

### MAYO EXPLAINS IODINE'S POWER IN GOITRE CURE

Noted Surgeon, in Beaumont Lecture, Tells of Thyroid Gland and Goitre.

That iodine is responsible for the saving of thousands of lives annually and that it is capable of effecting apparently miraculous cures in the cases of persons afflicted with toxic goitre were the contentions made recently by Dr. Charles H. Mayo, of Rochester, Minn., who delivered the first of three "Beaumont Lectures" before members of the Wayne County Medical Society.

Dr. Mayo's subject was "The Historical Aspects of the Thyroid Gland; Its Development, Function and Disease." The "Beaumont Lectures" were inaugurated four years ago by the Wayne County Medical Society as a memorial to Dr. William Beaumont, who, when post surgeon at Fort Mackinac, published in 1823 his epoch-making work on gastric juices and the physiology of digestion.

Dr. Mayo touched briefly on the life of Beaumont and remarked that although medical history indicated eight of his predecessors had been given the same rare opportunity for pursuing the same line of investigation, none had been qualified to take advantage of this.

#### History of Gland.

Briefly, then, Dr. Mayo proceeded to give the history of the thyroid gland and to indicate its functions in health, contrasting this with its condition in disease and pointing out by means of slides the various types of goitre. Sixty-five per cent of the solution discharged by the healthy thyroid into the blood stream consisted of iodine, he said, the average person consuming three-quarters of a milligram of iodine daily. When the gland found difficulty in obtaining its supply, it proceeded to multiply its cells as though reaching out after the substance and the condition known as goitre followed, he explained.

#### The Cretins.

Dr. Mayo spoke of the cretins, generally born with a deficient thyroid, which manifested itself in a sort of mental torpor, in deafness and dumbness often, and in failure to increase stature at the normal rate. Thyroxin, or thyroid extract, if fed to these children, he said, was found to have an almost immediate effect. He displayed

pictures of children who had grown an inch a month during the first year of treatment and thereafter half an inch a month.

"We may see from related circumstances," he said "that nature intended the thyroid gland to be the great energy gland of the body. I think it may well be likened to the draft, if the body is the stove. The draft regulates the burning of the carbon in the stove and the thyroid governs our metabolic rate. In the unborn child, the thyroid should be in place by the seventh week. We know that it is closely related to the sex organs, especially in women. At times when certain conditions arise with respect to these organs, there is a marked swelling of the neck.

"Nature has considered the gland of sufficient importance to provide for it an unusually large blood supply. In fact, the thyroid could take care of the entire supply of the body with the exception of the amount feeding the brain.

"We can see from the cretins that life is not worth living without an efficiently functioning thyroid gland. Remove the thyroid and you close the draft of the stove. The subject experiences chilly sensations and is mentally dull, asking the same question over and over again. It is the typical picture of old age when the thyroid is not functioning properly. But restore the glandular secretion and you open the draft; the stove burns properly again."

#### On Old Men.

Dr. Mayo stated that the Greeks, the Romans and the Phoenicians had practised glandular therapy, but generally on old men. Iodine, he said, was not discovered until 1801, although Paracelsus, as early as 1600, was prescribing for goitre a substance rich in iodine.

#### Absolute Preventive.

"Iodine is almost an absolute preventive of colloid goitre," he said. "That has been proved beyond all question. In those countries like Switzerland, the Indian Punjab and our own western and Great Lake region, where the water is deficient in iodine, goitre abounds. There is little of it, for example, in the states bordering the Atlantic coast and where great quantities of sea food are consumed. How we manage to extract the iodine from food, no one knows, but it should form an admirable line for investigation.

"We are only just beginning to gather together bits of knowledge concerning our ductless glands, but already the fact that iodine has a profound influence on the thyroid has been of inestimable value. Previously, old cases of goitre, coming to Rochester for treatment, would die before they

**CITIZENS OF KINGSTON can assist the local Board of Health at this season of the year by thoroughly cleaning all yards, cellars, etc.**

**Disease in any community is usually in direct relation to absence of cleanliness, sunlight and fresh air.**

reached the clinic for operation. Now that can be checked.

