

Name _____

Snakebite!

Snakebite and its cure have always been the despair of medical science. On no other subject has our knowledge remained for centuries so unsatisfactory, fragmentary and empirical. The history of the subject, in fact, may be summed up briefly as a series of vain and spasmodic attempts to solve the problem of snakebite-poisoning and wring from nature the coveted antidote.

Various and contradictory theories of the action of snake-poison have been propounded, some absolutely erroneous, others containing a modicum of truth mixed with a large proportion of error, but none but one fulfilling the indispensable condition of accounting for all the phenomena observable during the poisoning process and of reducing the formidable array of conflicting symptoms to order by finding the law that governs them all. We have the advocates of the blood-poison theory ascribing the palpable nerve-symptoms to imaginary blood changes produced by the subtle poison, and alleged to have been discovered by the willing, but frequently deceiving microscope. Even bacteriology has been laid under service and innocent leucocytes have been converted under the microscope into deadly germs, introduced by the reptile, multiplying with marvelous rapidity in the blood of its victims, appropriating to themselves all the available oxygen and producing carbonic acid, as the saccharomyces does in alcoholic fermentation. Others again, and among them those supposed to be the highest authorities on the subject now living, divide the honors between nerve and blood. Some snakes they allege are nerve-poisoners others as surely poison the blood, but with one solitary exception

they assume the terminations of the motor-nerves and not the centers to be affected.

Thus then with regard to theories we have hitherto had "confusion worse confounded," and as with theories so it has been with antidotes. They were proposed in numbers, but only to be given up again, some intended to decompose and destroy the subtle poison in the system, others to counteract its action on the system with that action unknown. It is scarcely too much to assert that there are but few chemicals and drugs in the materia medica that have not been tried as antidotes in experiments on animals and dozens upon dozens that have been tried in vain on man. The reasons for this somewhat chaotic state of our science on a subject of so much interest to mankind are various. The countries of Europe, in which scientific research is most keenly pursued, have but few indigenous, and these comparatively harmless snakes. The best scientific talent has, therefore, only exceptionally been brought to bear on the subject. In those countries on the other hand in which venomous snakes abound and opportunities for observing the poison-symptoms on man are more plentiful, the observing element has been comparatively deficient.

A still more potent source of failure must be sought in the faulty methods of research pursued by most investigators. Experiments on animals were far too much resorted to, and their frequently misleading results accepted as final, whilst observations on man did not receive the attention their importance demanded.

From *On Snake Poison, Its Action and Its Antidote* by A. Mueller

Name _____

1. What are the two different theories of the action of snake poison that have been entertain

2. Name two ways in which snakebite antidotes have been intended to work.

3. According to the author, why is the science of treating snakebites so "chaotic?"

ANSWERS

1. The blood poison theory and the nerve poison theory
2. Some intended to decompose and destroy the subtle poison in the system, others to counteract its action on the system with that action unknown.
3. The countries in which scientific research is most keenly pursued have few indigenous snakes and most of them are harmless; in countries with many venomous snakes there has been little opportunity to actually observe the effects of the poison. Many researchers use faulty methods, and accept initial results as final. Observations of the effects of snakebites on man have not always been given enough importance.