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Hormone Balancing: Natural Treatment and Cure for Arthritis

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(Formerly published in *The Journal of the Rheumatoid Disease Foundation, Volume 1, Number 1*), The Roger Wyburn-Mason and Jack M. Blount Foundation for the Eradication of Rheumatoid Disease

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A very healthy 71-year-old man was under his house repairing the foundation, when a support slipped and let the house fall far enough to break some facial bones. During his recovery, he developed inflammatory arthritis in his hands. It is fairly common for arthritis to appear shortly after an accident, a shock, or surgery, and Hans Selye's famous work with rats shows that when stress exhausts the adrenal glands (so they are unable to produce normal amounts of cortisone and related steroid hormones), osteoarthritis and other "degenerative" diseases are likely to develop. But when this man went to his doctor to "get something for his arthritis," he was annoyed that the doctor insisted on giving him a complete physical exam, and wouldn't give him a shot of cortisone. The laboratory examination showed low thyroid function, and the doctor prescribed a supplement of thyroid extract, explaining that arthritis is one of the many symptoms of hypothyroidism. The patient agreed to take the thyroid, but for several days he grumbled about the doctor "fixing something that wasn't wrong" with him, and ignoring his arthritis. But in less than two weeks, the arthritis had entirely disappeared. He lived to be 88, but without a recurrence of arthritis. (See "Thyroid Hormone Therapy: Cutting the Gordian Knot," and "Stress," <http://www.arthritistrust.org>.)

Selye's work with the diseases of stress, and the anti-stress hormones of the adrenal cortex, helped many scientists to think more clearly about the interaction of the organism with its environment, but it has led others to focus too narrowly on hormones of the adrenal cortex (such as cortisol and cortisone), and to forget the older knowledge about natural resistance. There are probably only a few physicians now practicing who would remember to check for hypothyroidism in an arthritis patient, or in other stress-related conditions. Hypothyroidism is a common cause of adrenal insufficiency, but it also has some direct effects on the joint tissues. In chronic hypothyroidism (myxedema and cretinism), knees and elbows are often bent abnormally.

By the 1930s, it was well established that the resistance of the organism depended on the energy produced by respiration under the influence of the thyroid gland, as well as on the adrenal hormones, and that the hormones of pregnancy (especially progesterone) could substitute for the adrenal hormones. In a sense, the thyroid hormone is the basic anti-stress hormone, since it is required for the production of the adrenal and pregnancy hormones. A contemporary researcher, F.Z. Meerson¹, is putting together a picture of the biological processes involved in adapting to stress, including energy production, nutrition, hormones, and changes in cell structure.

While one of Selye's earliest observations related gastro-intes-

tinal bleeding to stress, Meerson's work has revealed in a detailed way how the usually beneficial hormone of adaptation, cortisone, can cause so many other harmful effects when its action is too prolonged or too intense.

Some of the harmful effects of the cortisone class of drugs (other than gastro-intestinal bleeding) are: Hypertension, Osteoporosis, delayed healing, atrophy of the skin, convulsions, cataracts, glaucoma, protruding eyes, psychic derangements, menstrual irregularities, and loss of immunity allowing infections or cancer to spread.

While normal thyroid function is required for the secretion of the adrenal hormones, the basic signal which causes cortisone to be formed is a drop in the blood glucose level. The increased energy requirement of any stress tends to cause the blood sugar to fall slightly, but hypothyroidism itself tends to depress blood sugar. The person with low thyroid function is more likely than a normal person to require cortisone to cope with a certain amount of stress. However, if large amounts of cortisone are produced for a long time, the toxic effects of the hormone begin to appear. According to Meerson, heart attacks are provoked and aggravated by cortisone produced during stress. (Meerson and his colleagues have demonstrated that the progress of a heart attack can be halted by a treatment including natural substances such as vitamin E and magnesium.)

While hypothyroidism makes the body require more cortisone to sustain blood sugar and energy production, it also limits the ability to produce cortisone, so in some cases stress produces symptoms resulting from a deficiency of cortisone, including various forms of arthritis and more generalized types of chronic inflammation. Since cortisol is formed as one of the last steps in a series of reactions, glandular exhaustion means that a whole group of other steroids is depleted, before cortisol or cortisone. I believe that the safest way to handle a steroid deficiency is to supplement the precursors of the raw materials, so that a normal balance of the various substances is preserved.