"Give even a dying patient ten drops of iodine solution three times a day for ten days, and at the end of that time he will be on his feet. In the last year, the death rate was only .08 per cent from this cause. The iodine also enables the surgeon to do a complete operation at once when before he had to do three or four 'test' operations first and thus greatly weakened the patient's resistance. Iodine or thyroxin,

in many cases of goitre, is a curative. Given in table salt it is a preventive for goitre. Precisely how it is split up when passing through the digestive tract on its way to the thyroid gland, from which it emerges into the blood stream as a hormone, we do not know. Its demonstrated usefulness, however, must content us for the present."

Large bird, native of Florida, was found in railway yards at St. Thomas.

Margaret Ross, daughter of the late Hugh and Mrs. Ross, Meyersburg, near Campbellford, and wife of Dr. G. I. McKelway, a prominent physician of Washington, D. C., died in a Toronto hospital Monday.

William Hildan, an old time resident of Perth, died at Ottawa on Monday, in his eighty-second year, while on a visit to friends.

Mr. LeMaite has been appointed caretaker of the Harvey Warner park in Napanee.

### LACK OF IODINE SOURCE OF ILLS

Long-Knows Salt Wins Delayed Recognition by Medicine

MUCH USED IN THE WAR

Salt Contained in Many Foods in Natural State.

London.—There is new hope for the ordinary man, who is the victim of the ordinary aches and pains and ailments of everyday life. This hope comes through a substance, one of the essential salts, which has been known to medical science for many generations. It is iodine.

It is known, as indeed it might have been known many years ago, that a lack of iodine in the circulation of the blood, from which it is extracted by the thyroid gland, is the cause of countless ailments. It is responsible for a condition, which shows itself in its most acute form in goitre or Derbyshire neck, which affects the health in minor but distressing degrees of thousands of people, who never realize that they are suffering from a form of iodine starvation.

#### Used in War.

Iodine is taken in many forms. The general and most familiar treatment with iodine, however, is found in its external use as a germicide. The war made millions of men its grateful adherents. For it was in common use as a first antiseptic dressing for wounds, while the simple prescription of a No. 9 pill and iodine saved medical officers a vast amount of trouble and restored unnumbered sufferers from strange and divers diseases to the rude state of health, which was known as A.I. The commonest way of absorbing

the necessary iodine into the system is by eating common salt, of which it is a constituent, and through the vegetables and fruits in which it is contained. Nature indeed has always recognized the necessity for iodine. But we, who thrive on nature's bounty, have undone a large part of her good work by cooking and peeling our vegetables and fruit, and by refining the iodine out of our salt. The famous march of progress, of which the steps are so halting and slow, has new driven medical science into some recognition of the value of this essential salt. A stage has now been reached in which the doctors may be expected to make a habit of prescribing iodine much more frequently.

### Many Children Have Goitre, Sault Investigation Shows

Sault Ste. Marie, Ont.—The medical survey which is being made in schools of the Sault by the members of the Sault Ste. Marie Medical Association is revealing more goitre among the children than had been expected, though it has been considered for some time that the Sault was in a section where goitre was prevalent.

No figures as to the number of cases discovered are available, as the survey has not been completed, and the reports have not been turned in, but it is understood that the proportion is quite large.

Capt. John Bertrand, Watertown, N.Y., has sold his properties on Webb and Hagan streets, Clayton, N.Y., to Mrs. Lina Burgess. The sale amounted to about \$4,000.

Rev. Donald McInnes, Foxboro, has been called to Knox church, Port Dover. Milwaukee girl confesses to passing twenty-two forged cheques on stores.

