MYASTHENIA GRAVIS

A Holistic Therapy

By Walter Last

Severe muscle weakness becomes increasingly more common in recent times. The classical disease with severe muscle weakness is myasthenia gravis or M.G. It is most common in young women, although it may develop at any age and in both sexes. Males are more affected in their later decades of life.

Certain muscles become chronically weak and easily fatigued. Most affected are the muscles of the head and neck, later progressively also the muscles of the chest and limbs. The first sign of myasthenia gravis is usually a drooping eyelid (ptosis). Frequently double vision (diplopia) develops as the disease progresses, also difficulty chewing or swallowing or even breathing. The speech may be slurred and the vision blurred. Usually the condition becomes worse as the day progresses.

In medical treatment a group of drugs, called anticholinesterases, is used, such as neostigmine or pyridostigmine. These delay the normal inactivation of the neurotransmitter acetylcholine, which results in a temporary improvement in muscle functions. Frequently the thymus gland is greatly enlarged and may be surgically removed. This can result in some medium-term improvement in one-third of cases.

There are frequent side effects from drug therapy, such as abdominal cramps, diarrhoea, nausea, vomiting, excessive mucus formation, bronchial spasms, twitching of face muscles, spasms and freezing of muscles, tremors, incoordination and paralysis. It is easy to overdose with a resulting 'cholinergic' crisis often resulting in death.

Removal of the thymus results in disturbances of the calcium and manganese metabolism, it greatly weakens the immune system and perpetuates the muscle weakness which then does not respond any more to biological therapy.

CAUSES OF MYASTHENIA GRAVIS

Myasthenia gravis has been shown to be an autoimmune disease. This means that the immune system attacks some of its own body proteins. Specifically, the transmission of signals from the nerve endings to the muscle receptors is partly blocked by antibodies. The messenger chemical or neurotransmitter released as signal from nerve endings to muscles is acetylcholine. Acetylcholine molecules travel the short distance in the gap between nerve ending and muscle to find a receptor on the motor end plate. When a sufficient number of acetylcholine molecules are attached to muscle receptors, there is an electric discharge of the normal membrane potential and the muscle fibre can contract.

In myasthenia gravis many or most of the receptors are already occupied by antibodies, therefore, not enough acetylcholine molecules find receptors to trigger this discharge and subsequent muscle contraction. Normally, the acetylcholine is split by an enzyme and, with this, removed from the receptor in a fraction of a second. Using drugs, which hinder this enzyme, acetylcholine molecules have more time to find receptors with an increased chance to lead to a discharge.

However, if too much of this enzyme antagonist is present, the cells remain discharged for too long

and the muscles become more or less paralysed. This is a 'cholinergic crisis' in which heart and breathing may stop. A modern complication is the additional antagonistic action of fluoride on this enzyme. Fluoridated water may trigger a crisis or contribute to the long-term deterioration. This also applies to commercial liquids, such as soft drinks, soymilk or reconstitutet 100% fruit juices in countries where water fluoridation is practised.

It has been stated that myasthenia gravis has manifested after exposure to crop sprays with chemicals which have an antagonistic effect on acetylcholinesterase.

To test the theory that antibodies clog up muscle receptors serum from a myasthenia gravis patient was injected into mice, which promptly developed M .G. symptoms. The same electrical symptoms as in myasthenia gravis could also be produced in healthy human muscle when exposed to the serum of a myasthenia gravis patient.

This is as far as the conventional medical understanding of myasthenia gravis goes. The cause of the main event, the blocking of the muscle receptors by antibodies, is not known. There is also at present no attempt to overcome this disorder with nutritional therapy.

Nutritional Factors

A wide variety of vitamins and minerals are involved in muscle activity, partly in energy production and partly in the synthesis of proteins and neurotransmitters. The main B-vitamins are essential for energy production in the muscles and some improvement in myasthenia gravis has been reported with B-complex supplementation so that, for instance, less of the enzyme-blocking drug was required.

