

called trichloroacetic acid, Dr. Brady said. This substance acts to coagulate the organic material in the tooth and block any further penetration by the acids of decay into the interior of the tooth.

Nature has her own way of doing just this, under favorable conditions.

When decay starts, a defense may be made in the form of a barrier of calcium deposit across the path of the penetrating acids. In laboratory tests, it has been found that acid strong enough to destroy all the rest of the tooth, will leave that defensive calcium deposit.

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tory preparation and is not yet commercially available.

The compound is somewhat inconvenient in that it must be prepared shortly before use, as it is stable at most for only a few weeks.

It does not supplant insulin but serves as an adjunct to it.

It is of no special value to persons who are now adequately treated with insulin.

Fifteen cases treated in Boston in general confirm the excellent results reported in the eighty-five cases reported from the Danish hospital.

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MEDICINE

## New Insulin Treatment Makes Diabetic More Nearly Normal

### Supplement to Ordinary Insulin Promises To Make Adjustment of Carbohydrate Balance Easier for Some

THE "most valuable discovery in the treatment of diabetes since the original discovery of insulin" is announced in *The Journal of the American Medical Association*. (January 18)

A new preparation—protamine insulinate—is the answer found by Danish investigators to the problem of the many persons with a severe diabetes which cannot be controlled satisfactorily with insulin alone.

Protamine insulinate does not supplant ordinary insulin in the treatment of diabetes but serves as an adjunct to it. The two must usually be used in the same patient at different times each day.

For example, a person with diabetes can employ the quickly acting old insulin in the morning with a heavy breakfast and the slowly acting compound at night before a light dinner.

That is what has been done at the Steno Memorial Hospital, Copenhagen, Denmark, where Dr. H. C. Hagedorn and his associates have developed the new preparation. A similar procedure is being followed by Dr. Howard F. Root and associates at New England Deaconess Hospital, Boston, where the new preparation is also being tested.

"It would appear as if a new revolution in the treatment of diabetes must follow and the possibility created for the diabetic patient to resemble more closely a normal individual," writes Dr. Root and his co-workers, Drs. Priscilla White, Alexander Marble and Elmer H. Stotz.

"While the majority of persons with diabetes are able to adjust their carbohydrate metabolism satisfactorily by the injection of insulin several times a day, many have so delicately balanced an

equilibrium that it is readily disorganized by slight overdosage or underdosage of insulin," the *Medical Journal* explains. "Wide fluctuations in blood sugar occur in these patients."

The Danish investigators have combined insulin with protamines, which are elementary compounds of amino acids containing one or more of the substances lysine, arginine and histidine. The resulting compound is relatively insoluble and tends to be absorbed slowly and over a longer time than ordinary insulin. The blood sugar lowering effect lasts about twice as long.

In presenting the work of both the Danish scientists and of Dr. Root and his associates in Boston, *The Journal of the American Medical Association* emphasizes several facts:

Protamine insulinate is still a labora-

ZOOLOGY

## Roosevelt Memorial Hall Honors Love of Wildlife

WILDLIFE in all its phases has an inseparable connection with the name Roosevelt. As legitimate quarry for hunting, as a vital part of the national heritage to be conserved against the effects of too much civilization, as a life-complex worthy of scientific field study, wildlife has long had the close attention of members of this most prominent American family.

Roosevelt significance to wildlife is brought to a new focus with the dedication of the New York State Roosevelt Memorial at the American Museum of Natural History in New York City, which took place on Sunday, Jan. 19. In this new great hall, appropriately near the hall dedicated to his friends and collaborator, the late Carl Akeley, Theo-



NEW YORK STATE ROOSEVELT MEMORIAL

dore Roosevelt's intimate and vigorous interest in the wild animal life of three continents will be suitably commemorated, in collections, in paintings and in sculptured mementoes of the chief events of his astonishingly varied life.

While Theodore Roosevelt never pretended to be a professionally qualified zoologist, his knowledge of the animal life he met in his travels in Africa and both the Americas ran substantially ahead of that usually encountered in even the more thoughtful and observant of big-game hunters. And the trophies of his expeditions today enrich several leading museums with scientifically valuable and popularly instructive material. His leadership, along with Gifford Pinchot, in the fight for the conservation of American forests and forest

wildlife is so well known that even passing mention is almost superfluous.