## Windsor Iodized Salt plays an important part in the health of growing children

**Goiter is but the visible sign the ugly danger signal, of a lack of iodine in the thyroid gland—Mental development, physical growth, the skin, the hair, general health affected.**

ALL the iodine in the world is contained in the ocean in beds of salt, deep underground, left there millions of years ago when oceans rolled where now it is dry land.

Ages ago iodine may have been one of the chemicals of rocks or the soil absorbed from the ancient oceans, but there is no iodine in the soil today. Iodine is one of the most soluble salts in nature, consequently if it ever existed in the soil it would be quickly dissolved and carried down to the sea, leaving none available at any of the usual sources from which our bodies derive the salts and other chemicals necessary to health and normal development, viz., in water, vegetables and other foods.

Thirty years ago it was learned that iodine was a necessity to the proper functioning of the thyroid gland and when the gland was deprived of its iodine, goiter in some form resulted. Another result of insufficient iodine was the wasting of the thyroid gland.

Generally speaking, goiter was considered more disfiguring than dangerous. In the majority of cases it really is not a serious trouble, though some forms, exophthalmic or "pop-eyed" goiter, for instance, are extremely dangerous and fatal in 20 per cent of the cases within two years.

Goiter—the common variety—so frequently seen in both sexes, is really a symptom or evidence that the body has not been properly supplied with iodine through the thyroid gland, with results to the general health likely to be much more serious than the goiter itself.

But the great prevalence of goiter also led to the discovery of the almost universal prevalence of other troubles due to the lack of iodine. As goiter became better understood its causes were sought. Surveys showed that it was least frequent near the sea and most frequent inland.

Further study revealed that to properly function, the thyroid gland must have iodine to work with—iodine in infinitesimal quantity.

### THE DANGER SIGN

Then as the work of research proceeded it was found that the lack of iodine in the thyroid gland produced many other harmful results. Goiter is only the outward manifestation of one result of the absence of iodine. For instance, lack of iodine in the thyroid gland seriously interferes with the growth of children.

Investigation of this condition was started from the fact that young salmon which remain in the fresh waters where they are hatched seldom grow to more than a half to two pounds in weight, while those which go down to the sea their second year and remain there for three years grow to from 15 to 30 pounds in weight. They get their iodine in the salt water and grow big.

Then as children approach puberty, goiter or lack of iodine seriously retards the development of the generative organs in both sexes, especially in girls, in whom the change is made more rapidly than in boys. Such girls are likely to bear goitrous children when they themselves become mothers.

Goitrous expectant mothers may bear goitrous children, which in many cases are cretins or imbecile dwarfs, while in the large percentage of cases the children will be defective in one form or another.

Defective action or wasting of the thyroid gland due to insufficient iodine, in women approaching or past the change of life, causes depression, dry, unhealthy skin, pesty complexion, falling hair and nervousness.

Deficient iodine also adversely affects the nutrition of the body. Fats are not properly consumed as heat and are redeposited under the skin, causing obesity or even fatty degeneration.

We have now told you what the lack of iodine in the thyroid gland means. What the presence of iodine means is equally interesting and shows how important iodine is to every human being.



Dr. Barwise, who made a special study of this subject in Derbyshire, England, where for centuries goiter has been notoriously prevalent, has listed the functions of iodine through the thyroid gland as follows:—

1. It is necessary for effective metabolism, and specially promotes respiratory changes and physical growth.
2. It promotes efficient mental development. A severe shortage before birth results in cretinism.
3. It is especially required in the pregnant condition and antenatal clinics must bear this point in mind.
4. It is needed at the age of adolescence for the reproductive organs, particularly in the female, in whom the change-over takes place more rapidly than in the male.
5. It is needed to keep the skin and its appendages in a healthy condition. A dry skin and falling hair frequently mean thyroid deficiency.
6. It is required for the digestion, assimilation and combustion of fats. When a shortage occurs the fat cannot be satisfactorily dealt with and it is stored in the subcutaneous tissues. Many cases of obesity may be occasioned in this way.
7. It is required for the metabolism of calcium. The harder the drinking water the more iodine is required.
8. It is needed to enable us to resist the invasion of microbes, and to render harmless the toxins which they produce.

