

• RADIO

Saturday, Jan. 31, 1953, 3:15-3:30 p.m., EST
 "Adventures in Science" with Watson Davis,
 director of Science Service, over the CBS Radio
 Network. Check your local CBS station.

T. R. McElhinney, vice-president and technical
 director of the Valite Corporation, New Orleans,
 discusses "Industrial By-Products from Sugar
 Cane."

SURGERY

Ski-Type Needle Helps Sew Hearts

► A SKI-TYPE needle is the latest aid for surgeons operating on human hearts. The needle was invented by Dr. Gerald H. Pratt of St. Vincent's Hospital of the City of New York and New York University College of Medicine, and was made with the cooperation of Davis and Geck Company, Brooklyn, N. Y., manufacturers of surgeon's sewing supplies.

The ski-shaped needle was made with the base of the ski as a long square instead of a flat surface. This allows the surgeon to hold the needle securely at any angle from 0 to 180 degrees, Dr. Pratt states in the *Journal of the American Medical Association* (Jan. 10).

Science News Letter, January 24, 1953

CHEMISTRY

New Magnesium Isotope

► A NEW radioactive chemical, magnesium 28, has been created by Dr. Raymond J. Sheline of Florida State University with the aid of the University of California cyclotron and the University of Chicago betatron.

This new radioactive isotope of magnesium is considered particularly important because of its long half-life. Magnesium 28 has a half-life of 21.3 hours, more than 100 times that of the longest magnesium radioactive isotope heretofore found, which was a mere 9.6 minutes.

The long half-life means that scientists can learn more about plant and animal life processes with the aid of the new radioactive chemical.

Dr. Sheline and associates are already using it to learn more about photosynthesis. This process of formation of sugars and starches from carbon dioxide and water under the influence of light takes place in the chlorophyll tissues of plants. And chlorophyll has magnesium in its molecule. How the magnesium gets into the molecule, since this only takes place in the plant tissues, is a puzzle Dr. Sheline hopes to solve through tracer studies with the new magnesium 28.

The new radioactive magnesium can be made either by bombarding elemental silicon in the betatron or, fairly simply, by bombarding metallic magnesium with alpha particles in the cyclotron. The targets after

NUTRITION

Check Diet for Vitamin A

This is time of year when many families may be short on vitamin A, found in yellow and green vegetables, as well as calcium, from milk and milk products, and vitamin C.

► THIS IS the season to check your diet for its vitamin A content. Children need it for healthy growth, but grown-ups need it, too.

They get it by eating fresh green and yellow vegetables. At this time of year many families, especially those who depend on home gardens for their food supply, may be short on vitamin A.

Calcium is one of the food elements most often short in family diets, reports to the National Nutrition Conference showed. Best source of this is milk or milk products. Remember, the recommended milk ration is one quart daily for children, one pint for adults.

Some of this, of course, may be taken in food, instead of being drunk. Ice cream and cheese are two popular milk products. Cream soups, oyster and other fish stews, cream sauces and custards are other foods that can put milk into the diet.

Vitamin C is another diet requirement which the conference heard was often short in family diets. Citrus fruits and their juices, tomatoes and tomato juice and raw cabbage are good sources of this vitamin. Thiamin, one of the B vitamins, is also likely to be below the recommended amount in many diets. This vitamin is found in foods such as pork and whole grain or enriched grain products, from bread to breakfast cereals.

If you are looking for a new cheese dish, to get calcium into the day's ration, try this recipe for cheese and rice soufflé. It comes from Miss Elizabeth E. Ellis, University of New Hampshire nutritionist.

1 cup hot cooked rice; 2 tablespoons table fat; 3 tablespoons flour; $\frac{3}{4}$ cup milk; $\frac{1}{2}$ pound Cheddar Cheese (2 cups grated); 4 eggs; $\frac{1}{2}$ teaspoon salt; few grains pepper.

Cook rice according to kind used. Grease a 6-cup casserole and make the cheese sauce. Melt fat, add flour and milk. Stir until sauce thickens; add the sliced or shredded cheese and stir occasionally until melted. Separate eggs, beat yolks with fork and combine them with cheese mixture. Remove from heat, fold in cooked rice. Pour over stiffly beaten egg whites slowly. Cut and fold in the mixture (never beat). Turn into casserole. Bake 40 minutes at 325 degrees F. Serve at once.

Science News Letter, January 24, 1953

bombardment are shipped by air to Dr. Sheline in Florida, where he performs the chemical separation to get the new radioactive magnesium for tracer studies. Isolation of magnesium 28 was announced in the *Physical Review* (Jan. 15).

Science News Letter, January 24, 1953

ELECTRONICS

Long Microwave System Hints End of Cables

► WIRES AND cables for long distance transmission may be on the way out. More and more, as radio reaches higher into the frequency spectrum, messages are being sent over microwave channels.

Most recent portent of things to come is a new 1,840-mile microwave communication system, opened up along a pipeline stretching from Texas to New Jersey. This is the longest privately owned microwave system in the world. It was built by General Electric Co., and will be used to check pressure at various points in the pipeline, for maintenance messages and for business conversations between offices.

It used about one-hundredth the amount of vital copper overground wires would use and, at \$1,500,000, costs about half what a wired system would cost.

Science News Letter, January 24, 1953



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