

SECRETS OF ALCOHOL REVEALED BY SCIENTISTS.

(By Nurse Ada E. Chappell.)

Scientists of the highest repute have proved that alcohol is not a food, but a very dangerous drug. When taken into the body of man or beast its character is not changed; it still remains alcohol, and as such is passed into the blood, and thus carried to all the cells of the body, there to do its destructive work.

When starchy foodstuffs are taken into the human body, though they cannot be utilised in the physical economy as starch, yet there are secretions in the digestive track which convert them into sugar, and thus their utility is secured for the needs and uses of the body. (These secretions acting on starchy substances are not manufactured in the human body until about the ninth month, hence the wisdom of withholding starchy foods from the infant until this time, when they can be converted into sugar.)

But there is absolutely no provision in the body of either human beings or the beast creation to convert alcohol into another substance which could be utilised in the physical economy, or to change its character and neutralise its injurious effect.

There are many simple experiments which could be tried in any household to see the effect on the tissues of the body. Take any pet animal and try it upon it, and see the changes which would take place in it. In the summer of 1909 an international conference on alcoholism was held in London, to which most of the great nations sent scientific men or delegates. Comparing the results of investigations made in all parts of the world, finding these results agreed, representative medical leaders of the Conference drew up a report in the form of a statement defining the nature of alcohol, as follows:—

THE NATURE OF ALCOHOL.

"Exact laboratory, clinical, and pathological research has demonstrated that alcohol is a dehydrating, protoplasmic poison, and its use as a beverage is destructive and degrading to the human organism. Its effects upon the cells and tissues of the body are depressive, narcotic, and anaesthetic. Therefore, therapeutically, its use should be limited and restricted in

the same way as the use of other poisonous drugs."

In the Principles of Eugenics, by B. Eames, it says: "Nearly all authorities are now agreed as to the deleterious effects of alcohol upon posterity."

Dr. Saleeby (one of the greatest living authorities on Eugenics) maintains that alcohol is a race poison—that it acts as a poison to the germ cell. Experiments upon animals have proven it true. It was shown by Cambermale that pups begotten of a healthy female by an alcoholised dog were congenitally weak, and showed marked asymmetry of the brain.

Friedenwald found that when pregnant rabbits were given alcohol they delivered their young prematurely. In one experiment, when twenty rabbits were so fed, seventeen aborted, and eight of them died soon after of septicaemia (blood poisoning). Nearly all of the young which were born at full term died a few days after birth.

Dr. T. Alexander MacNicholl, a renowned authority on the subject of alcohol and degeneracy, who was sent to Europe by Theodore Roosevelt during his administration as President of the United States to make further study and research, has cited some cases which show the difference in heredity between the children of the drinker and the children of the abstainer. He made a study of two groups of families living under the same conditions and in the same environment. Sixty-five children were born in the ten families of regular drinkers during the period of investigation, thirty of whom died in infancy, one was insane, one epileptic, four anaemic, three had very poor teeth, one was diabetic, three had heart disease, two were imbeciles, five were neurotic, three had adenoids, eight were tubercular, and only four were normal. In their studies at school two of the children were excellent, six fair, and seventeen deficient. In the ten families of the total abstainers, there were seventy children, of whom only two died in infancy, one was anaemic, one tubercular, one neurotic, one rheumatic, and sixty-four were normal. In their studies at school sixty-five were excellent, ten fair, and two deficient. In the children of the total abstainers, 90 per cent. were normal in mind and body, as against 7 per cent. of the drinkers' children.

Dr Axel Gustafson, one of the world's greatest authorities concerning the effects of alcohol upon the human system, says that it is pre-eminently a brain poison. The brain essentially is composed of oxygen, fats, and water; and alcohol has a marked affinity for these substances. It takes the loose oxygen from the red blood corpuscles, thus retarding normal oxidation, and inducing accumulation of waste material; it dissolves fats tending to paralysis of cell function; and it abstracts water from the protoplasm, producing shrinking of the cells. These conditions existing any length of time will cause the cells to degenerate, connective tissue to form and normal functions to be permanently impaired.

The following is an extract from the speech of the Hon. R. P. Hobson, who had received a thorough scientific training and brought that capacity to bear upon the question of alcohol and its bearing on human degeneracy. This speech was delivered in the House of Representatives, February 2nd, 1911:—

ALCOHOL A CAUSE OF DISEASE.

The results can be illustrated by taking the effect of alcohol on the white blood corpuscles, the wonderful standing army of the system, whose organised hosts, millions strong, attack and destroy the hordes of disease of all kinds that are constantly entering the system through the air we breathe, the food and drink, and through abrasions of the skin. These disease germs, seeking a lodgment, germs of tuberculosis usually in the lungs, germs of typhoid in the intestines, each kind in its favourite organs or tissues, are constantly under assault from the armies of the corpuscles. If the latter win from the outset the germs are thrown off. If the germs win at first they get a lodgment and multiply, and the person contracts the diseases. If by repeated assaults the corpuscles finally win, the patient recovers. If the multiplying hordes of germs win the patient dies.

Under the microscope it was found that even a moderate drink of alcoholic beverage passing quickly into the blood paralyses the white blood corpuscles. They behave like drunken men. In pursuit they cannot catch the disease germs. In conflict they cannot hold the disease germs from devouring, and they cannot operate in great phalanxes, as they do when sober,