EDITORIALS

M. O. R. C.

Members of County and State Medical Societies who are in acceptable health, and who do not fully inform themselves of the opportunities connected with the formation of the Medical Officers' Reserve Corps, are not only neglecting civic responsibilities and privileges *but intelligent self-interest as well.* The chances are that lack of information fully explains why only 490 of the 1600 medical officers wanted from California; 7 of the 75 wanted from Nevada, and 73 of the 85 wanted from Utah have been commissioned at this writing.

If our members could all have the enlightenment this editor recently obtained from two conferences with Colonel Edward L. Munson, Surgeon Ninth Corps Area, including our Western States, published more fully on page 1424 of this issue, that distinguished doctor would have more enquiries and applications for commissions within one week than he would know what to do with. This M. O. R. C. that so few of us know about is something quite distinctly worth while for every able-bodied doctor, whether considered from the angle of public service or self-interest. It is a *permanent* organization. A permanent mobilizing of the medical forces of our country to meet any and all classes of possible emergencies. The duties are less than nominal, and the opportunities and privileges are appealing. When the quota is filled, it is filled. And, in case of need, those holding commissions in the Medical Officers Reserve Corps will be the first assigned to active duty *at the rank they then hold. Others, of course, will be drafted and take what is left.* State and County Medical Associations have endorsed this movement and are sponsoring it. Every member should at least investigate this opportunity for public service *and personal protection.* Address the Surgeon Ninth Corps Area, Presidio, San Francisco, California.

ABSORPTION OF DRUGS FROM THE NASAL AND ORAL MUCOSAE

The absorption of volatile agents from the nasal and oral mucosae is well known, but it is frequently denied for or unsuspected with the non-volatile. It is a common laboratory experiment to demonstrate the toxic and fatal effects of nicotine by placing a drop of the alkaloid on the gums of an animal. The effects of tobacco-chewing in the novice or of chewing a cigar stump are too well known to require description. Occasionally, the physician is disturbed by the sudden or gradual development of alarming symptoms, and even collapse and death, from the local application of cocaine and other anesthetics in these regions. This means that probably the cocaine has been absorbed and caused systemic poisoning. Anaphylactic sensitization from the nose and absorption of caffeine from cigarettes have also been reported. Nitroglycerine is commonly administered by application to the tongue. Its absorption by this method and by gastric administration was discussed in these columns some time ago. A knowledge of the scope and quantity of nasal and oral absorption of non-volatile drugs is desirable, for it might be of toxicologic and therapeutic importance. This has recently been obtained for certain hypnotic and coal tar derivatives by Planelles of the Munich Pharmacological Institute.

Planelles first demonstrated it in vitro experiments that smoke collected from cigarettes impregnated with antipyrin, barbital, salicylic acid, and acetylsalicylic acid, invariably contained all the drugs, including unchanged acetylsalicylic acid. He then smoked such cigarettes himself, allowing the smoke to come in contact with the oral and nasal mucosae and avoiding swallowing and deep inhalation (alveolar absorption) as much as possible. At the same time the urinary excretion of the drugs was studied. Under these conditions, Planelles demonstrated qualitatively the presence of antipyrin, barbital, salicylate and acetylsalicylic acid, as salicylate, in the urine. A quantitative study of barbital excretion showed that about 20 per cent of a 0.3 gm. quantity of barbital placed into and smoked as a cigarette appeared in the urine. Smoking a 0.5 gm. quantity of barbital caused the appearance of the drug in the urine at the end of 10 minutes, while after swallowing the same quantity, the time of appearance was 20 minutes. After smoking, the drug disappeared from the urine at the end of 30 minutes, and at the end of 60 minutes when it was swallowed. According to Planelles, the dermal absorption of barbital is about 20 per cent. If this is true, certainly the nasal and oral surfaces compare favorably with the skin, and from Planelles' results the absorption would be faster and completed sooner from the nose and mouth than from the gastro-intestinal tract. Confirmation of Planelles' results is desirable, but it is suggestive that prompter hypnotic effects of barbital might be secured by simply holding the drug in the mouth instead of swallowing it, for the onset of the drug's action is notoriously slow, whatever the cause.

In any case, the results of Planelles, and from what has been said, leave no doubt that a variety of volatile and non-volatile agents, including protein among the latter, can be absorbed from the oral and nasal mucosae. It is well to bear this in mind at least in connection with the possible toxicity of local anesthetics, especially with cocaine which is notorious for its irregular absorption. Then there are certain antiseptics (toxic dyes and other kinds) which are being used in the nose and mouth, let alone systemic disturbances and possible toxicity, especially in children, from the indiscriminate use of drugged lozenges, nasal sprays, and a variety of other preparations of the patent medicine type used by the laity.

Planelles, J.: Arch. exp. Path. Pharm., 1924, 104:272.
"Resorption dampfförmiger Medikamente durch die Nasen—Rachenschleimhaut."