That Theodore Roosevelt was only giving expression to a deep-rooted family tendency when he wrought all these works was well testified at the dedication ceremonies last Sunday. His relative now in the Presidency, Franklin D. Roosevelt, made the principal address, as representative and leader of the newer developments in American conservation. And on the same platform was the second Theodore Roosevelt, who has followed to a large extent in his father's footsteps.

Politics may amount to a veritable family row among the Roosevelts, but in matters concerning conservation of wildlife resources, they are a united clan.

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#### SAFETY ENGINEERING

## Curb on Motor Car Speeds Will Not Prevent Accidents

**T**HE growing demand for restraints of motor car speed as a cure for traffic accidents and deaths is about "as illogical and irrational as the dulling of the cutting edges of all knives for the benefit of the few people who are incapable of using these indispensable tools," the meeting of the Society of Automotive Engineers heard from Dr. Miller McClintock, director of Harvard University's bureau for street traffic research.

"It is quite right and proper that public officials, in the performance of their duties, should place restraints upon the use of speed under conditions which experience has proved to be productive of hazards. It should be pointed out, however," Mr. McClintock said, "that these restraints are distinctly negative in character and that they do not approach a constructive solution of the accident problem. The great majority of current fatal, non-fatal and property damage accidents result from speeds which are below any speed limits which would appear reasonable or tolerable. Statistical evidence, though inadequate, indicates that not more than six or seven per cent. of fatal accidents can be attributed to speeds of more than fifty miles per hour. A rigid physical limitation of speed to fifty miles per hour would affect only a small proportion of even these accidents. Most of them would have proved

equally fatal at lesser speeds.

"The difficulty of dealing with the accident problem purely through a control of speed is illustrated by a situation of daily occurrence. Two vehicles on a rural highway are approaching each other, each travelling at thirty miles per hour. This is certainly a nominal speed and one far lower than that imposed by any state today. They meet head-on. The effect is very much as though each of them had struck a stone wall at sixty miles per hour. It is rather an academic question to ask how much more serious the consequence would have been if the speed had been higher.

Then added Dr. McClintock:

"Please do not interpret anything that is here said as an appeal for higher or unlimited maximum speeds, either in vehicle capacities or in the law. . . . Speed restrictions alone dodge the issue, can never touch more than a small fraction of the accident problem and fail to take any constructive action against the conditions that cause speed to be dangerous."

The demand for speed restraints is a healthy sign of growing public opinion on the important matter of doing something about traffic deaths, Dr. McClintock indicated, but it must be directed into the really constructive channels of thinking and not be allowed to strike at

the one main value of the modern motor cars—their rapid mobility.

Motor cars, he pointed out, are no more comfortable than a well-protected stage coach, and modern trucks cannot carry more load than an old-fashioned horse drawn dray. Their usefulness lies in the fact that they extend a day's journey from 30 to 300 miles and speeds from 4 to 40 miles an hour and more.

#### Railroad Experience

The current demand for speed curbs, the Harvard traffic expert said, was experienced in the early days of railroading, when the railroads were considered "instrumentalities of the devil himself." The feeling was in part logical because of the repeated and ghastly train wrecks. Better rolling stock, better roadways, improved personnel and safety devices solved the problem for the railroads.

All but the last point—safety devices if a human mistake is made—are also helping the automotive problem.

Fundamental in the traffic accident problem, said Dr. McClintock, is congestion. Congestion is the factor which limits the motor car to only a fraction of its potentialities in serving society.

Accidents are caused by four types of conflicts on the highways regardless of speed (which only affects the severity of the accident), said Dr. McClintock.

They are:

1. Overlaps in the paths of approaching vehicles—head-on collisions, etc.
2. Overlap between the moving vehicle and objects at side of road—impact with parked cars, bridge abutments, etc.
3. Intersection accidents.
4. "Internal stream conflict" due to the difference in speeds of vehicles moving in same direction.

#### Ideal Highway

The proper highway would overcome all four of these basic difficulties, says Dr. McClintock. Its requirements would be:

1. Physical separation of the two streams of traffic moving in opposite directions. The new roads with parkways down the middle meet this requirement.
2. Traffic lanes reserved for moving vehicles only. There would be no parking.
3. No grade crossings for any type of intersectional traffic.
4. Sufficient number of lanes for the segregation of fast and slow vehicles and provision for acceleration and deceleration lanes.

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