In experiments with separately administered vitamins B1, B2, B6, C, E, pantothenic acid and choline (as from lecithin) were reported to be beneficial in myasthenia gravis. Conversely, myasthenia gravis like symptoms could be produced in monkeys and humans by making them deficient in the vitamins B1, B6 and pantothenic acid.

During World War 2 myasthenia gravis developed in prisoners of war in Singapore, which was attributed to malnutrition. A high-vitamin nutritious diet with plenty of yeast and liver soon restored these patients to normal. In Europe were reports of almost an epidemic of myasthenia gravis following the war. Also other myasthenia gravis cases have been reported with more or less permanent remissions as long as a highly nutritious diet was used.

In addition to the general effect on energy production and protein synthesis, several vitamins have been shown to have a specific relationship with myasthenia gravis

Vitamin B1, working together with manganese, is the key vitamin for the synthesis of acetylcholine in the nerve endings. A lack of this vitamin, therefore, can cause a reduced signal from nerves to muscles and, with this, muscle weakness and other neurological complications. Vitamin B1 also helps acetylcholine to bind to receptors. It also has a significant role in nerve excitation and enhances the effects of acetylcholine. Furthermore, with low vitamin B1 levels lactic acid accumulates in the muscles and causes fatigue, deficiency can also lead to nerve degeneration.

Vitamin B2 is important for tissue respiration, for the storage of glycogen in muscles and liver as well as for the metabolism of glycine, an amino acid linked with myasthenia gravis. A deficiency lowers the resistance to stress. Vitamin B6 is essential for the synthesis of neurotransmitters and receptors.

Pantothenic acid supplies the acetyl part in the synthesis of acetylcholine. It opposes the effects of substances that are known to block receptors. Pantothenic acid is the anti-stress vitamin, most important for healthy adrenal glands, which are especially weak with myasthenia gravis

Vitamin C is another anti-stress vitamin. It is essential for collagen synthesis. Collagen is the connective tissue between muscle cells, cementing them together. Vitamin C is involved with the use of glycogen in muscles, with muscle contractions and exercise tolerance. It affects muscle metabolism and the functioning of muscle membranes. Together with folic acid it is involved with the synthesis of neurotransmitters and steroid hormones. It has a mild anticholinesterase activity and this enhances the action of the reduced amount of acetylcholine that finds a receptor. A study on 2000 smokers revealed that their vitamin C blood levels were 40% lower than those of non-smokers. Myasthenia gravis patients reported increased muscle weakness after smoking.

Vitamin B12 and folic acid are required for the synthesis of choline before forming acetylcholine. Vitamin A is needed for the immune system, to produce steroid hormones and to protect the thymus and adrenal glands from the effects of stress. Vitamin A deficient rats developed weakness of the head and leg muscles. The importance of the stress-protective vitamins can be seen in the observation that myasthenia gravis frequently develops during or after a period of intense stress.

Vitamin E is important to protect cell membranes from damage through oxidation and peroxidation, while a deficiency causes changes in muscle protein with swelling and fragmentation of individual muscle fibres, leading to muscle weakness, dystrophy and paralysis. It is directly involved with the energy metabolism of muscles, deficiency causes increased amounts of muscle protein to break down and be expelled with the urine as it happens in myasthenia gravis

Vitamin E deficient chicks have been shown to develop serious abnormalities of the central nervous system. In other animals large amounts of 'old-age' pigment (lipofuscin) accumulates in the nerve cells. The development and function of all endocrine glands depends on it. The pituitary gland has an exceptionally high content of vitamin E, 15 times higher than in other parts of the body, while in the adrenal glands it is almost 6 times higher.

Babies have a high requirement for vitamin K, otherwise the development of glands, nervous system and muscle structures will be weak or faulty. Breast milk has about 10 - 20 times more vitamin E than cows' milk and colostrum even much higher levels. It is similar with vitamin C and various other essential nutrients.

