

PSYCHOLOGY

Mental Test Coaching Does Not Raise Scores

► DO NOT waste your time trying to make your child seem to be a genius by coaching him in intelligence tests. It will not do any good, A. Yates, research officer of Britain's National Foundation for Educational Research, has reported to the British Association for the Advancement of Science meeting in Belfast.

Experiments in which children were given intensive coaching and instruction in the performance of intelligence tests have shown that their scores were raised only about 8 to 10 points, barely more than the gain made by another uncoached group of children who were permitted practice tests before taking the final test.

Even this short gain was not lasting, having been all but wiped out in a six-month interval after the coaching.

There is the chance of doing the child more harm than good by continued hammering away at practice, for there is some evidence of the tendency for the scores of some individuals to fall away, if practice is continued after the optimum score has been reached.

Mr. Yates also disagrees with the trend in some quarters to advocate universal coaching in intelligence tests in schools to wipe out any supposed advantage gained by children who are coached by their parents at home. He has found that teachers vary in their ability to produce gains by coaching and pupils vary in their ability to register gains, so that any universal coaching is likely to produce erratic results and even greater unfairness than that which over-ambitious parents may conceivably bring about.

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PSYCHOLOGY

Do Not Worry About Insomnia

► DON'T WORRY about insomnia. Do something about it. If you have always been a sound sleeper and find, now, that you cannot get to sleep easily or awaken in the middle of the night and lie tossing for hours, see your doctor. There may be a physical cause for your insomnia, such as muscle cramps, cold feet or gas pains, or something more serious. More often, however, the cause turns out to be some worry or emotional conflict.

"Sleep disturbances are among the commonest signs of emotional tensions," says Dr. Robert T. Porter of New York.

"It has often been noted by medical teachers that when there are many treatments for one condition, none are really fully satisfactory," he observes. "The number of patent remedies, diet formulas, special mattresses, ear-stoppers and other gadgets, as well as books and phonograph records advertised to assist sleep clearly labels insomnia as one of these conditions

for which no entirely satisfactory treatment has yet been established.

"For the less severe cases, perhaps almost any of the methods may help. Some of the more severe cases, however, do not respond adequately to symptomatic measures.

"Sleep-inducing drugs may bring sleep if used in large enough dosages. But if they are having to overcome severe anxiety or tension, drug tolerance may speedily develop so that, to maintain effectiveness, larger and larger dosages would be required, and this cannot be pursued indefinitely. In these more resistant cases it is therefore logical to try to treat the emotional problems which may be producing the insomnia."

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VETERINARY MEDICINE

Cook Garbage to Stop Pig Epidemics

► GARBAGE COOKING can be an important weapon in defense against two serious diseases: trichinosis, which humans get from infected pork, and VE, short for vesicular exanthema, which was epidemic among swine in 24 states during this past summer.

VE does not attack humans, though slaughter programs to control it could make pork scarcer and more expensive.

Both diseases are spread largely by the commercial feeding of raw garbage to swine.

Interstate quarantine regulations enforced by the U. S. Public Health Service require that garbage transported across state lines for swine-feeding purposes must be given heat treatment. State laws are needed, however, to control the situation for garbage collected and fed to swine within the state.

The trichinosis and VE problems are so serious that the Public Health Service and the Department of Agriculture are planning a cooperative effort to push garbage cooking for swine.

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NUTRITION

How to Pack Lunches For Week at a Time

► WHETHER SANDWICHES for Dad and for the school children's lunch can be made up a week in advance, then kept in the freezer is being studied by food technologists at Rutgers University, New Brunswick, N. J.

They want to find out what happens to peanut butter or egg salad sandwiches when they have been frozen for a week. They hope to show that homemakers could save time and trouble by making many sandwiches at one time, then storing them frozen until needed.

Fruit pies are generally better if frozen first and then baked; custard pies should be baked first, then frozen, Dr. Walter A. Maclinn of Rutgers reports.

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IN SCIENCE

GENERAL SCIENCE

Rockefeller Foundation Curbs Science Funds

► A CHANGE in program, with a reduction in allotment of funds for natural sciences research in the United States, is announced by the Rockefeller Foundation, New York.

