Vitamin C

This vitamin is probably the vitamin most consumed, for the most indications, for the longest time in the US. Starting with Linus Pauling’s ground-breaking research, the American vitamin industry has taken off; it has been said that Americans have the most expensive urine in the world! Unfortunately, there still is incomplete research on the actual benefits of supplementation with vitamin C other than curing scurvy. The vitamin is vital to a number of physiological functions; the nonspecific symptom of fatigue could be the first symptom of deficiency. One study suggested 30% of the population is deficient due to poor eating habits; consumption in the diet is still the best source. The recommended daily allowance for men is 90 mg daily, non-pregnant and non-nursing women is 75 mg daily; users of tobacco should consume an additional 35 mg vitamin C daily. About 90 mg is contained in 1/2 cup raw sweet red pepper, 1 large kiwi fruit, 1 cup orange juice (recently opened, see below), 1 cup strawberries, or 1 ½ c cooked broccoli, green peas or kale.

Vitamin C is very frequently used to prevent or treat the common cold. Since Dr. Pauling’s small study in Swiss school children on a ski holiday, amazingly little further research has been done. A Cochrane review of studies in 2000, (the most recent of those included in my sources) concluded that high doses (1-3 grams daily) might decrease the duration of cold symptoms by one to one and a half days in some patients, although doses over 2 grams are more likely to cause stomach upset and diarrhea. That review found that vitamin C taken to prevent colds doesn’t help. Other possibly effective uses include to decrease sunburn (orally or topically with vitamin E), to slow progression of atherosclerosis (though this may be true only in specific populations), decrease risk of gout, and to decrease risk of developing mouth cancer (but no other cancer). Taken with iron pills, vitamin C does increase the amount of iron absorbed from supplements.

Studies don’t support use of vitamin C for acute bronchitis, Alzheimer’s disease, diabetes prevention, stroke, or “overall mortality”, ie death from any cause. More and larger studies are needed to clear up conflicting evidence regarding efficacy in hay fever, asthma, infertility, mental stress, cardiovascular disease, and cataracts. Of interest are the results of a study in 2002 testing the amount of vitamin C in various ages and sources of orange juice. The study concluded that frozen orange juice consumed within one week of reconstitution is the strongest and most reliable [orange juice] source of the vitamin; all the juices lost about 2% of usable vitamin C daily once opened. Ready-to-drink orange juice should be purchased 3 to 4 weeks before the expiration date and consumed within one week of opening.

Side effects usually don’t occur until daily doses of supplements exceed 2000 mg (2 grams). This is the dose recommended by the makers of EmergenC, which contains 1 gram in each packet. In some people, this amount can cause abdominal bloating and diarrhea, and increase the risk of kidney stones. Higher doses can trigger nausea and vomiting, heartburn, fatigue, headache and affect sleep.

REFERENCES
Natural Medicines Comprehensive Database, accessed 4/10/2012
UpToDate, accessed 4/10/2012