MEDICINE

Relief Drugs Announced

Asthma and disorders of blood circulation and the heart can be better treated with chemicals recently developed.

➤ BETTER TREATMENT for victims of asthma, heart disease and disorders of blood circulation was announced at the meeting in Chicago of the Federation of American Societies for Experimental Biology.

For asthma sufferers is a chemical compound called Isuprel, said to be the most efficient for controlling asthma of all similar compounds yet studied. It was reported by Drs. A. M. Lands, O. H. Siegmund and H. R. Granger of Frederick Stearns and Co. research laboratories at Detroit.

It would be used in place of epinephrine, or adrenalin, of which it is an analogue. It is 100 times less toxic than adrenalin and can be given by mouth or can be inhaled as well as being injected under the skin. It is the same chemical widely hailed in reports from Europe under the name, Aludrine, and should be available in the U. S. shortly.

People with poor circulation get a marked warming of hands and feet by Priscol pills. This new drug can be used to treat Raynaud's disease and other conditions of poor circulation, Drs. J. P. Hendrix, M. J. Reardon, and F. A. Marzoni, Duke University scientists, reported.

Priscol relaxes the arteries, blocks the blood pressure raising effect of adrenalin, and allows the heart to pump more blood through the arteries, thus improving circulation. It is related to histamine, a normal body chemical which also dilates blood vessels. Priscol, also, has been used in Europe but has only recently received attention in the U. S.

Many patients with advanced heart failure will get more specific benefit from mercury compounds than from digitalis, old stand-by in treating heart disease, three New York pharmacologists find. They are Drs. Walter Modell, Morris Pearlmutter and Donald A. Clarke of New York Hospital, Cornell Medical Center, Beth Israel Hospital and the Hospital for Joint Diseases.

Digitalis, generally given a position of first importance in the treatment of heart failure, acts directly on the heart muscle to increase the force of its contractions. Frequently, however, especially in more acute cases, digitalis does not relieve all the symptoms. In order to achieve complete relief, additional measures become necessary, and to this end, mercury compounds are used. These agents act on the kidneys to increase the formation of urine, resulting in withdrawal of excess fluid from vital organs in which it has accumulated due to the heart condition.

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CHEMISTRY

New Lamp Widens Field Of Light As Catalyst

➤ CHEMISTRY has a new tool. It is a powerful 3,000-watt mercury vapor lamp which will greatly widen the application of light to chemical reaction in the so-called photo-chemical process.

The use of light to cause a chemical change is well known in photography and textile bleaching, but knowledge of its use to assist chemical reactions in industries is confined largely to the trade. In photography the action of the light is direct. It causes a chemical change in the sensitized film to make the negative from which the finished picture is printed. In the industries, light is also used as a catalyst to assist chemical reaction.

The new lamp is a development of Westinghouse Lamp Division. It is a 55-inch-long tube, containing the mercury vapor, made of special glass which permits the passage of photochemical wavelengths. These include both invisible ultraviolet and visible light radiations. Both ultraviolet and certain visible light wavelengths may serve as catalysts to bring two chemicals together quickly, causing a reaction to form a new product.

The lamp is able to achieve photochemical changes because its radiations vibrate at a high frequency, Eugene W. Beggs, Westinghouse scientist, explains. When the rays are absorbed they distort the electronic structure of the atoms and molecules, forcing them to line up in new form.

Photochemcial processes are widely used in the chemical industry. In recent years they were employed in developing some of the new synthetic rubbers, solvents and lacquers. Photochemical rays were used by Westinghouse in the chemical preparation of samples of uranium for the early atomic bomb research work.

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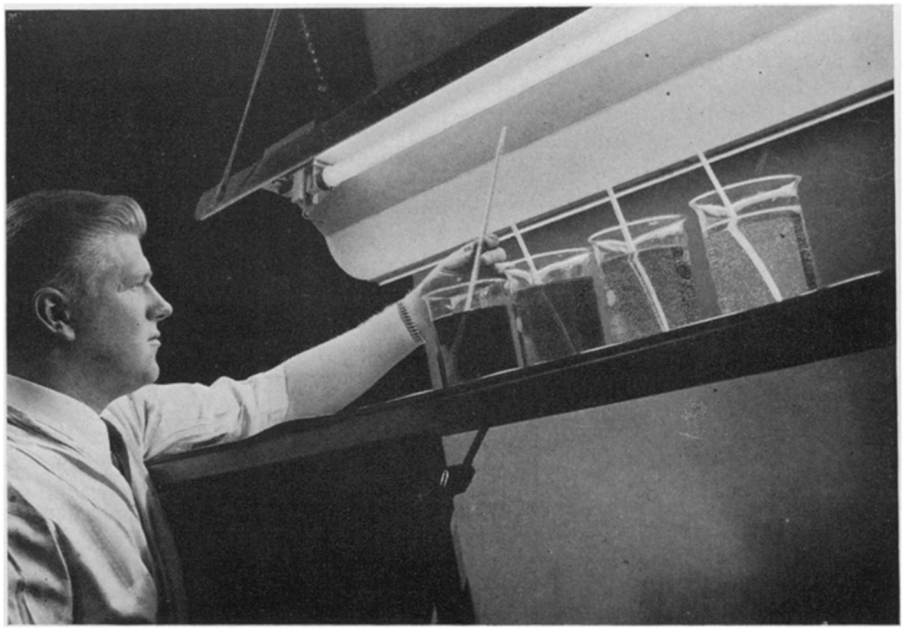
In mowing *lawns* the stubble should be left nearly two inches high, experts state; this stimulates root development.



"ALADDIN'S LAMP"—This lamp generates photochemical radiations to act as catalysts in chemical reactions.