

ANTHROPOLOGY

Blonde, Nordic Mothers Are Likeliest to Have Twins

Publicity Given Every Birth of Twins Makes Twinning Seem More Frequent Than it Really Is

This is the second of a series of two articles on multiple births in human beings. It deals especially with the statistical probabilities of twin births and with the physiological reasons for such occurrences.

DO YOU want to know the chances for having a multiple birth in your own family?

The likelihood depends partly on whether you already have a history of twins or triplets in the family. Most multiple births occur in a family which has known them before, either on the father's or the mother's side.

The age of the mother affects the chances for a multiple birth. It is most likely when the mother is between the ages of 35 and 40. The number of children already born to the mother does not seem to make any difference.

The race of the parents seems to affect the chances. The Nordic races have more multiple births than do the Alpines or Mediterraneans.

Blondes are more likely to have the double blessed event than are brunettes.

Can the physician tell before the birth how many are coming? It is reported that Dr. A. R. Dafoe, the physician who so successfully brought the Dionne five into the world, did not know beforehand of their multiplicity.

Revealed By Heartbeat

Ordinarily, however, it is possible for the physician to diagnose the condition when the mother has more than one child. He can hear more than one heart beat from the infants; he can perhaps detect more than one head; and if he has the aid of the X-ray, he can see more than one skeleton. If there are triplets, though, he will be very likely to think they are twins.

Dr. Dafoe did not see the Dionne mother until one week before the birth of the infants, and at that time, because of a special condition, the diagnosis of multiplicity could not be made.

The mother who is under the care of a physician before the birth is most likely to be forewarned if she is to have twins or quintuplets.

The publicity given to twin births makes them seem more common than they really are, yet it is probably their very rarity that makes them arouse so much interest.

In one year in the United States over one million births were reported: the exact number was 1,399,975. Yet the twin births reported for the same year numbered only one for each 93 births. Only about one person out of every 47 is of twin origin.

Not More Than 2,500,000

Probably there are not more than two and a half million twins in the whole United States.

The number of cases of the birth of larger numbers of young at one time is very much smaller. Births at which three infants put in an appearance coincidentally are in the proportion of only

one to 8,649 births in the United States.

And it is interesting that this number, 8,649, is just exactly the square of 93. This indicates to scientists that the formation of triplets is caused by the action of two causes. When only one of these biological accidents occurs, twins appear. Occasionally, however, two occur at the same time and the result is triplets.

Quadruplets are not so much rarer than triplets as might be expected. The proportion of quadruplet births is not one to the cube of 93, as might be imagined, but one to 1,339,975 which is the cube of 71.9.

Sex Ratio Different

The proportion of girls is much larger for multiple births than single births.

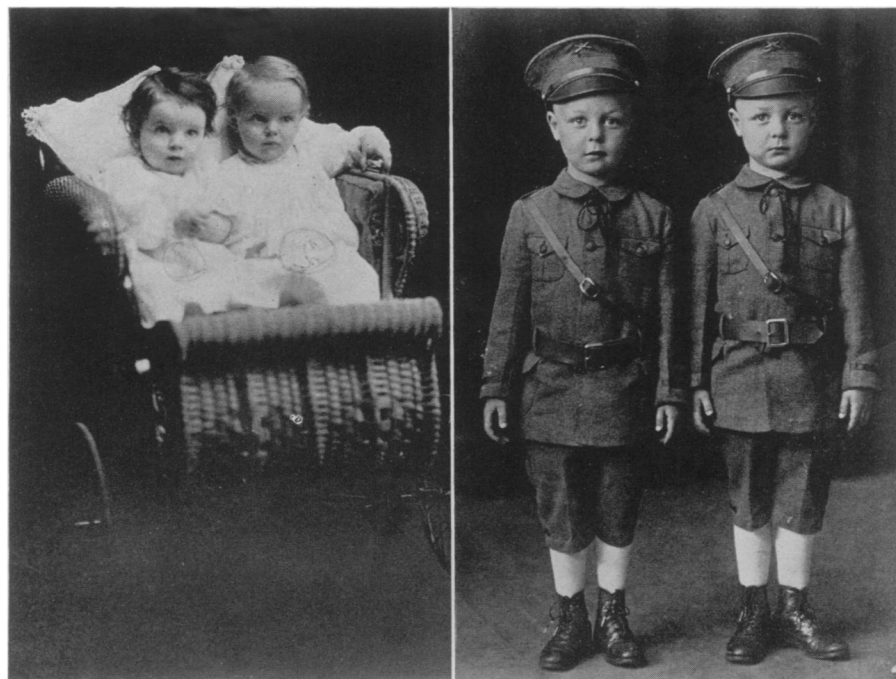
Among single births there are usually 1,057 boys born for each 1,000 girls.

Among twins there are 1,043 boys to each thousand girls.

Among triplets there are only 1,007 boys to each thousand girls.

And among quadruplets, there are only 548 boys to each 1,000 girls.