Dr. Barwise also admonishes that it should be remembered that the secretion of the thyroid is one of nature's processes of securing immunity from germ infection, and the prevention of goiter is much more than a mere aesthetic attainment. For the maintenance of health, infinitesimal quantities are as necessary as vitamins and the effect of it is similar and quite out of proportion to the quantity taken. There is every reason to believe that the freer use of iodine in Derbyshire would lead to improved physical and mental development; a greater freedom from infectious complaints; and improvement in the general health.



There are many ways of taking iodine into the system and all are very good. The first method is nature's—always good. Down by the sea in the Maritime Provinces of Canada and in the New England States goiter is almost unknown. Iodine gets into the drinking water by sea spray blown miles inland. It gets into the vegetables from the soil. In many districts marsh hay, soaked in sea water while growing, is cut and fed to the cattle and thus finds its way in milk into the human stomach. Then the people by the sea eat a great deal of fish, clams, oysters, crabs and lobsters, all of which contain iodine absorbed from the sea water. It might be mentioned here that all wheat, especially from near the sea, contains a little iodine, but the iodine is in the indigestible husks or bran of the wheat, so that even if it were eaten as a mixture of flour, the iodine would not be absorbed into the system, the bran merely acting as "roughage" to stimulate bowel action, without being digested.

But we cannot all live near the sea, so we must get our iodine by some other method.

Switzerland, one might almost say, has been the very home of goiter and the attendant evils caused by insufficient iodine. This is because it is far inland from the sea and because the water supply is almost exclusively derived from glaciers or snow. However, Switzerland is now adopting the simple, effective method of using salt.

The surest, simplest way of getting iodine into the thyroid gland is by using Windsor Iodized Salt.

It is necessary to put iodine into the salt and for this purpose the Canadian Salt Company at Windsor, Ontario, worked out the first successful formula in Canada for iodizing salt. Since this discovery and its subsequent approval by the Provincial Board of Health, Windsor Iodized Salt is in universal use.

Windsor Iodized Salt prevents goiter and the diseases caused by deficient iodine. It is estimated that 90 to 95 per cent of goiter cases can be cured by the simple use of Windsor Iodized Salt. While it is too soon to say what percentage of cases can be prevented, it is not too much to say that within ten years goiter may easily be eliminated in Canada by the simple, daily use of Windsor Iodized Salt.

Windsor Iodized Salt tastes and looks just like "plain" salt. If we didn't tell you it was iodized you would never know it. It does not change the flavor of your food one iota. The children take it in their porridge, in their vegetables and broths just the same as any other salt and they never know they are taking "medicine" that makes them grow into sturdy, vigorously healthy young men and women.

THE CANADIAN SALT COMPANY, LIMITED WINDSOR ONTARIO

**Windsor Salt FREAKIES**

Boys and girls! The strangest message you ever saw! Paste the black pieces shown here together, mention this paper and send to us for **FREE BOOK OF CUT-OUTS**

And a story of how the present salt in Canada is brought to your table as told by a girl who swears! Write to Windsor Salt, Windsor, Ont.

**REGAL TABLET SALT** FREE RUNNING



**INSURES JEWELS FOR KING'S RANSOM.** Mile. Regine Flory, one of the most beautiful of the French stage stars, has insured her jewels for 2,000,000 francs. In the photo she is wearing her tiara, in itself worth more than the total insurance as it is encrusted with diamonds and other precious stones.



**WHEEL CHAIR LEAGUE OPENS.** When the cry, "Play ball," sounded this spring crippled war veterans at the Veterans' Hospital, Tacoma, Wash., were not to be denied the fun of the great American game. They trundled their wheel chairs onto the field and soon had a spirited game underway. At bat you see I. Day of Seattle, while G. J. Holmgren of Minneapolis is behind the plate.