# *Vitamin F in the Treatment of Prostatic Hypertrophy*

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For a considerable time we have been using an oral vitamin F complex preparation for the control of the common cold. This treatment has been used quite successfully in Europe for several years. During the courses of treatment with this preparation it was noted that in certain male patients who were being treated concurrently for prostatic hypertrophy, there was a sudden notable decrease in the palpable size and consistency of the prostate gland.

This led us to investigate separately the action of vitamin F complex* on a series of cases of prostatic hypertrophy. However, before proceeding with our material, a necessarily brief survey of the nature of vitamin F might be in order.

Kugelmass summarizes the information as to the nature and composition of the product:

> "This fat soluble growth factor consists of the unsaturated aliphatic acids essential for normal nutrition. It is a common constituent of animal fat, and is 'associated with' the linoleic or linolenic fraction. Vitamin F is essential for cell respiration, insulin secretion, epidermal synthesis and hair metabolism, other lipid functions being fulfilled by dietary fat."
>
> ". . . . . A residual amount of vitamin F persists in the liver even on a diet free from unsaturated fatty acids, although absent in body fat, the most potent sources are egg, lard, linseed oil and corn oil."

Evans and Lepkovsky found that:

> "Vitamin F, unlike vitamins A, D, and E, is not concentrated in the non-saponifiable fraction. It can be recognized in the fatty acid portion after saponification."

Sherman finds that the purer forms of unsaturated fatty acids do not exhibit the same F effects as natural oils high in unsaturated fatty acids.

**The vitamin F complex used in these cases was supplied by the Vitamin Products Company, Milwaukee, Wisconsin.*

Numerous observers have proved that there are definite, deleterious effects upon experimental animals and the human organism, when these unsaturates are deleted from the diet. Upon return to a diet containing these factors the organisms demonstrate marked restoration to normal.

The majority of workers are of the opinion that these unsaturated fatty acids, in certain combinations, undergo synthesis in the body, perhaps in the liver, converting them into the typical vitamin form. Shephard believes the reaction may take place in the skin.

## *CLINICAL PROCEDURE*

The total number of cases in our report is nineteen. Six other cases were deleted due to failure to continue treatment or to cooperate. Laboratory blood determinations were made of five patients taken at random from the group.

Our procedure was as follows:

1. The gland was palpated to determine its size and consistency.
2. A residual urine was obtained.
3. A detailed history was taken of the urinary symptoms regarding force of stream, spraying effect of stream, dribbling, nocturia and cystitis.
4. Each patient was given a thorough physical examination for the exclusion of other vitamin, mineral or endocrine deficiencies.
5. Blood samples were obtained for the determination of lipids, iodine, calcium, and phosphorus.

We did not check androgen levels but we believe further investigations will yield interesting information in this respect.

Patients were then placed on a daily dosage of six five-grain tablets of vitamin F complex, a concentrate containing linoleic, linolenic, and arachidonic acids, each tablet having a total of 10 milligrams of these unsaturated fatty acids. This dosage was administered for a period of three days to produce systemic saturation; it was then reduced to four tablets daily for several weeks; finally a maintenance dose of one or two tablets was administered daily.

Physical examinations were given each month, at which time blood samples were taken for determination of essential change. The patients also reported weekly for observation of their subjective symptoms.

## *RESULTS*

1. All cases showed a diminution of residual urine; in 12 of the 19 cases there was no residual urine at the end of the treatment.
2. Nocturia was eliminated in 13 of the 19 cases showing this symptom.
3. A decrease of fatigue and leg pains and an increase in sexual libido was noted in all patients.
4. Cystitis cleared up in relation to the decrease in residual urine.
5. Dribbling was eliminated in 18 of the 19 cases.
6. Force of stream was increased.
7. In all cases the size of the prostate was rapidly reduced. Confirmation was by palpation.

Every patient exhibited enthusiasm over the improvement in physical well-being resulting from treatment. The few showing the least improvement had all given histories of gonorrheal infection of varying degrees of involvement of the genito-urinary tract.

## *LABORATORY FINDINGS*

In essentially all of these cases our laboratory findings indicated low blood lipids, high or normal blood calcium, and low blood iodine at the start of the treatment. Tissue lipids, tissue iodine and tissue calcium were low, as was to be expected. Shortly after treatment was instigated a notable reversal of the above factors was observed in the laboratory specimens.

Five patients were taken at random from nineteen cases. The period of treatment varied from ten days in Case No. 5 to forty-five days in Case No. 1.

