L-Arginine

url: https://medlineplus.gov/druginfo/natural/875.html  
  
  
L-Arginine  
What is it?  
L-arginine is an amino acid naturally found in red meat, poultry, fish, and dairy. It is necessary for making proteins and is commonly used for circulation.  
  
L-arginine is converted in the body into a chemical called nitric oxide. Nitric oxide causes blood vessels to open wider for improved blood flow. L-arginine also stimulates the release of growth hormone, insulin, and other substances in the body. It can be made in a lab and used in supplements.   
  
People use L-arginine for chest pain and various blood flow issues, erectile dysfunction, high blood pressure during pregnancy, and a serious disease in premature infants called necrotizing enterocolitis (NEC). It's also used for many other conditions, but there is no good scientific evidence to support these other uses.  
  
  
How effective is it?  
Natural Medicines Comprehensive Database rates effectiveness based on scientific evidence according to the following scale: Effective, Likely Effective, Possibly Effective, Possibly Ineffective, Likely Ineffective, Ineffective, and Insufficient Evidence to Rate.The effectiveness ratings for L-ARGININE are as follows:Possibly effective for...Chest pain (angina). Taking L-arginine by mouth seems to decrease symptoms and improve exercise tolerance and quality of life in people with angina. But it doesn't seem to help widen blood vessels that are narrowed in angina.  
Erectile dysfunction (ED). Taking 2.5-5 grams of L-arginine by mouth daily seems to improve sexual function in people with ED. Taking L-arginine with medications such as sildenafil and tadalafil might work better than taking either L-arginine or the medication alone.  
High blood pressure. Taking L-arginine by mouth can reduce blood pressure in healthy people, people with high blood pressure, and people with slightly high blood pressure with or without diabetes.  
A serious intestinal disease in premature infants (necrotizing enterocolitis or NEC). Adding L-arginine to formula seems to reduce the risk for this condition in premature infants.   
Narrowing of blood vessels that causes poor blood flow to the limbs (peripheral arterial disease). Taking L-arginine by mouth or by IV for up to 8 weeks increases blood flow in people with this condition. But using it for up to 6 months does not help to improve walking speed or distance. IV products can only be given by a healthcare provider.  
A pregnancy complication marked by high blood pressure and protein in the urine (pre-eclampsia). Taking L-arginine by IV can reduce blood pressure in pregnant people with pre-eclampsia. L-arginine might also reduce the risk of pre-eclampsia in people who are at high risk for this condition. IV products can only be given by a healthcare provider. It's not clear if taking L-arginine by mouth helps.   
High blood pressure during pregnancy. Taking L-arginine by IV can reduce blood pressure in pregnancy. It's unclear if taking L-arginine by mouth lowers blood pressure during pregnancy, but it might decrease the need to take blood pressure lowering drugs. IV products can only be given by a healthcare provider.  
Possibly ineffective for...Long-term kidney disease (chronic kidney disease or CKD). Taking L-arginine by mouth or by IV doesn't improve kidney function in most people with CKD.   
High cholesterol. Taking L-arginine by mouth doesn't help to lower cholesterol levels.  
Heart attack. Taking L-arginine by mouth doesn't seem to help prevent a heart attack. It also doesn't seem to help treat a heart attack after it occurs. In fact, there is concern that L-arginine might be harmful for people after a recent heart attack. Do not take L-arginine if you have had a recent heart attack.  
Tuberculosis. Taking L-arginine by mouth along with standard treatment for tuberculosis does not seem to help improve symptoms or clear the infection.  
Wound healing. Taking L-arginine by mouth does not seem to improve wound healing.  
  
There is interest in using L-arginine for a number of other purposes, but there isn't enough reliable information to say whether it might be helpful.  
  
  
Is it safe?  
When taken by mouth: L-arginine is possibly safe for most people when taken short-term. It can cause some side effects such as stomach pain, bloating, diarrhea, and low blood pressure.  
When applied to the skin: L-arginine is possibly safe for most people when used short-term. It's also possibly safe when used in a toothpaste short-term.  
When inhaled: L-arginine is possibly safe for most people when used short-term.  
   
  
Special precautions & warnings:  
Pregnancy: L-arginine is possibly safe when taken by mouth for a short time during pregnancy. Not enough is known about using L-arginine long-term in pregnancy. Stay on the safe side and avoid long-term use.  
Breast-feeding: There isn't enough reliable information to know if L-arginine is safe to use when breast-feeing. Stay on the safe side and avoid use.  
Children: L-arginine is possibly safe in children when taken by mouth, when used in a toothpaste, or when inhaled.   
Guanidinoacetate methyltransferase deficiency (GAMT): People with this inherited condition are unable to convert arginine and other similar chemicals into creatine. To prevent complications from this condition, avoid L-arginine supplements.  
Recent heart attack: L-arginine might increase the risk of death after a heart attack, especially in older people. If you have had a heart attack recently, don't take L-arginine.  
Kidney disease: L-arginine has caused high potassium levels when used by people with kidney disease. In some cases, this has resulted in a dangerous irregular heartbeat.  
Surgery: L-arginine might interfere with blood pressure control during and after surgery. Stop taking L-arginine at least 2 weeks before a scheduled surgery.  
  
