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**NUTRACEUTICALS
INDUSTRY LOOKS FOR ACTIVE
REGULATORY CONTROL - 28**



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Nutraceuticals and Pregnancy Leg Cramps

According to Danforth's Obstetrics and Gynecology, almost half of all pregnant women suffer from muscle spasms in their legs, with cramping more frequent during the evening time. Leg cramps are a sudden tightening of muscles, which can cause intense pain. The muscles may tighten for many reasons such as lack of fluids; injury; muscle strain; staying in the same position for a long period of time; and blood circulation problems or pressure on the nerves in the spine. Leg cramps may start to plague during second and third trimester and may get worse as the pregnancy progresses and weight get increased. While these cramps can occur during the day time, probably one notices them most at night, when it interferes with one's ability to get a good night's sleep. In other ways cramps are sudden and sharp gripping kind of pain attacking calf muscles during second and third trimester of pregnancy. These leg cramps are mostly nocturnal and thus disturb sleep.

During pregnancy 50 per cent of women suffering pregnancy induced leg cramps; the pathology of pregnancy induced leg cramps is not exactly identified, it may be due to hormonal imbalance, excessive body weight which causes the strain on calf muscles or may be due to nutritional deficiency. It is established that by giving vitamins, minerals and amino acids, it can be subside.

Leg cramps are common. The cause is not known in most cases. However, some medications and diseases sometimes cause leg cramps. Regular calf stretching exercises may prevent leg cramps. Quinine tablets may be advised as a last resort if you have cramps regularly.

Unknown cause (idiopathic leg cramps): One theory is that cramps occur when a muscle that is already in a shortened position is stimulated to contract. As the muscle is already shortened, to contract further may cause the muscle to go into spasm. This commonly happens at night in bed, as the natural position we lie in is with the knees slightly bent (flexed) and with feet pointing slightly downwards. In this position the calf muscle is relatively shortened and may be prone to cramps. This theory explains why stretching exercises may cure the problem. Secondary causes in some cases, the cramps may be a symptom of another problem. For example: Some medicines can cause cramps as a side-effect, or make cramps occur more often. These include: 'water' tablets called thiazide diuretics and loop diuretics, nifedipine, cimetidine, salbutamol, statins, terbutaline, lithium, penicillamine and phenothiazines (prochlorperazine, perphenazine, chlorpromazine).

Stretching exercises are commonly advised. However, there is a lack of good research evidence to prove that they work. One research study concluded that stretching exercises did reduce the number and severity of cramps; however, another study did not confirm this. Nevertheless, many doctors feel that regular calf stretching does help. So, as it may help, it is worth trying if you are able to do the exercises. If it works, you will not need any tablets to

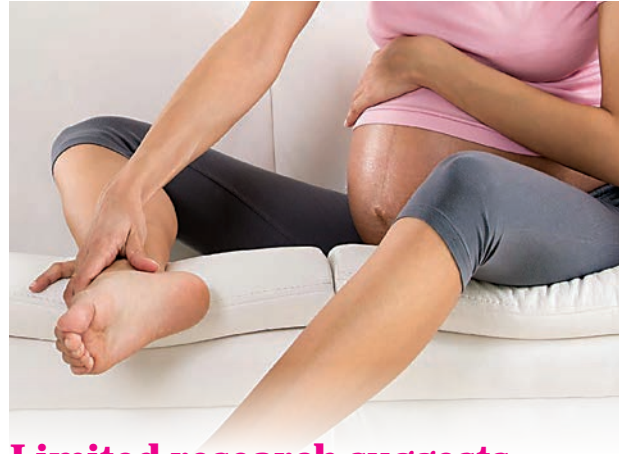
prevent the cramps. At first, do stretching exercises of affected muscles for about five minutes, three times a day. Do the last exercise shortly before bedtime? If the cramps ease off, you may then only need to do the exercise once or twice a day to keep the cramps away. To stretch calf muscles, stand about 60-90 cm from a wall. Then, keeping the soles of your feet flat on the floor, bend forward and lean on the wall. You will feel your calf muscles stretch. Do this several times, each time for as long as you can manage. It may take a week or so of exercises before you notice an improvement. So, it is worth giving yourself a 2- to 4-week trial of regular calf stretching exercises to see if your cramps ease off. The cramps may not go completely, but their frequency and/or severity may reduce.

The following are not proven treatments (from research studies); however, some experts believe that they help to prevent cramps. Using a pillow to prop the feet up in bed while sleeping on your back. Hanging the feet over the end of the bed while sleeping on your front. Keeping blankets loose at the foot of the bed to prevent toes and feet from pointing downwards during sleep.

Quinine is used as a last resort - and you need to be aware of the risks. If you take quinine you have a good chance of reducing the number and/or severity of leg cramps. However, it may not stop them altogether. One tablet at bedtime is the normal dose. Most people can take quinine but do not take it if you are pregnant or may become pregnant. There are also some rare conditions where you should not take quinine. These include a previous reaction to quinine; a previous haemolytic anaemia; optic neuritis; glucose 6-phosphate dehydrogenase deficiency. Side-effects are uncommon at the low dose used to treat leg cramps. However, serious side-effects do sometimes occur. For example, a serious blood disorder which is potentially fatal is a known rare side-effect. Also, a small number of people who take quinine long-term develop a condition called cinchonism. This is a complex of: Feeling sick (nausea); Being sick (vomiting); Dizziness; Visual disturbance; and Hearing impairment.

Other medicines have been suggested as possible treatments for leg cramps. These include magnesium, diltiazem, vitamin B complex, vitamin E, naftidrofuryl, orphenadrine and verapamil. In general, these are not currently recommended, as most studies involving them found that they do not work very well in most people.

Too little calcium in your bloodstream can cause leg cramps, explain experts from the United States National Institutes of Health. Large amounts of soda, caffeine or alcohol can deplete calcium stores. Women after menopause are also prone to low calcium levels. Increasing the calcium in your diet or decreasing the amount of calcium-depleting substances you consume may help lessen your leg cramps. Pregnant women may experience leg cramps, possibly due to low calcium levels, but additional calcium may not help. When pregnant



Limited research suggests that taking a magnesium supplement might help prevent leg cramps during pregnancy. Make sure you have your health care provider's OK to take a supplement. You might also consider eating more magnesium-rich foods, such as whole grains, beans, dried fruits, nuts and seeds.

women with leg cramps took 1 g of calcium twice daily for two weeks, they increased their calcium levels, but didn't experience any improvement in their leg cramps, found a study published in "Acta Obstetrica et Gynecologica Scandinavica" in 1981. Because you need vitamin D to absorb calcium, your doctor might also suggest taking vitamin D supplements.

Regular physical activity might help prevent leg cramps during pregnancy. Before you begin an exercise program, make sure you have your health care provider's OK.

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Keeping your muscles hydrated might help prevent cramps. Your urine should be relatively clear or light yellow in color if you are properly hydrated. If your urine is darker yellow, it might mean that you're not getting enough water.

Choose shoes with comfort, support and utility in mind. It might help to wear shoes with a firm heel counter — the part of the shoe that surrounds the heel and helps lock the foot into the shoe. **NS**