The change, made as a result of a year-long survey, is intended to meet post-war conditions. Under the new program, future budgets are expected to allot \$500,000 for natural sciences research in the United States, the same amount for Europe, \$700,000 for Latin America, and \$1,500,000, or 47%, for "operating agriculture."

Outside funds now available to universities and other institutions for basic research in biology now total around \$25,000,000 a year, Chester I. Barnard, who retired as president of the Foundation in July, 1952, points out in his last review.

This is 10 to 12 times the amount that was available when the Rockefeller Foundation entered on its program of aid to experimental biology 19 years ago.

The Foundation, therefore, is going to concentrate its work in support of projects designed to put into effect the results of research for improvement of agriculture in various regions of the world.

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AERONAUTICS

Turboprop Gives Speeds Up to 1,000 Miles an Hour

► AIRPLANE SPEEDS well above that of sound are promised with a new turboprop engine and special propellers developed by the Curtiss-Wright Corporation, Wood-Ridge, N. J. The combination will eventually permit speeds up to 1,000 miles an hour, it is claimed.

Turboprop engines are similar to the turbojets that power ordinary jet planes, but the high-pressure gases they generate are directed against vanes on a shaft to cause rotation. The shaft, in turn, drives conventional bladed propellers. Turboprops are already in experimental use in some airplanes. This new engine is said to be more powerful than those now employed, although its horsepower is not revealed.

The new propellers are capable of harnessing power up to 20,000 horsepower or more. They are hollow-steel, produced by an extrusion process perfected by Curtiss-Wright engineers. They range up to 20 feet in diameter. Some are three- and four-bladed, and some are six- and eight-bladed. Some give single rotation, while others give dual rotation.

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E FIELDS

PHYSIOLOGY

No One Can Drink Quart 100-Proof Daily

► IF SOMEONE tells you he can drink a quart or more of 100-proof liquor a day, do not believe him. He might, if he is a chronic alcoholic, be able to drink a fifth of 100-proof liquor in 24 hours, but no more.

Studies showing this are reported by Drs. Henry W. Newman, Roger H. L. Wilson and Edith J. Newman of Stanford University School of Medicine, San Francisco, *Science* (Sept. 26).

Earlier, Dr. Henry Newman had reported on the basis of dog studies that an average-weight man might consume a quart of 100-proof liquor in 24 hours. The amount is slightly less. He and his colleagues find from direct experiments on three men and one woman that it is 760 milliliters, or about four-fifths of a quart.

The woman and one man were chronic alcoholics, the other two men were moderate drinkers. In the studies, each got either diluted alcohol or "an acceptable alcoholic beverage" every hour for several days. Tests of the alcohol level in the blood or saliva gave figures from which the scientists could determine exactly how much alcohol each of the four persons tested could handle in their bodies in 24 hours.

For the woman, this was slightly less than a pint, 383 milliliters, and for the two moderate men drinkers, the figures were 608 and 524 milliliters, both somewhat under a quart. The male alcoholic in the study consumed the highest amount, 760 milliliters.

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PUBLIC SAFETY

Be Sure Your Sweaters Do Not Go Up in Flames

► TO GUARD yourself and your family from serious, perhaps fatal, clothing burns, ask stores where you shop for your new fall clothes if the sweaters or clothing you are buying have passed flammability tests.

This is the best way to be sure that you do not get any clothing dangerously likely to go up in flames, Roger M. Wingate of the National Fire Protection Association reports. The Association, made up of representatives of government agencies, retailers and manufacturers, is trying to establish, by scientific tests, a standard that will show exactly how flammable fabrics are.

Even with these tests, however, Mr. Wingate, vice-president of Liberty Mutual Fire Insurance Co., Boston, said that the most important thing is for the consumers to demand that their clothing meet the minimum

standards. These depend on the rate at which fabrics burn, for it is the rapid burning of clothes that most often causes the serious or fatal burns. About one-third of the 12,000 deaths from fire burns each year are due to those from clothing.

