as estimated by the saccharine method. In pathological conditions, as in normals, the blood flow through the partial pulmonary circuit is completed in about the same time, 6 to 9 seconds. The test was performed in patients with rheumatic, luetic and hypertensive cardiovascular disease free of or associated with various stages of congestive failure, in bronchial asthma, pulmonary neoplasm, nephritis, myxedema, arthritis. In several instances where there was clinical reason to believe that the flow in the lesser circulation was retarded, the rate of speed through this circuit was decreased, *i. e.,* 15 seconds or more.

The test is of use in estimating the speed of blood flow through the pulmonary circulation up to the alveoli. Respiratory changes, voluntary or involuntary, may be able to influence this speed. No data are available on this point. No details are at hand on the influence of changes in atmospheric pressure or of marked variations in environmental temperature. It appears that the rate of speed in this circuit is quite constant, 6 to 9 seconds, and that it remains undisturbed even in marked heart and lung alterations, often when the rate of flow in the general circulation is markedly prolonged. It may therefore be stated that, as a rule, retardation of the general circulation does not involve the rate of blood flow in that portion of the pulmonary circulation measured by the test described above. Retardation of the blood flow over this part of the lesser circulation may be governed by forces functioning independently of the general systemic circulation.

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Scalp Products and Hair Before Puberty as Culture Medium for Certain Pathogenic Fungi.

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A study of the growth of pathogenic fungi on a mixture of barber shop hair and scalp products of adults was reported.[1] In this paper the results of a study of the growth of pathogenic fungi on the hair and scalp products of children under 12 years, before and after extraction with ether, are reported.

[1] Williams, John W., PROC. SOC. EXP. BIOL. AND MED., 1934, **31**, 586.

The hair was divided into 2 portions and one portion was extracted with ether for 24 hours in a Soxhlet. Portions of the material were placed in test tubes, moistened with distilled water and autoclaved. Plants were made on the extracted and unextracted hair and Sabourauds' proof medium with the following pathogenic fungi and saprophytes, *Lichtheimia sp.* and *Scopulariopsis brevicaulis; Achorion schoenleinii, Acladium castellani, Candida candida, Endodermophyton tropicale, Endomyces capsulatus, Endomyces dermatidus, Epidermophyton inguinale, Glenospora gammeli, Geotrichum bachmann, Indiella americana, Monilia albicans, Microsporon apiospermum, Microsporon audouini, Oöspora humi, Trichophyton crateriforme, Trichophyton granulosum, Trichophyton japonicum, Trichophyton interdigitale, Willia anomala.*

The results of the observations over a period of 30 days were as follows: Growth on Sabouraud's occurred in all instances within 3 days. Growth on extracted hair occurred in all instances with the exception of *Endomyces capsulatus,* while growth on plain hair was absent only in the case of *Achorion schoenleinii.* Growth was much more pronounced on extracted hair with *Glenospora gammeli, Indiella americana, Microsporon apiospernum, Microsporon audouini, Monilia albicans, Trichophyton interdigitale.* Growth occurred as early as the third day on both extracted and unextracted hair with *Acladium castellani, Candida candida, Geotrichum bachmanni, Indiella americana, Lichthiemia sp., Microsporon apiospermum, Monilia albicans, Oöspora humi, Scopulariopsis brevicaulis, Trichophyton crateriforme, Trichophyton granulosum, Trichophyton interdigitale, Trichophyton japonicum.* Growth on extracted and unextracted hair by the seventh day was noted in the following additional cultures: *Endodermophyton tropicale, Epidermophyton inguinale, Glenospora gammeli, Microsporon audouini, Willia anomala.* Growth with *Endomyces dermatitidus* was noted in 12 days on both extracted and unextracted hair, while growth of *Achorion schoeneinii* was noted in the extracted and of *Endomyces capsulatus* on plain hair only.

In general, it may be said that extracted hair seems to favor growth of the organisms. From the above it is apparent that hair of children under 12 is for a number of pathogenic fungi an excellent culture media. Future papers will give data on hair of men and women; an attempt will be made to further separate hair ingredients.