Often, a small physiological dose of natural hydrocortisone can help the patient meet the stress, without causing harmful side effects. While treating the symptoms with cortisone for a short time, it is important to try to learn the basic cause of the problem, by checking for hypothyroidism, vitamin A deficiency, protein deficiency, a lack of sunlight, etc. (I suspect that ultraviolet light on the skin directly increases the skin's production of steroids, without depending on other organs.) Using cortisone physiologically, rather than pharmacologically, it is not likely to cause the serious problems mentioned above.

Stress-induced cortisone deficiency is thought to be a factor in a great variety of unpleasant conditions, from allergies to ulcerative colitis, and in some forms of arthritis. The stress which can cause a cortisone deficiency is even more likely to disturb formation of progesterone and thyroid hormone, so the fact that cortisone can relieve symptoms does not mean that it has corrected the problem.

Besides the thyroid, the other class of adaptive hormones which are often out of balance in the diseases of stress, is the group of hormones produced mainly by the gonads: the "reproductive hormones." During pregnancy, these hormones serve to protect the developing baby from the stresses suffered by the mother, but the same hormones function as a part of the protective anti-stress system in the non-pregnant individual, though as a lower level.

Some forms of arthritis are known to improve or even to disappear during pregnancy. As mentioned above, the hormones of pregnancy can make up for a lack of adrenal cortex hormones. During a healthy pregnancy, many hormones are present in increased amounts, including the thyroid hormones. Progesterone, which is the most abundant hormone of pregnancy, has both anti-inflammatory and anesthetic actions, which would be of obvious benefit in arthritis.

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There are other naturally anesthetic hormones which are increased during pregnancy, including DHEA, which is being studied for its anti-aging, anti-cancer, and anti-obesity effects. (One of the reasons that is frequently given for the fact that this hormone hasn't been studied more widely is that, as a natural substance, it has not been monopolized by a drug patent, and so no drug company has been willing to invest money in studying its medical uses.) These hormones also have the ability to control cell division, which would be important in forms of arthritis that involve invasive tissue growth.

While these substances, so abundant in pregnancy, have the ability to substitute for cortisone, they can also be used by the adrenal glands to produce cortisol and related hormones. But probably the most surprising property of these natural steroids is that they protect against the toxic side-effects of excessive adrenal hormones. And they seem to have no side-effects of their own; after fifty years of medical use, no toxic side effects have been found for progesterone or pregnenolone. Pregnenolone is the material the body uses to form either progesterone or DHEA. Others, including DHEA, haven't been studied for so long, but the high levels which are normally present in healthy people would suggest that replacement doses, to restore those normal levels, would not be likely to produce toxic side effects. And, considering the terrible side effects of the drugs that are now widely used, these drugs would be justifiable simply to prevent some of the toxic effects of conventional treatment. It takes a new way of thinking to understand that these protective substances protect against an excess of the adrenal steroids, as well as making up for a deficiency. Several of these natural hormones also have a protective action against various poisons — Selye called this their "catatoxic" effect. (If a toxin, for example a bacterial product, is involved in a sickness, such as arthritis or colitis, these catatoxic steroids might be helping by blocking the toxin and strengthening the patient.)

Besides many people whose arthritis improved with only thyroid supplementation, I have seen people use one or more of these other natural hormones for various types of arthritis, usually with a topical application, and I know of several other people who used progesterone topically for inflamed tendons or other inflammations. Only one of these, a woman with rheumatoid arthritis in many joints, had no significant improvement. An hour after she had applied it to her hands and feet, she enthusiastically reported that her ankle had stopped hurting. But after this, she said she had no noticeable improvement.

The first time I saw arthritis disappear after treatment with progesterone was accidental. A woman who began using progesterone for her epilepsy decided to dip her arthritic fingers in the oily solution, and a few days later proudly demonstrated that she could bend them without pain.

