60 cubic millimetres of normal blood serum decolourise the methylene-blue solution. (20 cubic millimetres of serum have no action, just as in the case of 20 cubic millimetres of blood.) Hence there is also some substance in normal blood that has a reducing action when a sufficient quantity of blood is employed. It has been observed that a minute quantity of sugar, whilst 20 cubic millimetres of the same diabetic urine in methylene-blue solution readily. Hence there is a substance in non-diabetic blood, beside the minute quantity of sugar, which the sugar had been decomposed by the action of yeast was added; to the other no yeast was added. Both were kept in a warm place for 48 hours. At the end of that time no longer gave the methylene-blue reaction; also 20 cubic millimetres of normal urine did not give the methylene-blue reaction.

CLINICAL AND PATHOLOGICAL VALUE OF THE REACTION.

The methylene-blue reaction of the blood is present clinically. The examination of the urine is generally sufficient. All these facts indicate that the methylene-blue reaction may be made the basis of an easy method of estimating the amount of sugar in the blood. Two methods have been employed.

PRINCIPAL RESEARCHES INTO THE ETIOLOGY OF SCURVY.

It is curious that in the same number of THE LANCET (April 28th) there should be an account of a case of pernicious anaemia associated with, and in the opinion of Dr. W. Elder mainly due to, neglected state of the teeth, cured by buccal antiseptics, anti-streptococcic serum (the
most evidently beneficial treatment), and salicylate of bismuth. We have all heard stories of leading consulting physicians who have refused to advise patients suffering from dyspepsia till their teeth were put in order. Have we not nearly all been subject to this seemingly arbitrary action by the practical man?

I am greatly interested to have this suggestion that the initial lesion of scurvy is an affection of the gums; it is not only a likely hypothesis but it concurs completely in the historical pathology of this disease. I would submit as a nearer approximation than we have yet had to the true etiology that scurvy is caused by microorganisms which thrive only in the presence of certain substances that can be destroyed by antiseptics. (Osler recommends per-manganate of potash and dilute carbolic acid for the stomatitis and solution of nitrate of silver for the ulceration of the gums.) Lime-juice cures scurvy either specifically (as quinine antagonises the malarial organism or as mercury resists syphilis) or it may act as an antiseptic which can be taken into the mouth and swallowed strong enough to do the mouth good and destroy the parasite without harming the rest of the body. We have all heard stories of leading consulting physicians who have forgotten why we think so I may narrate Dr. Galleraud's experiences. In the Psycké, in the White Sea, in 1887, before the Russian admiral Vaynberg's squadron came to the vessel returned to France. Next year in the Cléopâtre he was threatened with a more serious epidemic, but Dr. Murray of the Meander told him about our lime-juice and got for him 11 gallons from the Meander and Phoenic, by the kind permission of M. de St. Vincents, who owned the vessel, and the French Admiral was so convinced by his experiences of the usefulness of lime-juice that he made it a general issue to their fleet.

In relation to the antiseptic effect of the oils of the aromatics, the anti-scorbutic plants mentioned are generally credited. Lind (1779) besides lime-juice recommended vinegar; Blane (1785) (like Lind a M.D. of Edinburgh) mentions onions as, anti -scorbutic. (There was scurvy in Ladysmith; was there any or as much in Mafeking?) So much for the acids. As to oils, the anti-scorbutic plants mentioned are generally credited. There are several well-known facts about scurvy which I am quite unable to explain by the theory of primary infection of the gums cured by antisepsis, this being the practice of raw meat juice. The infecting organism, however potent; most ulcerations result from a mixed infection or symbiosis and are best cured by different antiseptics used alternately, and lime-juice may be the best antiscorbutic because of its double nature and varied antiseptic effect. Employed as a mouthwash at bedtime it certainly is useful. I suppose as an antiseptic in the prevention of the buccal catarrh commonly ascribed to over-smoking, and very apt to follow late and prolonged dinner-parties. Easton's syrup diluted I have found more effectual, but it is more difficult to insure that your patient shall use it.

In relation to the antiseptic effect of the oils of the cucumbers I may say that in a small prison in which I once worked we recognised, we thought, an epidemic gastrointestinal campylospermia in the prisoners got mustard added as a condiment to their daily allowance of three-quarters of a pound of cooked beet, which the infective dyspepsia was, as we had expected, checked without drugs or antiseptics. But when the北汽 cucumber, which thrives best in beef-chyme, grows strongly in the stomacha of people who eat no meat but beef; to depress it we have learnt by experience to take mustard or to vary our diet. If we are not very critical, the cucumber is less well antagonised by mustard and that therefore it is we do not eat mustard with cucumber. So the old gibe: "Mustard with mutton! Naval officer, I presume," dates back to a time when naval officers, always at sea blockading and living on beef and pork, had not enough experience of mutton to know that mustard was not its appropriate antiseptic condiment. I suppose, too, that the principle of the varying of diet is the most efficacious and less imperfect when the meat is replaced by milk, is assimilated and are more easily destroyed by the remedies formerly powerless against it.

Since I have read William Hunter's papers on pernicious anemia we are well aware clearly than even before how important a factor in the causation of tropical anemia and debility is the infection of our alimentary canals by the saprophytes which so plentifully surround us in those regions of luxuriant vegetation. From these infections the natives strive to save themselves by smoking cigarettes and chewing peppers and other "hot things"-that is, aromatic antiseptics. The diarrhea of Hing-Kong is a proverb—a tradition I myself believe of the time before 1888, when the gravitation supply of upland surface-water was brought in. Still, there is a good deal of diarrhea which is best treated antiseptically with carbolic acid on Colonel Quill's plan, or with boric acid for the stomach, salol for the small intestine, and enemata of coppe and ponceau for the colon. The most compound cases, which in Europe are done away with by antiseptics, are often cured by raw meat juice. The infecting organism, however potent; most ulcerations result from a mixed infection or symbiosis and are best cured by different antiseptics used alternately, and lime-juice, yet it is not, so far as I know, an antiseptic.

In conclusion, I may recapitulate and say that I suggest that scurvy is essentially an infection of the mouth with micro-organisms out of decayed food, antagonised by lime-juice and fresh vegetables which act as antiseptics. Raw or cooked it seems most effective as food, lime-juice, yet it is not, so far as I know, an antiseptic.

ON THE LIMITATION OF PHYSICAL METHODS IN THE INVESTIGATION OF THE PHYSIOLOGICAL AND PSYCHICAL PHENOMENA OF SIGHT.

By F. W. EDRIEGE-GREEN, M.D. DURR., F.R.C.S. ENG.

In a paper published in The Lancet of May 26th (pp. 1510-2) I showed how difficult it was to correctly ascertain the colour perception of any person if we ignored other names. In this paper I wish to show that in investigating physiological, psychical, and pathological phenomena we must employ methods which are suited to the case in hand and not those which are so admirably adapted to the study of the physical phenomena themselves. We talk of light and heat as if they were two different things, but the difference exists in us, not in the physical stimuli giving rise to the sensation. The physical stimulus is that force which, acting upon the body, gives rise to a sensation. It may be, however, that the alteration in the physical state of the eye is due to the sense of light falling upon the back of the hand and gives rise to the sensation of heat, and may when falling upon the back of the head covered by hair give rise to a sensation whatever. Again, different physical stimuli.