The record of sex among quintuplets does not fit in with this decreasing ratio of boys to girls with larger numbers at birth, but the sex is not known for all the 35 quintuplets on record. Among



FRATERNAL AND IDENTICAL TWINS

Fraternal twins are merely children born at the same time. They are developed from different original egg-cells, and may be as unlike in appearance as the little blonde and brunette in the baby carriage. They may even be of opposite sexes. Identical twins, developed from the same cell split in halves, are always of the same sex and more alike than two peas.

the 25 sets for which the sex is known, 76 were boys and 49 girls.

Scientists do not consider that the original sex ratio is any different for multiple births than for single births, but that the vicissitudes of development are much more of a burden to members of a multiple birth, and girls are constitutionally better able to withstand the difficulties and survive birth.

The fact that the Dionne quintuplets have lived and grown under such very difficult circumstances may be due to the fact that they are all girls.

A Biological Accident

Human infants usually arrive singly because, in humans, nature ordinarily provides for the release from her storehouse of but one egg cell at a time. It is in this single cell that the human being has his origin.

Under unusual conditions, however, due to causes which are not completely understood, nature allows the release of two or three of these egg cells at a single time.

This trick of nature is not particularly rare. According to Dr. A. F. Guttmacher, Johns Hopkins University physician and scientist, it happens about once in every five monthly cycles, but it is relatively rare that both eggs develop into living creatures.

When they do, twins or triplets are born. But twins or triplets formed in this fashion are not especially like one another except as they share in the general tendency for members of one family to have resemblances. About 70 per cent. of all twins are of this dissimilar, or "fraternal" type.

The twins that are mistaken for one another, that are as alike as two peas in a pod, are formed in a different manner. These identical twins have their origin in but one single cell which begins to develop in the ordinary fashion.

Once in a great while, because of something which disturbs the normal course of development, the cell may separate into two entirely distinct parts, each of which develops into a complete and perfectly balanced human being.

The Dionne quintuplets are likely to have among their number both identical and fraternal twins, for although the chances are small that both these types of biological accidents would occur at the same birth, the chances are even smaller that five separate egg cells would be released from nature's storehouse at the same time and that every one of these should be fertilized and come to birth. The chances are even more remote that a single cell would divide into five parts, for the cell division does not usually produce odd numbers.

Science News Letter, September 1, 1934



Drought Records

FROM THE excited discussions in the press and by the public at large, it might be thought that drought in the United States was invented in the summer of 1934. This is far from being the case. Although the present dry period is admittedly the costliest in crop and livestock losses that the country has ever seen, there are plenty of dry spots on the map that have been even drier.

Some of them hold records for drought that reach back more than a hundred years, a study of the World Weather Records of the Smithsonian Institution discloses.

In Washington, D. C., precipitation records have been kept for 110 years, since 1824. The Capital's champion dry summer occurred in 1826, with a rainfall of only 18.79 inches.

The longest American weather record is that for Charleston, S. C., which has been kept, with a few interruptions, for 196 years. The old Southern city's driest year was 1850, with 23.69 inches of rain; its wettest was 1765, with 68.76 inches.

Records for the Midwest and Northwest of course do not extend so far back; Weather Bureau stations were established in those regions during the '70's, for the most part. But even at that, they have been able to establish some pretty stiff drought marks for 1934 to shoot at. Cheyenne's driest year, 1876, shows only 5.04 inches of rainfall. Helena, Mont., established a low-precipitation record in 1889, with 6.71 inches. Bismarck, N. D., had only 11.03 inches of rain in the same year. Omaha's all-time record for drought was set as recently as 1910, with 15.49 inches, only about half its "normal" rainfall.

Science News Letter, September 1, 1934

GEOLOGY

Over-Production of Crude Oil May Exhaust Supply

FACED with a possible future shortage of one of Uncle Sam's most valuable natural resources, engineers and officials in the oil industry are advising conservation of U. S. oil deposits.

The known, drill-tested reserves of crude oil in the country amount to about 12,000,000,000 barrels. Divide this sum by the yearly consumption of 800,000,000 barrels and the answer is that in about 15 years, unless conservation is exercised, we will run short of one of our greatest economic assets.

At the Fourth Annual Economic Conference for Engineers, held at Johnsonburg, N. J., Charles B. Ames, chairman of the Texas Company's Board, discussed the effects of present administration policies on a petroleum shortage, which will face the nation if steps already taken are not modified.

"A plan should be developed for the effective conservation of our crude oil supply. This can be accomplished through the medium of a compact between the Federal Government and the principal oil-producing states."

One of the greatest difficulties in the conservation program has been securing cooperation among these states. The NRA afforded the first opportunity for a far-reaching national program.

Although the possibility of control forced the price of crude oil up from 25 cents per barrel in the spring of 1933 to \$1.00 in September, 1933, it has not prevented over-production. Since the Oil Code went into effect last September, production of petroleum has exceeded the estimated requirements by about 40,000,000 barrels.

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