About a year later, a friend in Mexico City complained about a knee that had been increasingly stiff and painful for about a year. Twenty minutes after applying progesterone the pain was gone, and when I asked him about it a few years later, he said it never hurt again. Knowing that those "raw material" steroids, pregnenolone, progesterone, and DHEA, could be converted into anything the body needs, such as cortisone and sex hormones, but that they protect against the toxic effects of other hormones, many other people (including physicians and researchers) were interested in trying them on their own joint problems.

Some typical cases are described below:

1. A 72-year-old woman. She was considered to have mild rheumatoid arthritis which was degenerating into porosis, with her fingers being the most seriously affected joints. A 3% solution of DHEA in olive oil was applied to one index finger, and a 10% solution of progesterone in mixed tocopherols was applied to the

other index finger. All of her fingers had been rigid for over a year, with the result that she was extremely disabled. Forty minutes after the DHEA solution had been applied, the finger treated with that solution could be bent enough to touch the base of her thumb, without significant pain, but none of her other fingers showed any improvement. Several days later, the DHEA solution was applied to all of her fingers, with similarly good results. After about 6 months, stiffness and pain returned in spite of her use of DHEA. Although thyroid was suggested, she had been taught to be afraid of that hormone, as have millions of other women.

2. A 60-year-old woman with a long history of rheumatoid arthritis had serious degeneration of many joints. She had undergone surgery several times, for implantation of two artificial joints and for repair of joint cartilage. She walked a little as possible and experienced pain, inflammation and fatigue with excessive walking. She applied a solution containing 7% DHEA and 3% progesterone in a solvent consisting of olive oil and tocopherol. She applied the solution several times one afternoon and the next morning to all affected joints, including hands, wrists, elbows, knees, and ankles. She experienced what she said was "complete relief," and spent the next two days walking around the town sightseeing, without any of the after-effects she had previously experienced from walking.

3. A 62-year-old man. His knees had been stiff, painful, and inflamed for over two years, following an accidental fall onto his knees. Arthroscopic examination revealed damaged cartilage in his right knee, and surgery was recommended to restore function. The patient refused surgery, even though he walked with difficulty and had to use his left leg (which was also affected) to lift himself slowly up steps. He said he had not slept well since he had developed the arthritis, because the pain woke him repeatedly during the night, and only the use of an analgesic would allow him to go back to sleep. He coated his knees and the skin around them, about four inches above and below, with a total of nearly an ounce of a solution similar to that used in case number two. Within 30 minutes, he appeared to be able to walk more normally, and about 45 minutes after applying the solution, he remarked that he believed he was able to walk more easily. He repeated the application that night before going to sleep. Around 10 o'clock the next morning, he returned and laughingly demonstrated his knees by running up the stairs, and said that he had been able to sleep through the night for the first time in years, and had not taken his usual analgesic. Topical treatment was discontinued after a few days, and he remained free of symptoms while taking 60 mg of pregnenolone orally, daily.

4. A 61-year-old woman. Painful and stiff joints in her hands had interfered with her work as a musician, and had made it impossible to sleep through the night, since the pain woke her two or three times during the night. A solution similar to that used in cases three and four was applied to the painful joints early in the evening, and a few hours later she was able to go to sleep without taking aspirin and slept through the night. She occasionally uses the same solution preventatively, and has not had a recurrence of the joint pain or stiffness.

We often hear that "there is no cure for arthritis, because the causes are not known." If the cause is an imbalance in the normal hormones of adaptation and resistance, then eliminating the cause by restoring this balance will produce a true cure.

Informed patients who suspect that their health problems are related to stress should encourage their physicians to investigate the use of thyroid hormone, progesterone, pregnenolone, DHEA, and the anti-stress nutrients, especially magnesium and vitamins A and E.

References

1. Meerson, F.Z. "The role of stress in the mechanism of long-

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2. Cleary, M.P., Shepherd, A., and Jenks, B. “Effect of DHEA on growth in lean and obese Zucker rats,” *J. Nutr.* 114(7): 1242-1251; 1984.

3. Coleman, D.L., Leister, E. H., and Applezweig, N.. “Therapeutic effects of DHEA metabolites in diabetes mutant mice,” *Endocrinology* 115(1): 239-243; 1984.

4. Rosenfeld, A. “Superpowder,” *Omni magazine*; 1980.