the mother was instructed to hold a piece of black X-ray paper between the lamp and the child's face.

Dosage was strictly progressive and is indicated by the following table:

*With Long Flame-Cored Carbon Arc.*

1st treatment: 1 minute to back and front at 40 inches.
2nd " " " 38 "
3rd " " " 36 "

Time increased thereafter by ½ minute each consecutive exposure until a maximum of 5 minutes to front and back was being given.

*Alternative Table with Alpine Sun Mercury Vapour Lamp.*

1st treatment: 1 minute to back and front at 36 inches. Increase weekly by 20 seconds until 3 minutes reached, and remain at this.

**CONCLUSIONS.**

It would seem that a sunshine clinic serves a good purpose at an age when the subject requires biological stimulation and at a period when this is, in many instances, subnormal.

The fact that a flaming arc lamp may not be available will prevent multiple treatments being undertaken and thus limit the numbers it is possible to treat.

Most hospitals have an alpine sun mercury vapour lamp. It is suggested that in this case any subnormal or weakly children should be selected to undergo a tonic course, the children to be chosen by the families' M.O. with the co-operation of the parents.

In conclusion it must be noted that the personal element must be provided for. The fair child requires (or will tolerate) less than the dark child. The dosage should be gradually increased until pigmentation or a barely perceptible erythema is obtained.

**A CASE OF MYASTHENIA GRAVIS.**

**By Captain R. StJohn Lyburn, M.D., Royal Army Medical Corps.**

The patient, a Greek aged 23, was the wife of a Flight Serjeant in the R.A.F. Her occupation before her recent marriage was a dressmaker.

On her 21st birthday she was in excellent health, but shortly afterwards suffered from severe occipital headaches. A year later she noticed that her right ring finger would tire quickly when she was engaged in dressmaking. This weakness became intensified the longer she continued to use the finger, but regained its strength after a short rest. A fortnight later she noticed her right hand begin to drop and the left ring finger became similarly affected to the right. In a short time the fingers of both hands were affected and she
had difficulty in dorsiflexion of the wrist. These symptoms only came on about three-quarters of an hour after commencing her dressmaking.

This condition of “weakness on muscular exertion” progressed fairly rapidly and the patient soon found that she was unable to lift up her right arm, even after a short time at dressmaking. She was therefore compelled to give up her work.

Two months after she noticed the tiredness in her right ring finger, symptoms appeared in the lower extremities. These were first manifested by the patient twisting her ankle frequently after a short walk. On rising in the morning after a night’s rest she felt well and did not notice any weakness.

Then her head began to fall forwards and she would have to support it with her hands; as the day progressed the tiredness in her legs increased until she could only walk a short distance. After a rest the strength in her legs would recover, but after another short walk she would be compelled to rest owing to weakness in the crural muscles. In this state she was married to an airman.

The muscles of the tongue were the next to be involved, and when I last saw her she was suffering from dysphagia resulting from involvement of the pharyngeal muscles.

Diplopia set in eight months after the disease became manifest.

The patient attended the antenatal clinic of the Military Families’ Hospital, Mustapha, where it was noticed that she had ptosis of the left lid. The above account of the illness was then elicited. She was four months' pregnant. Her husband was informed of the seriousness of the illness, and it transpired that she had been attending a Greek neurologist in Alexandria, who had prescribed tablets which gave her great relief, though only temporarily. These were found to be prostigmin.

She is now quite unable to swallow food or fluid without this drug. Other distressing symptoms were insomnia, pain in the back in almost any position, and halitosis. She has marked weakness in all her limbs, sits up with difficulty, and is unable to close her eyes tight or purse her lips to whistle.

Examination of the central nervous system revealed no abnormality. The knee-jerks were present, though sluggish. Sensation was unaffected. Physical examination of other systems showed nothing abnormal. Electrical tests to show the “myasthenic reaction” were not performed.

Her existence is entirely dependent on prostigmin (Roche), a synthetic physostigmine. Each tablet of 0.015-gramme causes recovery of the affected muscles in about ten minutes, and lasts for two hours. She frequently has to take seven tablets daily, but can usually manage with five.

Apart from being such a distressing illness it is also very costly. Every fifth day she has to buy a bottle of prostigmin tablets, the cost of which is PT 40 (about 8s.).

The question as to the advisability of terminating the pregnancy arose. Most authorities state that pregnancy usually causes an abatement of symptoms, but this has not been so in this patient.
Dr. Solomons, ex-Master Rotunda Hospital, is in favour of terminating the pregnancy if the patient’s condition deteriorates.

Comment.—The following excerpt is from Beaumont’s “Medicine”:—

"The cause of myasthenia gravis is unknown. The disease appears to be due to chemical abnormality which results in a defect of the transmission of the impulse from the nerve to the muscle. Acetylcholine is the chemical substance which allows transmission of impulses across the myoneural junctions in striated muscles, but acetylcholine itself has no beneficial effect on the disease. It is thought that eserine and prostigmin inhibit the destruction of acetylcholine by an esterase."

I am indebted to Lieutenant-Colonel R. H. Alexander, M.C., M.B., R.A.M.C., S.M.O., Alexandria Area, for permission to forward these notes for publication.

This case came under the care of Captain G. W. D. Reeves, Royal Army Medical Corps, in the April of last year.

She was then attending the antenatal clinic at Mustapha Military Families’ Hospital. She was due to go into labour on or about August 27, 1939.

August 1: Whilst in her quarters she suddenly developed an acute exacerbation of symptoms, and was experiencing great difficulty in breathing. Oral prostigmin could not be given as she was completely unable to swallow. An intramuscular injection of 1 c.c. was given and she recovered in a few minutes. She was removed to the Families’ Hospital; then it was noted that instead of using her usual five tablets per diem she now needed eight plus also the occasional intramuscular injection.

August 11: It had been previously decided that the patient should be transferred to Cairo, but owing to her serious condition this was impossible. She developed early labour pains and there was still a hope that she might be delivered in a normal manner, but soon it became obvious that this was impossible. The uterine contractions, although very painful, were very weak, the cervix was never completely taken up (all examinations were done rectally in case Cesarean section should be decided upon). Membranes were unruptured.

August 13: It was decided to perform a classical Cesarean section.

Operation.—The abdomen was opened through the usual incision. A living female child, weight 8 pounds, was delivered. After delivery of the child the patient collapsed and was revived with prostigmin and coramine. (It is of interest to note that the rectus muscles were practically non-existent and consisted solely of a very thin sheet of muscle fibres.)

Convalescence.—She has shown a slight improvement and now consumes only five tablets per diem.

The prognosis as to life is of course very grave.