

Ideally, antibiotic therapy should be initiated only after laboratory testing to determine the susceptibility to various antibiotics of the organism causing infection. However, in practice, antibiotic therapy is often initiated on the basis of the clinical experience of the physician who prescribes an antibiotic which he thinks is appropriate. The supposed medical rationale for the use of combination antibiotics is that (1) they are better than one of the components alone by having an additive or synergistic effect; (2) they have a wider spectrum; or (3) they protect against overgrowth of organisms which are not susceptible to one or the other antibiotic.

One disadvantage of a fixed combination is that it limits the flexibility of the physician in prescribing different amounts of the individual components. If he were giving the antibiotics separately to a patient the physician would have the option of prescribing them in different ratios, according to the needs of the patient. Another major medical disadvantage of the combinations is increased possibility of adverse reactions without increased efficacy. Thus, to justify marketing of a combination antibiotic, it should have advantages that outweigh any increased risks.

The Food and Drug Administration has concurred in the evaluation of the following combination antibiotic drugs by the Academy and concluded that there is lack of substantial evidence that these fixed combinations are effective for the conditions for which they are labeled or that each active ingredient contributes to the claimed effect on the basis of the following medical findings:

1. **Mysteclin F** (tetracycline and amphotericin B). There is a lack of available scientific evidence that this product will prevent disease due to monilial organisms as claimed in the labeling for the drug. It is possible, in our judgment, to prescribe antifungal drugs (the amphotericin B component) when clinically indicated, rather than to use them indiscriminately as "prophylaxis" against a clinical entity seen uncommonly during therapy with tetracycline and other antibiotics.

2. **Albamycin G. U.** (novobiocin calcium and sulfamethizole). The limitation of the combination are the limitations of the individual components. Novobiocin is limited by (1) its narrow antibacterial spectrum, (2) the rapid emergence of resistant strains, and (3) the great frequency with which adverse reactions occur. The novobiocin component has only modest efficacy in the treatment of urinary tract infections. Further, evaluation of the available evidence has led to the conclusion that therapeutic results occur, if at all, from the activity of one of the individual components and not by reason of their combination.