## *BEFORE VITAMIN F THERAPY*

| Case No. | Date | Calcium (1) | Phosphorus (1) | Iodine (2) |
|---|---|---|---|---|
| 1. J. P. H. | 9-16-40 | 9.00 mgms. | 3.8 mgms. | 5.5 mgms. |
| 2. R. L. | 11-26-40 | 8.70 mgms. | 1.25 mgms. | 5.5 mgms. |
| 3. W. F. C. | 11-22-40 | 9.50 mgms. | 2.60 mgms. | 10.0 mgms. |
| 4. H. H. B. | 12-14-40 | 9.40 mgms. | 2.20 mgms. | 8.5 mgms. |
| 5. K. W. W. | 12-23-40 | 10.30 mgms. | 1.89 mgms. | 4.0 mgms. |
| **Averages** | | 9.38 mgms. | 2.35 mgms. | 6.7 mgms. |

## *AFTER VITAMIN F THERAPY*

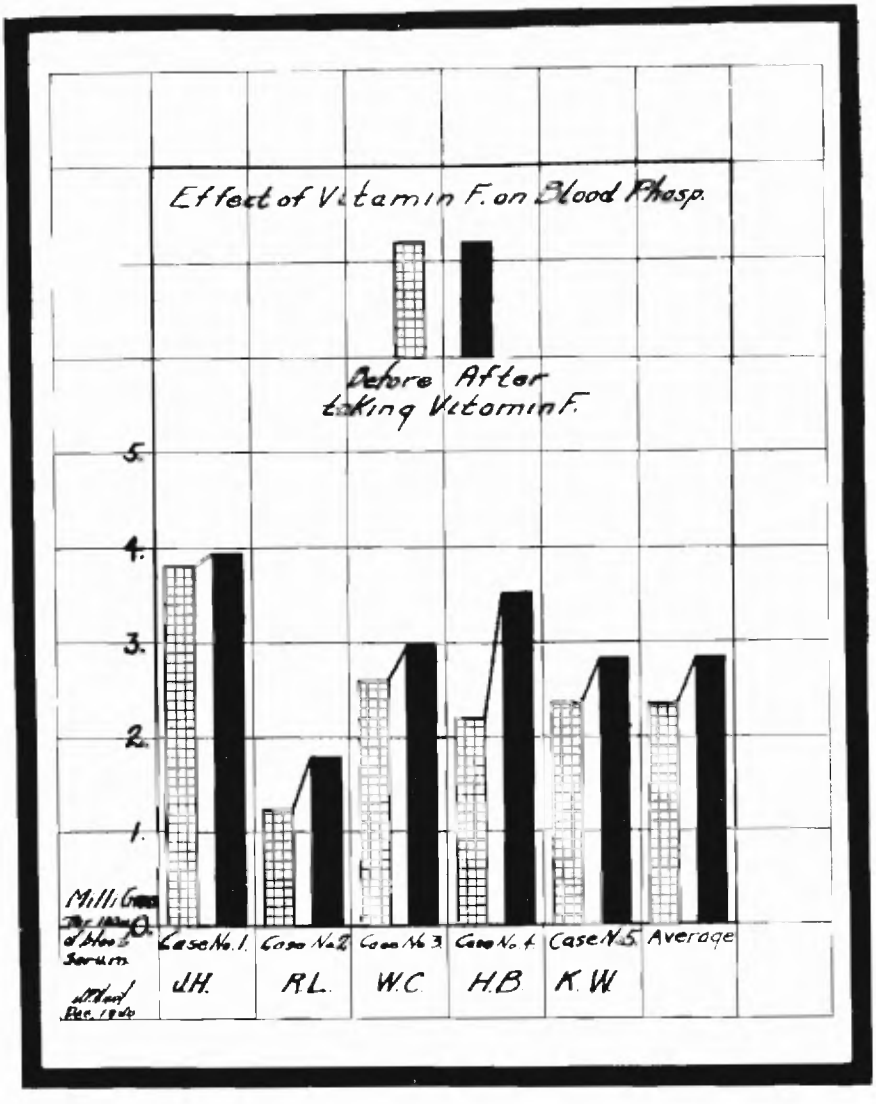
| Case No. | Date | Calcium (1) | Phosphorus (1) | Iodine (2) |
|---|---|---|---|---|
| 1. J. P. H. | 1- 4-41 | 7.10 mgms. | 3.93 mgms. | 16.5 mgms. |
| 2. R. L. | 12-26-40 | 8.40 mgms. | 1.79 mgms. | 22.5 mgms. |
| 3. W. F. C. | 1- 6-41 | 7.70 mgms. | 2.98 mgms. | 32.0 mgms. |
| 4. H. H. B. | 1- 4-41 | 9.00 mgms. | 3.50 mgms. | 26.3 mgms. |
| 5. K. W. W. | 1- 4-41 | 9.00 mgms. | 1.94 mgms. | 11.7 mgms. |
| **Averages** | | 8.24 mgms. | 2.83 mgms. | 21.8 mgms. |
| **Increase Differences** | | | 0.48 mgms. | 13.1 mgms. |
| **Decrease Differences** | | 1.14 mgms. | | |
| **Increase Percentages** | | | 8.3% | 307.3% |
| **Decrease Percentages** | | 11.2% | | |