The importance of vitamin E in myasthenia gravis can be seen in a case report were the initial use of other vitamins improved the condition somewhat, but only after the addition of vitamin E did all symptoms of the disease disappear.

In a study using rabbits with experimentally induced myasthenia gravis more animals survived with high-dose vitamins B1, C and E than in the unsupplemented group. These same vitamins in mega-doses (very high amounts) were successfully used for myasthenia gravis patients as stated in several published reports. However, I found that on a high-quality diet only a moderate amount of vitamin-mineral supplements was required for permanent remission. A patient who recovered on a raw food diet with only minimal supplementation initially persisted with double vision but overcame this with a hot castor oil pack over the forehead and eyes.

While magnesium is an essential mineral and activates many enzymes, a large dose of a magnesium supplement acts as a muscle relaxant and causes myasthenia gravis patients to deteriorate. Another problem is caused by the enzyme-poison fluoride. A well-controlled patient

was reported to wake up with extreme weakness one morning. It was later learned that the water supply had been fluoridated for the first time during the preceding day.

Another patient, after being symptom-free for years, developed extreme weakness on two separate occasions during a glucose tolerance test. The same happened after a breakfast with much sugar.

Three patients in intensive care failed to respond to any myasthenia gravis drug treatment. However, they improved greatly on nutritional therapy. Whenever placebos were given instead of vitamins their conditions deteriorated again.

Manganese and the Thymus Gland

Manganese and the thymus gland are the keys to the development and treatment of myasthenia gravis. Numerous enzymes are activated by manganese and it is essential for the production of energy from glucose. It is equally important for the growth of bones, the development of the skeleton and the formation of cartilage. It is essential for the development and functioning of nerves and muscles, specifically it is involved with muscular contraction. When muscles are damaged, manganese leaches into the bloodstream and causes its level to rise.

Manganese deficiency causes defective growth, muscular weakness, lack of coordination and balance, reproductive abnormalities and disorders of the central nervous system. Manganese is required for a healthy immune system and it is also involved in the synthesis of acetylcholine.

While the thymus gland is best known for its importance in the development and functioning of the immune system, it has also other, less known functions which to some degree are similar to those of manganese.

The thymus is an endocrine gland situated behind the upper part of the breastbone. It increases in size until puberty and then gradually shrinks again. Severe stress, including infection, causes the thymus to shrink excessively and prematurely, especially if there are deficiencies of the anti-stress vitamins. The experimental removal of the thymus in animals resulted in a 60% reduction in the contractibility of muscles, while the capacity to work was reduced by 42%.

In MG, the thymus is generally abnormal, usually much enlarged (hyperplasia) and not infrequently containing tumors (thymomas). Administration of high doses of manganese reportedly causes the thymus to shrink to its normal size in a very short time and thymomas and symptoms of MG to disappear.

This manganese therapy for MG was discovered and tested in the 1940's and 50's in the U.S. by E. K. Josephson (A-albionic Research 1961).

The report of his first MG case with this new method is quite instructive. A 43-year-old female developed the symptoms of MG in 1932. She had intermittent X-ray treatments for thymoma over many years. Drug treatment was started later but gave only a slight transient improvement and after some months she failed to respond completely. Nutritional therapy was started in 1937 with high doses of vitamins A, B, and C, along with a high salt intake because of severe adrenal weakness, and glycine, an amino acid important for the muscles. Within three weeks the patient was much improved. The later substitution of part of the salt with potassium chloride caused acute glaucoma and had to be stopped.

After a year the therapy started to become ineffective and the condition deteriorated again. Now vitamin E was added in the form of wheat germ oil. The condition rapidly improved and symptoms

of MG disappeared except for occasional mild relapses. However, after two years MG reappeared without relief from the treatment.

