

Exposure to a specific strong odor for a few minutes will dull your awareness of that particular odor; hence workers in industrial plants where a foul smell is always present soon lose their sensitivity to it.

However, even after spending an entire day in a beet-sugar factory where a highly objectionable odor is present, workers are still able to distinguish other smells without difficulty.

Some scientists think we are gradually losing our sense of smell. They tell stories of primitive tribesmen whose noses are sensitive enough to be used in tracking game.

But it is equally likely that our sense of smell is only lying dormant, ready to be used effectively whenever we choose to train it. A perfumer, after sniffing a flower carefully, can analyze its fragrance into numerous components and then blend appropriate substances to produce a scent barely distinguishable from the original.

A wine-taster, savoring a fine wine, can sometimes guess from its bouquet not only the type of wine but also the vineyard from

which it came and the year in which the grapes were grown.

The extent to which much "nosey" enjoyment can be developed is dramatically illustrated in the experiences of Helen Keller. Blind and deaf, Miss Keller was from an early age far more dependent on her sense of smell than the rest of us. The late Dr. Frederick Tilney once resolved to test her sense of smell on a drive from New York City out to Long Island. Mile after mile, Miss Keller was able to identify her surroundings by smell alone.

"Now we are passing through grassy fields," she said as the car skirted a golf course. "Here are trees," she added, as a wooded grove whizzed past, "and there is a house with an open fire on the hearth."

Dr. Tilney had completely missed the house. Looking back he could see it, a wisp of smoke curling from its chimney.

This article was prepared for SCIENCE NEWS LETTER in cooperation with the *Reader's Digest*. It will appear in the March issue of that magazine.

Science News Letter, February 18, 1956

PHYSICS

Size of Anti-Proton

► THE ANTI-PROTON, newly discovered particle of negative matter, is twice the size scientists expected, Dr. Owen Chamberlain of the University of California reported to the American Physical Society meeting in New York.

He said experiments in Berkeley's giant cyclotron confirmed this "unexpected" property. (See SNL, Jan. 14, p. 21 and SNL, Dec. 24, p. 403.)

Dr. Edward Teller, also of the University of California, has predicted the future discovery of two new particles, tiny bits of matter that act as glue to bind atomic hearts together.

He said these yet-undiscovered particles were needed to explain the large effective size of the anti-proton.

More examples of the anti-proton are now being found, Dr. Chamberlain reported, as scientists learn exactly where to place the emulsions on which the negative particles register as stars.

The Berkeley group is collaborating with Dr. Eduardo Amaldi and his co-workers at Rome.

One "spectacular" star, found by Dr. Gerson Goldhaber and associates, is especially important. It has eight prongs, with three protons and five pi mesons, or pions. One pion decays into a mu meson and an electron. (See SNL, May 21, 1955, p. 330.)

Total visible energy of this star is 1,230 million electron volts. It is important because this is in excess of the rest mass of either the proton or anti-proton, which is 938 million electron volts.

Finding this excess energy gives the best evidence yet that the anti-proton annihilates either a neutron or a proton. It is demonstrated by the fact that the visible energy exceeds that of one particle.

The difference between 1,230 million electron volts and the 1,876 million electron volts of two particles is in neutral particles not visible emerging from the star.

The anti-proton star first reported by Dr. Amaldi's group showed a visible energy of 826 million electron volts.

The negative particle of matter, for which evidence had long been sought, was discovered by precision measurements with counters by a team of Berkeley scientists last year. Besides Dr. Chamberlain, the group included Dr. Emilio Segre, Clyde Wiegand and Thomas Ypsilantis.

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CARDIOLOGY

Six Rules for Helping Heart Attack Victim

► CALL THE DOCTOR at once if someone is stricken with a heart attack.

This is the first of six rules for how to help in case of a heart attack given by the American Heart Association.

The others are:

"Help the patient take the position that is most comfortable for him. This will probably be halfway between lying and sitting. He usually cannot breathe comfortably if he lies flat.

"Do not attempt to carry or lift the patient without the physician's supervision.

"Loosen tight clothing such as belts and neckties.

"See that the patient does not become chilled, but do not induce sweating with too many blankets.

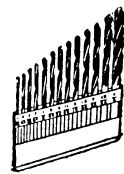
"Do not give stimulants such as whisky or brandy."

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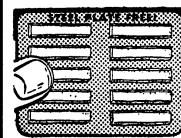


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