

Mountain-sick and miserable, soaked by rain during the day, covered with ten inches of snow at night, the eclipse party of

S. P. LANGLEY

afterward Secretary of the Smithsonian Institution spent a week on the summit of Pike's Peak in 1878 and were rewarded by seeing the greatest extension of the corona yet observed. Their report is

THE NEXT CLASSIC OF SCIENCE

These various salts of morphine seem to be very poisonous, for after every taste I felt a pain in my head. They are rather easily than difficultly soluble in water, and almost all are of a glistening luster and seem inclined to efflorescence. . . .

Effect of Morphine on the Human Body

The most important property of morphine is the effect which its administration produces in animals. In order to determine this with reliability, I have used myself for the test, and also persuaded a few other persons to do so, because experiments with animals do not lead to any exact result. I consider it a duty to observe most carefully the sinister effect of this new substance, in order to prevent possible accident; for it has even been publicly stated that this drug has been taken by several persons in fairly large quantities, without recognizing any effect from it. If what was taken in these cases was really morphine, it must follow that this substance is not dissolved by the gastric juice. My earlier experiments, which seem not to be well known, had already induced me to state explicitly that this drug is not dissolved except in alcohol or in a little acid, because it is dissolved in water with difficulty, and hence without it it could not be dissolved in gastric juice.

In order to prove my earlier researches thoroughly, I took three persons, of whom none was over 17 years old, to take morphine with me; warned by former experience, I gave each one only $\frac{1}{2}$ grain dissolved in $\frac{1}{2}$ drachm of alcohol diluted with one ounce of distilled water. A general flush, which was even seen in the eyes, spread over the face, especially the cheeks, and the life processes in general seemed speeded

up. When after $\frac{1}{2}$ hour another $\frac{1}{2}$ grain of morphine was taken, this condition was markedly increased, whereat a transient inclination toward vomiting and a dull pain in the head and stupor were experienced. Without waiting for the result, perhaps already very bad, $\frac{1}{4}$ hour later still another $\frac{1}{2}$ grain of morphine, as a coarse undissolved powder, was swallowed with 10 drops of alcohol and $\frac{1}{2}$ ounce of water. The result was felt by the three young men quickly and in the highest degree. It showed itself by pain in the stomach, exhaustion and great faintness approaching unconsciousness. I also had the same fate; prostrate I fell into a dreamy state, and experienced in the extremities, especially in the arms, a slight twitching, which apparently accompanied the pulse-beat.

These characteristic symptoms of a true poisoning, especially the weakened condition of the three young men, caused me such anxiety that, half unconscious, I drank over a quarter bottle (6 to 8 ounces) of strong vinegar, and also had the others do the same. This was followed by such violent nausea that several hours afterward one, of the most delicate constitution, whose stomach was already entirely emptied, suffered very serious retching, painful to the highest degree. It seemed to me that the vinegar had given the morphine this violent, unceasing emetic property. On this assumption I gave him magnesium carbonate, to which the nausea yielded at once. The night passed in a deep sleep. Toward morning the sickness appeared again, but it promptly disappeared after a strong dose of magnesium. Absence of defecation and of appetite, stupor, pain in head and body did not wear off for several days.

Science News Letter, August 20, 1932

PUBLIC HEALTH

Cancer Death Rate Shows Puzzling Sharp Increase

DEATH RATES from cancer have spurted upward alarmingly in the past year and a half in the face of extremely favorable general health conditions. Health statisticians are asking what forces are at work to cause this unprecedented rise in the deaths from cancer throughout the United States.

Figures compiled by the Metropolitan Life Insurance Company upon its industrial policyholders show a rise of 7.4 per cent. in the year 1931 and the reports for the first half of 1932 show a further rise of 9.5 per cent. over the rate for the like part of last year. This is in strong contrast to a relatively slow average rise of almost 1.5 per cent. a year in the period 1919 to 1930.

If the cancer deaths continue at the present rate during the rest of this year, the increase in the last two years will be three-fourths as much as during the preceding twelve.

Although official 1931 mortality statistics are not yet available for any large part of the country, the provisional reports received substantiate the Metropolitan's figures.

The actual increase in cancer deaths may not be as sharp as the figures indicate, since the reported increase may be due to more accurate diagnoses of cancer by physicians. But the Metropolitan statisticians suggest the possibility that "we are confronted with some influence that is increasing the true incidence of cancer."

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The belief that man has one less rib than woman persisted among the general public until the sixteenth century, when Vesalius demonstrated the facts.

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