In 1942 manganese sulfate was added to the therapy. Within one week her muscle strength was better than at any time during previous treatments and all symptoms of MG disappeared. The thymus tumor that had previously been unsuccessfully treated with X-rays disappeared as well. Until her death ten years later from a heart attack she had no more symptoms of MG.

In another case, a young woman developed rapidly progressing MG after her thyroid had been removed because of hyperthyroidism. Within 2 days of starting manganese therapy she showed marked improvement. However, in this case it took two to three years until she was completely well. In the following years she had two relapses, which cleared up each time within a few weeks with manganese therapy. This included shrinking of the enlarged thymus during the initial therapy and the last relapse.

Another interesting case was an elderly male who first developed signs of systemic lupus erythematosus and after several years also signs of Parkinson's disease. Many years later MG appeared. Nutritional therapy including manganese soon removed the symptoms of all three diseases.

In his summary, Josephson states that generally, myasthenia cleared up within days to weeks rather than months. At the same time, hyperplasia of the thymus and thymomas ‘virtually melted away’.

Josephson’s book is still in print by A-albionic Research under the title: *Thymus, Manganese and Myasthenia Gravis*, see www.msen.com or www.addall.com. However, it is written as a scientific monograph and difficult for most readers to understand. Amazingly, there is no indication that this method has been tested in a clinical trial, despite Josephson having presented it before the American Association for Advancement of Science at the Harvard School of Public Health in 1946.

Josephson also reports the complete failure of nutritional and manganese therapy in a myasthenia gravis patient who had his thymus removed. He continued to deteriorate and died 9 years after the onset of the disease.

Removal of the thymus gland is widely practiced as long-term therapy for MG. Most patients improve for a period and some may continue improving, while others soon deteriorate again. I believe that the great variability of thymectomy outcomes is due to so-called accessory thymuses or pockets of thymus tissue that may be present in the neck area. These will often be sufficient to maintain a reasonable manganese metabolism and, with this, enable an eventual recovery. On the other hand, if all thymus tissue has been removed, then a full recovery may not be possible. However, I am cautiously optimistic that even then a holistic approach can still lead to considerable improvement and to some regrowth of any remaining traces of thymus tissue.

Also the removal of the thyroid makes a cure more difficult as one of Josephson’s case histories shows. In addition to enlargement and tumors of the thymus, MG patients frequently have problems with other endocrine glands, such as the thyroid, pituitary and adrenal glands. There is a close relationship between the thymus and the thyroid in that hyperthyroidism generally leads to myasthenia or muscular debility as well as to hyperplasia of the thymus. As the disease progresses, most or all of the endocrine glands, organs, and metabolic functions tend to deteriorate. This, then, requires in addition to manganese therapy individualized support with a wide range of nutrients and remedies as well as a diet of highest quality.

Another set of problems may arise if the disease is due to chemical poisoning. This happened to Simon Kelly as reported on his website www.myasthenia.co.uk. He had developed MG once before, apparently due to extensively working with oil paints in a confined space. Six years later he had another stressful period during which he painted his house and burned off old paint. Not only did he develop MG a second time, but his blood became very alkaline and his red blood cells 'looked like sea urchins', shriveled up, black, and full of spikes. He also believes that a high consumption of soymilk contributed to his condition by causing intestinal inflammation and diarrhea.

After an odyssey of orthodox and alternative treatments, he had his first real improvement during a short period on manganese supplements, and then continued to improve further with Buteyko-type breathing to reduce the alkalinity of his blood. He also used some wheat grass juice. However, his best improvement came after several months of stagnation when he tried a second lot of manganese. His eyes were better than they had been for many years, and the strength of his legs improved tremendously.

I believe that in this case the poisoning of the energy-producing mitochondria caused an acute deficiency of metabolic acids, especially citric acid, in addition to leaching of potassium from the poisoned cells. This is like developing chronic fatigue syndrome in addition to MG and may have contributed as much to his weakness as the MG itself. In such cases clearly the highest quality of support is required.

