In 1984, while a trainee in general practice, I surveyed the serum theophylline level of 20 patients. Only two had a serum theophylline concentration in the therapeutic range and, I suspected five patients of non-compliance. I attempted to increase the oral theophylline dose of the remaining 13 patients. Two were reluctant to increase their dose because of previous adverse effects with a higher dose and only four of the 11 patients who had their dose increased could tolerate it. Thus only six out of 15 patients in this survey could tolerate a therapeutic level of theophylline.

This survey clearly indicates that oral theophylline preparations are poorly tolerated in therapeutic dosage. I submit that general practitioners prescribe theophylline in subtherapeutic dosage because of the expectation that a considerable number of patients will be unable to tolerate a therapeutic dose.

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Neonatal conjunctivitis

Sir,

Dr J.A. O'Brien (Letters, February *Journal,* p.82) makes some interesting suggestions in his report of a case of neonatal conjunctivitis. While most of his points are entirely accurate, I feel there are some areas where clarification is necessary in order to avoid misunderstanding.

First, Dr O'Brien quite correctly says that specimens for any microbiological investigation should if possible be taken prior to the initiation of antimicrobial therapy, in this instance citing the use of chloramphenicol eyedrops as the reason for failure to identify chlamydial infection. However, chloramphenicol is not the drug of choice for chlamydial ocular infections, even though a bacteriostatic effect may be demonstrated *in vitro*; indeed chlamydia can be the cause of a 'sticky eye' unresponsive to chloramphenicol eye applications.[1] In the neonate the treatment of choice is a topical tetracycline ointment, combined with systemic erythromycin therapy for at least two weeks. The latter addition serves several purposes — the oral therapy is easier for the patient to tolerate when up to six weeks of therapy may be necessary; ocular infection is not always eradicated by local treatment alone;[2] and perhaps of most importance is the prevention of respiratory tract colonization which may progress to chlamydial pneumonia.[3]

Secondly, I would like to comment on some of the diagnostic methods mentioned. Chlamydia culture remains the definitive method by which all others are judged — by necessity it is limited to centres that have facilities for tissue culture, and would not be available to the majority of general practitioners. Direct immunofluorescent techniques on the other hand are widely used by laboratories, and in skilled hands the incidence of false positive results is low. The ELISA test mentioned has promised to be an attractive alternative since the degree of skill needed compared with the immunofluorescent techniques is lower, but unfortunately a recent evaluation of the method concluded that it was unsuitable for routine diagnostic use at present.[4]

Finally, I should mention the process of specimen taking. As Dr O'Brien made clear, the diagnostic methods available are quite varied and it is important that the general practitioner liaise with his local laboratory prior to taking specimens so that the correct techniques are used, both in taking the specimen and transporting it to the laboratory. When examining for chlamydia, it is important to bear in mind that they are intracellular parasites, and in order to demonstrate them easily it is necessary to obtain cells for examination. In practice this usually means urethral scrapes in the male, endocervical specimens in the female, and for eye infections conjunctival scrapes (anaesthetizing the eye first if necessary).

I agree with Dr O'Brien that it is important for general practitioners to consider chlamydia infection in general practice. I would, however, request that general practitioners consult their local laboratory before embarking on extensive investigations, so that the appropriate specimens are taken and transported to the laboratory correctly.

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References

1. Richmond SJ, Oriel JD. Recognition and management of genital chlamydial infection. *Br Med J* 1978; **2:** 480-483.
2. Ridgway GL, Oriel JD. Treatment of neonatal inclusion blenorrhoea. *N Engl J Med* 1977; **297:** 512.
3. Beem MO, Saxon EM. Respiratory tract colonisation and a distinctive pneumonia in infants infected with Chlamydia trachomatis. *N Engl J Med* 1977; **296:** 306-310.
4. Taylor-Robinson D, Thomas BJ, Osborn MF. Evaluation of enzyme immunoassay (Chlamydiazyme) for detecting Chlamydia trachomatis in genital tract specimens. *J Clin Pathol* 1987; **40:** 194-199.

Predisposing factors to infective disease

Sir,

Dr Bullimore concludes in his article on predisposing factors to upper respiratory tract infection (March *Journal,* p.107) that traditional theories of causation need revision. I would suggest that they do not.

The laudable search for causative organisms and thence 'magic bullets' has been centre stage in medical thinking for a century. Contagion accounts admirably for the illness process in many recognized infective syndromes leading to appropriate therapy. Many episodes of illness are now recognized to be the result of organisms within the system which remain inactive until, I presume, the balance between their further development and the bodily defences moves in their favour. Such organisms include Coxsackie B, herpes simplex, chickenpox, human papilloma virus and potentially many more.

A consideration of those factors widely accepted as effective prior to the availability of a definitive treatment for tuberculosis is instructive. Following transmission of the causative agent, the course of the illness very much depended upon the nature of the host's defences, varying from fulminant disease in the immune-impaired host to complete remission of the disease in the fit individual, provided this fitness was maintained. Which factors maintain 'fitness'? These are exemplified by the physical methods found in the sanitorium regimen. Advocating a balanced life-style with adequate nutrition, exercise, physical and emotional rest and sleep with avoidance of unhealthy habits is nothing new. However, these conditions rarely prevail in real life and not surprisingly ill health flourishes.

I contend that the current model of infective illness is too constrained. As for tuberculosis, models of chronic illness should encompass the spectrum of ill health. Our organism is constantly under attack and in most the balance swings towards disease with alarming regularity. I cannot prove that we do not always catch a cold or a sore throat or a spell of bronchitis yet I feel in many the disease process suggests recurrent intrinsic infection as in herpes or tuberculosis.

In our fight to target our magic bullets at offending pathogens we can easily overlook the traditional heath process which must be our constant ally.

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Health promotion

Sir,

As a general practitioner employed by a district health authority as a medical adviser in health education on a sessional basis, I was interested to receive the latest report from general practice.[1] With the increasing interest in prevention, health