How do you diagnose magnesium deficiency? Magnesium may be the most important nutrient in the body, but it is its own worst enemy because magnesium doesn’t lend itself to easy measurement. Only 1 percent of the body’s magnesium is found in the bloodstream, where it is maintained at a certain precise level. Therefore, an ordinary serum blood test is unable to give even a rough estimate of the total body magnesium. If magnesium is depleted from the bloodstream due to physical or emotional stresses, magnesium is immediately grabbed from the bones and muscles to make up for the loss. A debit at these sites results in muscle spasms, angina, osteoporosis and many other magnesium deficiency symptoms that I will describe later. If dietary or supplemental magnesium isn’t forthcoming to replace magnesium losses, more symptoms develop. So, in spite of a true deficiency a magnesium blood test can still appear normal. This explains why medicine seems to ignore magnesium and is not aware that almost 80 percent of the population is deficient in magnesium.

Since a magnesium blood test is not an accurate way to determine deficiency, how do you find out if you need to take magnesium as a supplement? In The Magnesium Miracle I listed all the possible symptoms and conditions associated with magnesium deficiency. Muscle spasms, leg cramps, restless legs, insomnia, anxiety, high blood pressure, angina, and heart palpitations came easily to mind, but even I was surprised when I easily tallied 100 factors that identify the body’s need for more magnesium. Unfortunately, since doctors don’t learn about magnesium deficiency in medical school, all 100 factors can go unrecognized and are usually treated with inappropriate medications—further compounding the problem.

How does magnesium accomplish its widespread activities? It’s all about the enzymes. Magnesium is involved with over 350 metabolic enzymes in the body making it indispensable as a cofactor in the following crucial processes:

- Temperature regulation
- Producing and transporting energy
- Synthesizing protein
- Transmitting nerve signals in the brain and throughout the body
- Relieving muscles—including bowel, heart, blood vessels, fallopian tube, and skeletal muscles
- Manufacturing bones and teeth
- Detoxifying heavy metals including mercury
- Neutralizing acidity in the blood from poor diet and chemical toxicity
- Digesting lipids and balancing cholesterol levels
- Creating neurotransmitters like serotonin

Another question that many clients ask, “If we can’t measure magnesium levels how do we know what to take and how much to take?” I tell people to do their own “clinical trial” of magnesium. Since magnesium has a very low toxicity potential I suggest that people can take it and see if their symptoms improve. The different types of magnesium are very important. I don’t recommend magnesium oxide because we have recently learned that it’s only 4 percent is absorbed, so most of it goes through the intestines and can cause a laxative effect. That may be beneficial for people who are constipated but you aren’t going to absorb enough magnesium for your enzymes to do their work.

The most common form of magnesium to take is magnesium citrate—the powdered forms are the best absorbed, the capsules are next, then tablets. If you have a laxative effect with magnesium citrate, you can use magnesium...
glycinate, magnesium taurate, magnesium malate, or magnesium dimaleate. The dosage of the elemental magnesium, as listed on the label, is about 100 mg three or four times a day. For example, a 500 mg capsule of magnesium citrate will only give you about 100 mg of magnesium.

If you suffer from loose bowel movements as people with IBS-diarrhea do, then you can avoid oral magnesium and use magnesium oil, which is supersaturated magnesium chloride. This can be sprayed on the skin and absorbed in sufficient quantities to build up tissue levels of magnesium in the body. Dr. Norm Shealy has done magnesium oil studies finding that absorption through the skin helps promote normal levels of DHEA in the body.

All in all, magnesium is the miracle that many people need to help jump start their energy and their health. Carolyn Dean is both a medical doctor and naturopathic doctor who assists individuals with all types of illness at any stage or severity. Dr. Dean specializes in managing and healing often misdiagnosed and chronic conditions such as digestive problems, hormone imbalance, recurring infection, irritable bowel syndrome, widespread inflammation, allergies, anxiety, fibromyalgia, mood swings, chronic fatigue syndrome, fluid retention, lost vitality, and many other conditions that often remain unresolved. Dr. Dean has been in the forefront of health issues for twenty-eight years. Dr. Dean has authored twelve books and is proficient in both conventional and alternative medicine. Dr. Dean offers Consultations for Health by Phone. Her Web site is www.carolyndean.com.

1. Alcohol intake—more than 7 drinks per week
2. Anger
3. Angina
4. Apathy
5. Arrhythmia of the heart
6. Asthma
7. Anxiety
8. Blood tests
   a. Low calcium
   b. Low potassium
   c. Low magnesium
9. Bowel problems
   a. Undigested fat in stool
   b. Constipation
   c. Diarrhea
   d. Alternating constipation and diarrhea
   e. IBS
   f. Crohn’s
   g. Colitis
10. Brain trauma
11. Bronchitis—chronic
12. Caffeine—coffee, tea, chocolate—more than three servings per day
13. Chronic fatigue syndrome
14. Cold extremities
15. Concentration poor
16. Confusion
17. Convulsions
18. Constipated
19. Depression
20. Diabetes
   a. Type I
   b. Type II
   c. Gestational diabetes
21. Fibromyalgia
22. Food intake:
   a. Limited in green, leafy vegetables, seeds, and fresh fruit
   b. High protein
23. Food cravings:
   a. Carbohydrates
   b. Chocolate
   c. Salt
   d. Junk food
24. Gagging or choking on food
25. Headaches
26. Heart disease
27. Heart—rapid rate
28. High blood pressure
29. Homocysteinuria
30. Hyperactivity
31. Hyperventilation
32. Infertility
33. Insomnia
34. Irritability
35. Kidney stones
36. Medications—taking
   a. Digitalis
   b. Diuretics
   c. Antibiotics
   d. Steroids
   e. Oral contraceptives
   f. Indomethacin
g. Cisplatin
   h. Amphotericin B
   i. Cholestyramine
   j. Synthetic estrogens
37. Memory impairment
38. Menstrual pain and cramps
39. Migraines
40. Mineral supplements
   a. Take calcium without magnesium
   b. Take zinc without magnesium
   c. Take iron without magnesium
41. Mitral valve prolapse
42. Muscle cramps or spasms
43. Muscle twitching or tics
44. Muscle weakness
45. Numbness of hands or feet
46. Osteoporosis
47. Paranoia
48. Parathyroid hyperactivity
49. PMS
50. Polycystic ovarian disease
51. Pregnancy
   a. Currently pregnant
   b. Pregnant within one year
   c. History of preeclampsia or eclampsia
   d. Post partum depression
   e. Cerebral palsy child
52. Raynaud’s syndrome
53. Radiation therapy—recent
54. Restlessness
55. Sexual energy diminished
56. Shortness of breath
57. Smoking
58. Startled easily—by noise
59. Stressful life or circumstances
60. Stroke
61. Sugar—high intake daily
62. Syndrome X
63. Thyroid hyperactivity
64. Tingling of hands or feet
65. Transplants
   a. Kidney
   b. Liver
66. Tremor of the hands
67. Water that contains:
   a. Fluoride
   b. Chlorine
   c. Calcium
68. Wheezing