(1) Milligrams per 100 cc. blood serum

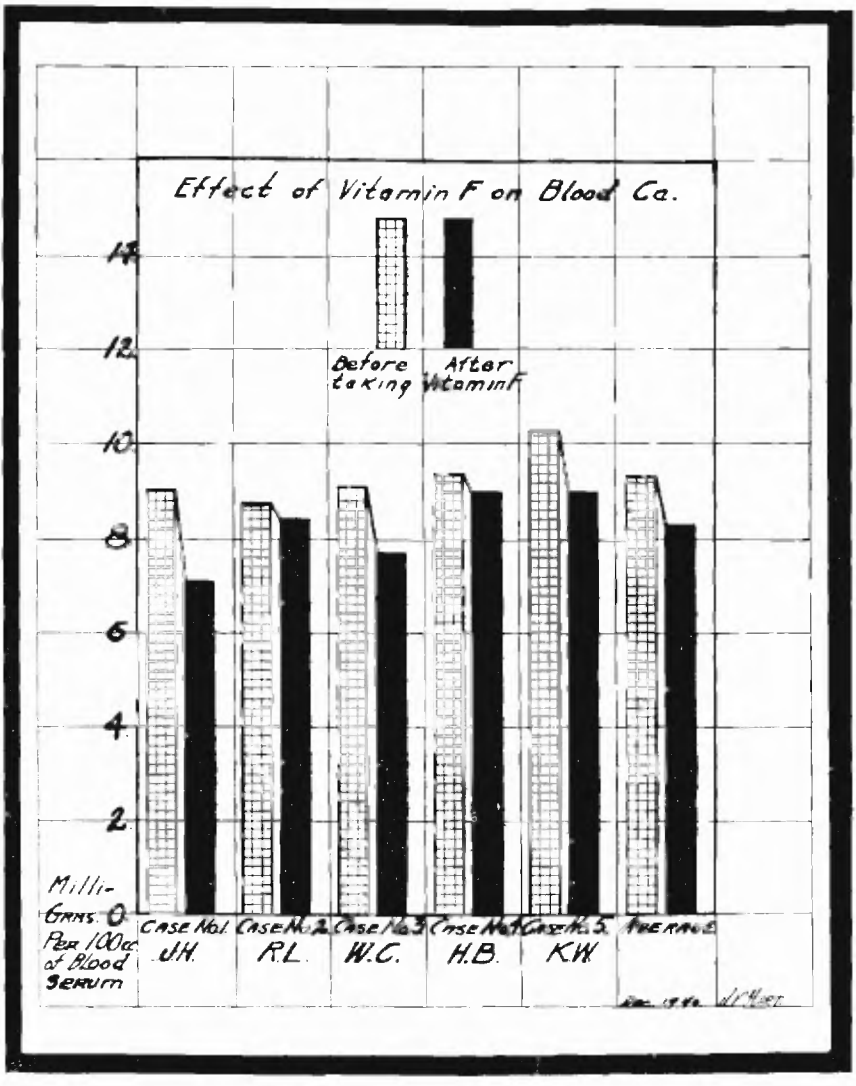
(2) Micrograms per 100 cc. whole blood

Although this is a small number of cases the results are so consistent that the following conclusions may be drawn:

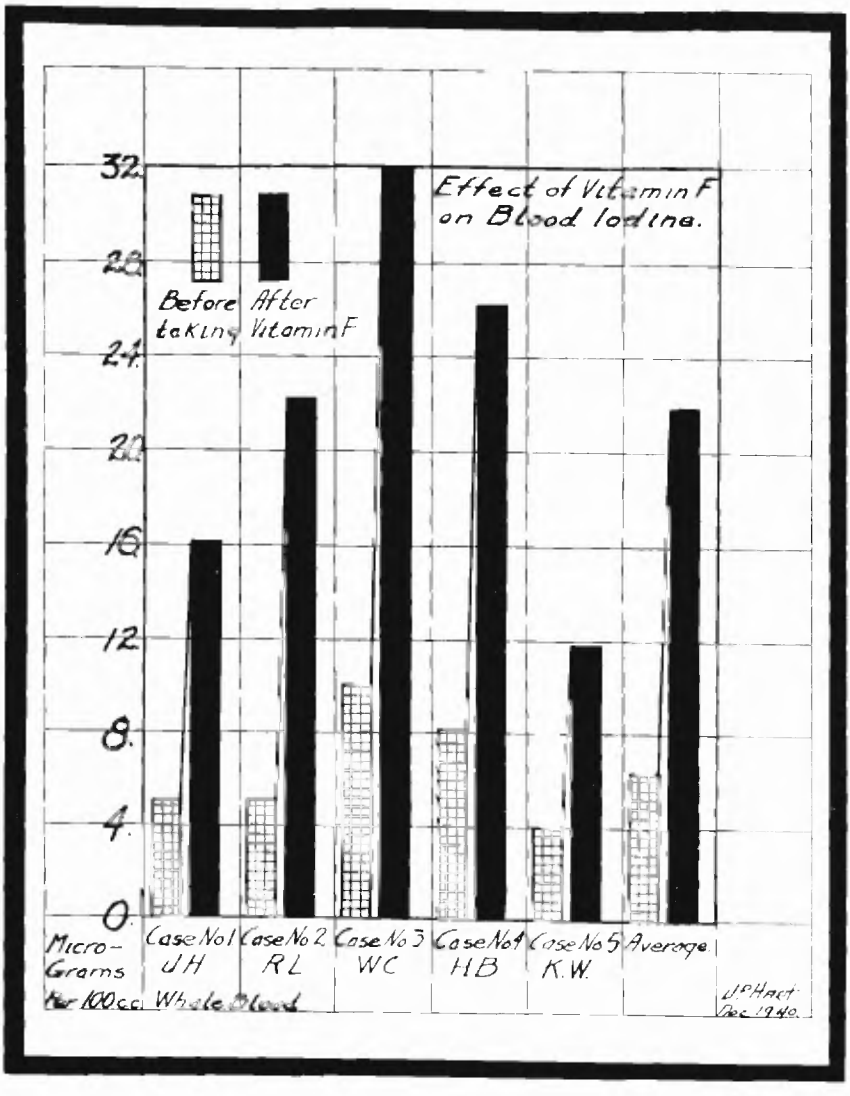
1. Blood calcium showed an average decrease of 11.2%.
2. Blood phosphorus showed an average increase of 8.3% under the same conditions.
3. Blood iodine increased 307.3%.
4. The striking increase in the blood iodine content after vitamin F therapy suggests a strong functional relationship between this vitamin and the thyroid gland.




EFFECT OF VITAMIN F ON BLOOD PHOSPHORUS




EFFECT OF VITAMIN F ON BLOOD CALCIUM




EFFECT OF VITAMIN F ON BLOOD IODINE

## *DISCUSSION*

The majority of our cases showed a tendency toward hypertrophy of the thyroid gland. The role of the thyroid as the physiological eliminator of calcium seems to have been overlooked by most investigators—however, it is known that the most consistent result from the administration of thyroxin is the quantitative elimination of calcium from the body. MacCallum and Harrower believe this substance more effective than the male sex hormone in prostatic hypertrophy.

The observations lend support to the theory that the complex of these unsaturates may be responsible in part for the maintenance of, or at least for the regulation of, iodine metabolism making not only available iodine in the blood stream, but actually the deposition of this substance into the gland tissue.

We have noted definite changes in the tissue calcium of the cases being treated. This may have some effect upon the muscular portion of the gland as well as on the active portion. It causes distention of the cells and opposes edema, improving the function and tone of the tissue of the gland. Vitamin F is a growth factor; in the young it probably feeds the thymus; in the adult, the spleen and gonads. These are the calcium depressors.

Apparently we have been able to accomplish the same results in the treatment of prostatic hypertrophy with this essential dietary factor that other workers have obtained with both synthetic and natural glandular substances. Vitamin F is unquestionably a very potent substance. Its deficiency appears to interfere with the normal function of the thyroid, prostate and gonads, at least. By whatever name it may eventually be designated, additional clinical research will probably yield more evidence of the importance of this vitamin.

## *SUMMARY*

1. The principles of Vitamin F Therapy in prostatic hypertrophy were demonstrated subjectively and objectively through diminished residual urine, reduction of size of prostate, disappearance of pain and discomfort, reduction of nocturia, and marked increase in sexual libido.
2. Vitamin F is a complex substance apparently always associated with linoleic, linolenic, and arachidonic acids.
3. The action of vitamin F administrations decreased blood calcium, raised blood phosphorus, and markedly raised blood iodine in all cases.
4. The action of vitamin F may possibly be through its influence upon the thyroid by virtue of its effect on iodine metabolism, as in our laboratory findings, a specific influence was shown to be exerted over both calcium and iodine metabolism.
5. Previously reported F deficiency indications were confirmed.

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