Many materials that are a menace to human life are sold in every store throughout the country without any warning that they are highly flammable. Last year's torch sweaters and the cowboy suits sold a few years ago are examples.

How fast the dress or suit you are wearing will burn depends not only on the material, but on how that material has been treated. It is the brushing, not the rayon, that makes brushed rayon sweaters flare up like torches. Cotton materials with a similar nap are just as flammable as rayon. But flat weave cotton or rayon, sheeting, and cotton or rayon prints are not dangerously flammable.

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TECHNOLOGY

X-Ray Inspection To Help Keep GI's Alive

► AN AUTOMATIC X-ray machine that peers inside of hand grenades with its electronic eye soon may help to make the death-laden missiles explode inside of Chinese Communist pillboxes instead of in a GI's hand.

Just completed in Milwaukee under the supervision of Arthur J. Kizaur of the General Electric's X-ray department, the machine can spot a 1/8-inch discrepancy in the fuse powder level, an inaccuracy that can mean life or death to the grenade thrower.

Rays from a 100,000-volt X-ray unit go through the grenade, scanning the fuse powder level as they pass. They emerge on the opposite side of the grenade and strike an X-ray sensitive cell filled with cadmium sulfide crystals.

If the powder level is low by as much as 1/8 of an inch, the cadmium sulfide crystals emit torrents of electrons that operate a rejection lever. The faulty hand grenade then is discarded from the production line automatically.

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DENTISTRY

Abscessed Teeth Saved By Treatment Method

► ALMOST THREE-FOURTHS of teeth abscessed and decayed to the pulp can be saved, if a treatment method reported to the American Dental Association in Chicago comes up to its present promise.

The method consists in removing the exposed portion of the pulp, treating the remaining portion with medicines and then filling the cavity.

A 72% success with the treatment over a year's period is reported by Dr. Donald B. Chatterton of San Diego, Calif.

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MEDICINE

Future Antibiotics Aimed at Specific Germs

► ANTIBIOTICS, THE so-called mold remedies, in the future will be anti-germ ammunition of a kind to fit a rifle rather than a shotgun, Graydon L. Walker, director of U. S. and Canadian sales for Parke, Davis and Co., Detroit, predicted at a meeting of pharmacists in New York.

Scientists and drug houses now, he said, seem to be interested in finding new antibiotics that are effective against one or at most very few germs, instead of searching, as in the past, for an antibiotic that could stop as many different germs as possible.

"Very substantial" basic research on blood and blood-forming tissues is now being financed by his firm, Mr. Walker revealed. The object is to help doctors find what causes blood disorders such as aplastic anemia. Development of this sometimes fatal blood disease in patients who had gotten Chloromycetin, a Parke, Davis and Co. antibiotic drug, either off and on or over a prolonged period, led recently to an extensive review of thousands of case histories by the Food and Drug Administration and the National Research Council. Chloromycetin was cleared with no restrictions on the number of diseases in which doctors can give it, but with the caution that it should not be used indiscriminately or for minor infections.

Much more information is needed, Mr. Walker said, on both the causes of such blood disorders, and the number of cases of them in the population generally as well as in patients who have been given Chloromycetin or other antibiotics.

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MEDICINE

Chemical Prevents Blood Clot in Veins

► GOOD RESULTS with a new synthetic anti-blood clotting chemical are reported by Drs. Donald A. Scholz and Nelson W. Barker of the Mayo Clinic and Foundation, Rochester, Minn. The drug may prove useful in preventing blood clots in veins.

It is called Treburon. It is the sodium salt of sulfated polygalacturonic acid methyl ester methyl glycoside.

It has from one-third to one-fourth the power of heparin, naturally occurring body chemical that slows the rate of blood clotting.

Mild nausea and tingling of the fingers were the only signs of bad reactions to the drug, and these appeared in only one of 12 patients and did not last long.

The study of Treburon at the Mayo Clinic followed reports from scientists of Hoffmann-La Roche, Inc., of its effects on rabbits, and of tests on patients by scientists at Marquette University School of Medicine, Milwaukee.

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