From my own experience I can confirm that manganese therapy does work. My first MG patient was a female golf professional. She improved on a raw-food diet, but only gradually. When she started taking manganese, she was back to playing golf within a few weeks. Initially she still had some double vision, which cleared up after one warm castor oil pack over the eyes. Another patient also recovered fully within weeks. I may add that in addition to manganese, Josephson as well as I recommended improved nutrition and suitable other supplements in all cases.

A Holistic Theory of myasthenia gravis

From the various known facts and indications we can now come to an understanding of the likely cause of MG.

The decisive experiment, in which antibodies from a MG patient attacked receptors in healthy muscles, shows that the basic problem is with the antibody production and not with the muscle receptors of the myasthenics. This means that the muscle receptors are basically healthy and the antibodies are produced against something else and attack the muscle receptors only as innocent bystanders. The real target may actually be in the thymus itself, as it has been shown that the thymus contains muscle-type cells with acetylcholine receptors.

As the thymus is obviously diseased, at least in all advanced cases of MG, this suggests that the antibodies may actually be formed against faulty receptors in the thymus itself. After all, the thymus develops antibodies against many other conditions, but does not normally become diseased itself as it does in MG. My conclusion is that thymus receptors become faulty and susceptible to attack due to manganese deficiency. Otherwise the autoimmune attack would not stop and patients start rapidly improving within days of manganese supplementation.

However, there may be additional factors to trigger an attack. A relevant observation is the presence of acetylcholine receptors in various bacteria, especially in *E. coli*, the most common type of bacteria in the large intestines. If the intestinal wall is weak, bacterial proteins or endotoxins can pass from the intestines into the bloodstream and cause antibodies to develop against any bacterial

receptors. These antibodies, originally formed against E. coli receptors may, in turn, initiate the attack on thymus receptors in the presence of manganese deficiency. A surplus of antibodies spills over into the bloodstream and will then attack healthy muscle receptors.

The thymus, attacking itself, is unable to obtain sufficient manganese from a diet with marginal manganese levels, even after the invasion of *E. coli* endotoxins has stopped. Therefore, symptoms of MG persist until a sufficiently high manganese intake allows the thymus receptors to restructure and the attack by its own antibodies to stop.

The most common causes for a weak intestinal wall that lets endotoxins invade the bloodstream are inflammatory conditions due to gluten sensitivity, food allergy, and Candida overgrowth. It may also be due to general dysbiosis of the intestinal tract as caused by prolonged or repeated antibiotic treatment. Commonly this is combined with a malfunctioning ileocecal valve, which normally prevents bacteria from the large intestines to invade the small intestines. It is possible that the same inflammatory changes that allow bacterial toxins to pass the intestinal wall also reduce the absorption of manganese.

An alternative or additional model of MG may be based on the observation that MG frequently starts during or following a prolonged period of intense stress. Commonly, this is emotional stress but may also be due to malnutrition, chemical exposure, or food sensitivity. This tends to lead to weakness or exhaustion of the adrenal glands, which manifests as an unusual sensitivity of myasthenics to stress.

The adrenal glands have a direct influence on the thymus in that a high level of adrenocortical steroids leads to its atrophy, while adrenal exhaustion, as in Addison's disease, tends to retard or prevent the normal involution of the thymus after puberty. With MG this adrenal weakness may either prevent the thymus from utilizing manganese or it may be combined with manganese deficiency to produce faulty thymus receptors. This, then, leads to the formation of antibodies that attack healthy muscle receptors as an unintended side effect.

Manganese deficiency may also be due to a diet high in refined food - white bread, for instance, has only 5% of the manganese content of whole meal bread. Produce grown organically in mineral-rich soil can have more than a hundred times the manganese content than if grown commercially with synthetic fertilizers. The highest and lowest values for manganese found in lettuce were 169 ppm and 1 ppm respectively.

