of people have about the coca leaves and not all the question have been answered. I feel that there is always going to be debate on whether coca leaves are safe or that it is beneficial. There are many benefits that coca leave have in the body that can be used to help cure or medicate people that are sick