

what they are doing and what they plan to do to protect and further the interests of men as they must live in this dis-

turbed world with a sense for man-science and culture.

Science News Letter, June 21, 1941

MEDICINE

Number of White Blood Cells May Predict Length of Life

Strains of Rats With Low Average White Blood Cell Counts Found to Have Shorter Lives Than Others

PREDICTION of the length of a person's life may, in future, be made from a count of the number of white cells in his blood. This possibility (and so far it is only a possibility) appears from a discovery announced by Dr. Carl Reich, of Lenox Hill Hospital, and Dr. W. F. Dunning, of Columbia University. (*Science*, May 2.)

In rats, they discovered, long life goes with a high count of white blood cells, and particularly with a high count of the type of white blood cells called "neutrophile polys." Strains of rats with low average white cell counts had shorter life spans than strains with high white cell counts.

The white blood cells, and especially the neutrophiles, make up an important part of the body's defenses against invading disease germs.

Sex differences associated with length of life were in accord with the findings. The females had a significantly higher white cell count than the males, and females of most of the strains of rats studied had significantly longer life spans.

Whether or not long life in humans is related to or depends on the number of white cells in the blood, and if so, what can be done about predicting length of life from the blood count or lengthening life by artificially increasing the number of white cells, are questions for the future to answer. In humans, according to one authority, men have higher white counts than women, although the average life span is longer for women than for men. This seems to conflict with the findings in the rats but further study may shed light on this.

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PHYSIOLOGY

Gland Extract Added Inches To Height of Dwarfed Boy

THE effect of a gland extract on growth in height was strikingly demonstrated in the case of dwarfed twin brothers reported by Dr. George B. Dorff, Bellevue Hospital, New York City, at the meeting of the Association for the Study of Internal Secretions in Atlantic City.

The gland extract, a sex gland stimulating chemical from the pituitary gland, was given to one of the boys but not to the other. Both were sexually infantile as well as dwarfed. During a period of four and one-half years before the treatment, they grew about seven and one-half inches. Although they were identical twins, developed from the same original egg cell, one of the boys was always about three-fourths of an inch shorter.

When this slightly shorter of the two was given the sex gland stimulating hor-

mone from the pituitary gland, he grew four inches in one year, becoming the taller of the two. The untreated twin brother grew only one and one-fourth inches during the same year.

The crystalline male sex hormone, testosterone propionate, markedly accelerated growth in height and weight of seven out of nine undersized boys and young men, Dr. J. S. L. Browne and Dr. Alan Ross, of Montreal, reported.

Two of the boys grew about three inches in six months when given twice weekly injections of this hormone. Definite signs of the growth-stimulating effect of this synthetic male hormone appeared after two months of treatment in a 24-year-old man whose height before treatment was four feet eight inches.

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Long-Lived Seeds

THE OLD adage, "One year's seeds means seven years' weeds," will have to be revised—upward. One year's seeds can mean sixty years' weeds, in a few species at least. That is the survival time for seeds of curly dock, evening primrose, smooth mullein and night-flowering catchfly in one of botany's classic experiments, reported by Prof. H. T. Darlington of Michigan State College. (*American Journal of Botany*.)

Sixty years ago a former professor of botany at the college, Dr. J. W. Beal, buried twenty pint bottles, each containing a thousand assorted weed seeds mixed in sand. The idea was to dig up one bottle every five years and find out how many seeds were still viable, and what species they represented.

This fifty-year schedule was kept up until twenty years ago, when it was decided to make the experiment last longer by digging up the bottles at ten-year intervals. Prof. Darlington has been carrying on the project since 1915.

Of the twenty species originally put away, only four germinated in this latest test. Even these four do not represent a perfectly smooth score, for it was thought that the mullein seeds originally put into the bottles were all of the ordinary woolly species. But the smooth mullein is what came up this time, and also ten years ago, though it had not appeared in any of the earlier plantings. And the catchfly plants are something of a mystery, for there is no record of their seeds having been included at all.

Two species that survived up to the fiftieth year, black mustard and water smartweed, failed to germinate this time.