Furthermore, a lack of gastric acid leads to reduced mineral absorption, while inorganic (ferric) iron makes manganese unavailable and destroys vitamin E. Also prolonged use of antibiotics can cause manganese deficiency. Finally, even manganese-rich whole meal bread may not be of much help, because the high phytate content of whole meal binds and makes manganese and other minerals unavailable. Minerals only become readily available after phytates break down. This happens when seeds are sprouted or properly fermented as in sourdough bread.

Several factors may come together to upset the utilization of manganese by the thymus, such as a marginal intake or malabsorption, a low level of anti-stress vitamins during a stressful period, infection, food allergy and exposure to toxic chemicals.

Sometimes, especially in milder conditions, the symptoms of MG may disappear even without additional manganese when high-level anti-stress vitamins are supplied, as these may reduce inflammatory conditions and improve the efficiency of the thymus in utilizing manganese. Similarly, a high-quality low-allergy or raw-food diet may have the same beneficial effect. It supplies

increased amounts of manganese and may at the same time correct intestinal conditions. With a normalized manganese metabolism in the thymus, the faulty acetylcholine receptors can be quickly repaired and the production of receptor antibodies stops.

The remaining question is why the thymus becomes enlarged. Josephson suggested that the thymus reacts in a similar way to manganese deficiency as the thyroid gland to iodine deficiency. Both react with hypertrophy. He saw the proof for this assumption in the observed rapid shrinking of the enlarged thymus with manganese supplements, in the same way as the enlarged thyroid shrinks with iodine supplements.

THE DIET

Raw-food diets have generally been show to improve and possibly cure MG. Therefore it is advisable to use a high percentage of food raw and in easily digestible form, such as freshly pressed vegetable juice. This may require a dedicated helper. Grass juice grown in mineral-rich soil is high in manganese. The best juice is made from mixed wheat and barley grass together with red beet. Add other vegetables as available; possibly flavor with apple, ginger root and bee pollen. Drink a glassful very slowly before most meals.

Another excellent food is sprouted seeds. They are high in enzymes and their minerals can easily be absorbed. Easy to sprout are mung beans, brown lentils and fenugreek. If chewing is difficult, these may be juiced as well or pureed or even cooked. If chewing is not a problem, then use sprouted seeds as part of a vegetable salad prepared with gelatin and finely grated root vegetables, such as red beet, carrot and turnip. As salad dressing use lemon juice, extra-virgin olive oil, herbs, spices and possibly the yolk of a free-range egg.

As cooked food use mainly fresh vegetables, arrowroot, sago, tapioca, rice and lentils. Buckwheat flour may be used for binding instead of gluten flour. Instead of cows' milk use rice milk or almond milk; also yogurt, cheese or cottage cheese from goats' milk. Tealeaves and walnuts are high in manganese (15 mg /100 g). Use fruits cautiously before or between meals.

Frequently use beef broth, also for flavoring salads. While beef is often beneficial for muscle strength, it should be in an easily digestible form, such as steamed or boiled minced meat. Better still is raw beef or lamb, see Raw Food Diet. In addition, simmer fish heads for several hours with the addition of vinegar or lemon juice in a non-metal pot. Blend and strain the broth as a source of gelatin and minerals. Steamed fish or seafood is fine. Use only beef that has been grass-fed and fish low in mercury, see www.grassfedorganics.com and www.mercola.com.

Initially avoid and after recovery and allergy testing minimize:

- cows' milk products, except butter;
- wheat products, initially also other gluten grains (oats, rye, barley);
- sweeteners and sweetened food; commercial fruit drinks and soft drinks;
- fried food, polyunsaturated oils, margarine and other hydrogenated oil or fat;
- processed foods with added chemicals, such as colors, flavors, aspartame;
- alcohol, tobacco, chlorinated or fluoridated water or toothpaste;
- meat or chicken from feedlots or factory farming;
- soy, corn and other genetically modified or microwave-heated food;
- solvents and household cleaners and exposure to their fumes;
- contact with chemicals; pesticides or aerosol sprays around the house.

