Herbert J. Gough of London, engineering; Sir Daniel Hall of London, agriculture; Dr. C. U. A. Kappers of Amsterdam, anthropology and physiology; Dr. Wolfgang Koehler of Berlin, psychology; Dr. Tullio Levi-Civita of Rome, mathematics; Dr. Emilio Mira of Barcelona, psychology; Dr. William Oualid of Paris, political economy; Dr. Henri Pieron of Paris, psychology; Dr. J. J. Sederholm of Helsingfors, geology; Dr. Charles E. Spearman of London, psychology, and Dr. R. J. Tillyard of Australia, entomology and paleontology.

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AERONAUTICS

Stratosphere Shell Prepared For Navigators

See Front Cover

THE LITTLE metal sphere that will be the stratosphere home of two men and scientific instruments for a few hours next month is rapidly being completed. (*SNL, May* 27, '33, *p.* 323) It is pictured on the front cover with Dr. Jean F. Piccard emerging at the unfinished vertex of the "orange peel" sections of dowmetal, the magnesium alloy one-third lighter than aluminum.

The sphere is truly a shell of the sky. Though seven feet in diameter, its metal sheeting is only one-eighth of an inch thick. The weight is 200 pounds, compared with 300 for the sphere used by Prof. Auguste Piccard last year. There are to be two manholes and eight portholes distributed so that vision will be free in all directions. The floor will be made of dowmetal and a space four feet square is being left for the occupants.

Four struts will be used inside, and shelves at three levels will hold all instruments, ballast and food in place. Ballast will be dumped through a tank which may be sealed to prevent loss of pressure. The navigators expect to close the portholes at an altitude which will leave the pressure at about eight and a half pounds after they ascend ten or eleven miles. The ascent is to be made from Chicago in connection with the Century of Progress exposition.

The gondola will be painted a light color on the top and black on its lower sides and bottom. Thus the metal's ability to absorb heat in the morning and afternoon, when heat will be needed most, will be increased.

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The oldest known medical school was founded by the Persian conqueror Darius in Egypt.

ENDOCRINOLOGY

Adrenal Cortex May Regulate Salt and Water in Body

New Type of Gland Disorder Brings Obesity Apparently By Disturbing Body's Handling of Water

THE VITAL cortex of the adrenal glands may have an influence on the regulation of salt and water in the body similar to that of insulin on sugar, the parathyroid glands on calcium and the thyroid gland on iodine. Evidence indicating that this may be the case was presented by Dr. R. L. Zwemer of the College of Physicians and Surgeons, Columbia University, at the meeting of the Association for the Study of Internal Secretions in Milwaukee.

The salt in this case is sodium. It is a loss of sodium from the body rather than any great increase in acid that produces the lower carbon dioxide combining power of the blood which is an early indicator of insufficient adrenal gland functioning, Dr. Zwemer believes.

In cats that have lost their adrenal glands, extract of the adrenal cortex increases the amount of sodium and chloride in the blood, Dr. Zwemer and his associate, Dr. Ruth Sullivan, found.

Drs. Zwemer and Sullivan working with animals, and Drs. Robert Loeb and Dana Atchley treating patients, found that giving common salt by mouth is helpful in conditions like Addison's disease in which the cortex of the adrenal gland is not producing enough of its vitally necessary hormone.

Cats that were given salt after removal of the adrenal glands survived twice as long as similar animals that got no salt.

While salt is helpful in these conditions of adrenal insufficiency, some of the adrenal cortex hormone or extract must be given to help out. Giving too much salt in these cases is as bad as too little. Drs. Zwemer and Sullivan have been able to calculate the exact amount of sodium necessary for cats suffering from adrenal insufficiency.

A new, hitherto unrecognized glandular disorder was reported by Dr. Leonard G. Rowntree of Philadelphia and Dr. Louis A. Brunsting of Mayo Clinic. The disorder was seen in two young women, 20 years old, who were brought to the Mayo Clinic because they had suddenly become very fat. They could not get rid of the excess weight by any of the measures for reducing.

"Both patients were superlatively feminine in appearance with luxuriant hair and exaggerated feminine configuration," the physicians found on examination. Both patients had matured at a younger age than the normal.

With the idea that the obesity was due to derangement in the body's handling of water, the patients were given treatment to remove the water from their bodies. This was done by the use of ammonium salts and the newer mercury compounds. As a result, the weights of the two patients were reduced to practically normal.

After their return home, one patient regained the weight she had lost. The other patient was able to keep her weight down by continuing the ammonium and mercurial compounds and by restricting her intake of water.

The condition might be the result of an early excess of one of the hormones of the pituitary gland, known as Prolan A, Drs. Rowntree and Brunsting suggested.

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ARCHAEOLOGY

Tut-Ankh-Amen's Mother-in-Law

BEAUTIFULLY sculptured in the almost impossibly hard stone, quartzite, a portrait head newly found at Tell el Amarna in Egypt may prove to be an image of Queen Nefertiti one of whose daughters married the long-posthumously famous Tut-ankh-amen. It has been compared with the famous portrait bust of Nefertiti now in the Berlin Museum in its slender beauty and its aristocratic poise.

For some reason the sculptor never finished his work. The back of the head and one side of the face were left unsmoothed, with the black guide-marks still on them. But the artist was suffi-