This means basically to use only fresh whole foods, preferably organically grown and nothing that

has been processed. Salted food is beneficial with weak adrenal glands and low blood pressure (below 120/80).

After recovery you may carefully introduce new foods to this strict diet. Test your muscle strength before and after each new food; also compare the pulse rate before and 30 and 60 minutes after meals. An unusual rise is a sign of allergy.

This MG diet is only a start and a generalization. You then have to adjust the diet to your specific body conditions as with food allergy testing or closely observing how your body strength changes with different foods and keeping a diary about it. If you deteriorate again after adding new foods, then return to the strict diet and when improved repeat the testing. For more detailed information about any aspects of this diet see *Healing Foods*.

Supplements

Initially take 15 mg of manganese with each meal, best as chelated manganese. If manganese sulfate is used, dissolve 25 g in 500 ml of water. One ml of this contains 12 mg in the case of hydrated manganese sulfate and 18 mg with water-free manganese sulfate.

After sufficient improvement gradually reduce and eventually stop manganese supplementation, but use it again if there is a relapse. With slow-responding conditions, such as after a thymectomy, reduce the dose after one month to 15 mg of manganese with one meal only in order to avoid deficiencies in other trace minerals from developing.

With meals or 3 times daily take a high-potency multi-vitamin-mineral tablet; additionally 400 IU of *natural* vitamin E as water-soluble d-alpha tocopheryl succinate, not as oil-filled capsules.

Experiment with additional vitamin C, up to 10 g daily in divided doses, partly as calcium ascorbate, the rest as sodium ascorbate.

Initially weekly vitamin B12 injections (1000 mcg) may be beneficial, alternatively or subsequently absorb a 500-mcg vitamin B12 tablet under the tongue once a day. Mix a teaspoon of lecithin granules with each meal as a source of acetylcholine.

Another beneficial supplement is vitamin A. Use 10 or 20,000 IU as liquid emulsified vitamin A once a day. This is especially important if the thymus has been surgically removed, but also with fat malabsorption and signs of vitamin A deficiency, such as night blindness, poor dark adaptation and longitudinal ridges of the fingernails. In this case continue with vitamin A for a long time. However, watch out for signs of overdose, in particular headaches, dizziness, blurred vision, joint pain, dry lips, scaly and dry skin and excessive hair loss. For this purpose beta-carotene is not a suitable substitute for vitamin A.

After thymus removal take 3 to 6 capsules of freeze-dried thymus daily, preferably keep each opened capsule in the mouth to absorb partly under the tongue, also use it temporarily if the thymus has been severely damaged by X-ray treatments.

Licorice root should be beneficial in all conditions to activate the adrenal glands. Take one capsule with each meal. However, do not use it with high blood pressure. With indications of severe adrenal weakness also freeze-dried adrenals may be beneficial, absorb under the tongue.

If the digestion is weak, use digestive enzymes and possibly hydrochloric acid tablets with cooked

protein meals. Glycine is an important amino acid for muscle functions, up to a tablespoon has been used with meals; however, it may not be required with an ample intake of gelatin as from boiled fish heads.

To normalize the intestinal tract, have cultures of acidophilus and bifido bacteria as high-potency capsules. Initially take 2 or 3 capsules before each meal, after sufficient improvement, reduce that to one per meal and later one per day.

Other recommended supplements to improve vitality and wellbeing in general are coenzyme Q10, freeze-dried liver, bee pollen, spirulina, ginseng and MSM. If fresh wheat or barley grass juice is not used then take commercial dried barley grass juice.

Increase supplement dosages only gradually and with self-observation, the recommended maximum amounts may be too much for you. After recovery gradually reduce supplement intake, but continue with the full amount of multi-vitamin-mineral tablets. The mentioned natural food concentrates may be used liberally and indefinitely.

ADDITIONAL THERAPY

Avoid stress, emotional upsets, hot baths, hot showers and hot food, have plenty of rest. Before performing a difficult task, close your eyes and vividly imagine performing that task with ease. Then open your eyes and do it. As much as possible be outside in natural surroundings. Have frequent short expose of your unprotected skin to mild sunlight.

After thymectomy try to re-grow sufficient functional tissue from any still existing pockets of thymus cells. You may have acupuncture or use a magnetic pulser over the thymus area and experiment with the following methods.

Dissolve some chelated manganese in water, together with some MSM or aloe vera, and rub it into the hollow above the breastbone or sternum and along its upper sides. Frequently tap the top of the breastbone over the thymus with the fingers and tap the vertebrae at the base of the neck. Strongly press into any tender point along the upper sides of the sternum and into the sternum itself between the first and second rib. Also press strongly into any tender thymus reflex around the ball of each big toe and thumb. You may need a helper to do this.

Use guided imagery: see or feel a brilliant white or golden healing light enter the top of your head, flow through your muscles and organs, strengthening and invigorating them. Fill the thymus with this light; see or feel small pockets of remaining thymus tissue re-growing to form a healthy thymus. Look up an anatomical atlas for the location and appearance of a normal thymus. Do these exercises daily for about an hour, preferably combined with warm castor oil packs over the thymus area**.**

Warm castor oil packs over the liver and abdomen, thymus and eyes are beneficial by increasing blood circulation and strengthening the treated area. They are especially effective over the eyes for improving double vision. Use a woolen cloth moistened with castor oil and keep it warm for 1 - 2 hours with a hot water bottle. Repeat as often as required.

If improvement is rather slow, as after thymectomy and in very advanced conditions, use additional therapies, such as acupuncture, liver cleanse, and herbal parasite cure. Have your teeth checked by a holistic dentist. Any dead teeth, as with root canal fillings, should be removed. Replace mercury amalgam fillings with plastic composite and check for osteitis in the jawbone. Be especially mindful of the teeth in the upper 5 positions, which in acupuncture are related to the thymus.

Preferably have no metal in the mouth but definitely not two different kinds of metal. Pure gold is least harmful, but commonly in dentistry a cheaper alloy containing palladium is being used.

In all conditions it is essential to use extensive intestinal sanitation and antimicrobial therapy as shown in Candida and the Antibiotic Syndrome. If the thymus has been removed also additional selenium is important to strengthen the immune system, up to 200 mcg daily.

Conclusion

It seems that MG has a tendency to reappear in stressful situations, especially in combination with an unbalanced or unsuitable diet and chemical exposure, which may include medical drugs. Therefore, if your recovery is slow or difficult and also to minimize the possibility of a relapse, make sure that you have corrected all conditions that might weaken your immune system and your adrenal glands. To do this

- Check for and eliminate hidden food allergies and chemical sensitivities.
- Use suitable supplements to correct any vitamin and mineral deficiencies and to support the adrenal glands and the immune system.
- Eliminate parasites, Candida and other microbes by using a herbal parasite cure based on wormwood, and investigate using colloidal silver, oxygen therapy and an electronic zapper.
- Sanitize your intestinal tract with acidophilus & bifido cultures and suitable laxative food (e.g. ground linseed and psyllium hulls in plenty of water).
- Sanitize your teeth by removing mercury amalgam fillings, any dead teeth and different types of metal in the mouth.
- Sanitize your bedroom by unplugging electric cords close to the bed while sleeping; minimize electromagnetic pollution and radiation in home and workplace.
- Maintain a high-quality nutrition with plenty of fresh vegetable and grass juice and minimize the use of any processed food.
- Maintain a relaxed lifestyle, practice relaxation exercises and learn to meditate.
- If there is a relapse, adopt again a strict MG program.
- For details on any of these recommendations see the relevant sections of this website.

HOME	BODY	DISEASES	HEALING FOOD
ENERGIES	EMOTIONS	MIND	SPIRITUALITY