  
  
Are there interactions with medications?  
ModerateBe cautious with this combination.Isoproterenol (Isuprel)L-arginine seems to decrease blood pressure. Isoproterenol is a drug that is used to lower blood pressure. Taking L-arginine along with isoproterenol might cause your blood pressure to go too low.Medications for diabetes (Antidiabetes drugs)L-arginine might lower blood sugar levels. Taking L-arginine along with diabetes medications might cause blood sugar to drop too low. Monitor your blood sugar closely.Medications for high blood pressure (ACE inhibitors)L-arginine might lower blood pressure. Taking L-arginine along with medications that lower blood pressure might cause blood pressure to go too low. Monitor your blood pressure closely.Medications for high blood pressure (Angiotensin receptor blockers (ARBs))L-arginine might lower blood pressure. Taking L-arginine along with medications that lower blood pressure might cause blood pressure to go too low. Monitor your blood pressure closely.Medications for high blood pressure (Antihypertensive drugs)L-arginine might lower blood pressure. Taking L-arginine along with medications that lower blood pressure might cause blood pressure to go too low. Monitor your blood pressure closely.Medications that slow blood clotting (Anticoagulant / Antiplatelet drugs)L-arginine might slow blood clotting. Taking L-arginine along with medications that also slow blood clotting might increase the risk of bruising and bleeding.Sildenafil (Viagra)Sildenafil can lower blood pressure. L-arginine can also lower blood pressure. There is a chance that taking sildenafil and L-arginine together might cause blood pressure to go too low. But most people seem to be fine when taking these products together.Water pills (Potassium-sparing diuretics)L-arginine might increase potassium levels in the body. Some "water pills" might also increase potassium in the body. Taking L-arginine along with some "water pills" might cause too much potassium to be in the body.MinorBe watchful with this combination.TestosteroneL-arginine might increase testosterone levels. But it's not clear if this is a big concern. People taking testosterone should be cautious until more is known about this potential interaction.  
  
  
Are there interactions with herbs and supplements?  
Herbs and supplements that might lower blood pressureL-arginine might lower blood pressure. Taking it with other supplements that have the same effect might cause blood pressure to drop too much. Examples of supplements with this effect include andrographis, casein peptides, niacin, and stinging nettle.Herbs and supplements that might lower blood sugarL-arginine might lower blood sugar. Taking it with other supplements with similar effects might lower blood sugar too much. Examples of supplements with this effect include aloe, bitter melon, cassia cinnamon, chromium, and prickly pear cactus.Herbs and supplements that might slow blood clottingL-arginine might slow blood clotting and increase the risk of bleeding. Taking it with other supplements with similar effects might increase the risk of bleeding in some people. Examples of supplements with this effect include garlic, ginger, ginkgo, nattokinase, and Panax ginseng.  
  
  
Are there interactions with foods?  
There are no known interactions with foods.  
  
  
How is it typically used?  
L-arginine has most often been used by adults in doses that vary from 1.5 to 24 grams by mouth daily, for up to 18 months. It's also sometimes used in gels and creams. Speak with a healthcare provider to find out what type of product or dose might be best for a specific condition.  
  
  
Other names  
2-Amino-5-(diaminomethylidene amino) pentanoic acid, 2-Amino-5-guanidinopentanoic Acid, (2S)-2-Amino-5-{[amino (imino) methyl]amino}pentanoic Acid, (S)-2-Amino-5- Guanidinopentanoic Acid, Acide 2-Amino-5-Guanidinopentano que, Arg, Arginine, Arginine Aspartate, Arginine Ethyl Ester, Arginine Ethyl Ester Dihydrochloride, Arginine Ethyl Ester HCl, Arginine HCl, Arginine Hydrochloride, Di-Arginine Malate, Di-Arginine Orotate, Di-L-Arginine-L-Malate, Dl-Arginine, L-Arginina, L-Arginine Ethyl Ester Dichloride, L-Arginine HCl, L-Arginine Hexanoate, L-Arginine Hydrochloride, L-Arginine Ketoisocaproic Acid, L-Arginine L-Pyroglutamate, L-Arginine Pyroglutamate, L-Arginine Taurinate, Malate de Di-Arginine, Orotate de Di-Arginine, R-Gene 10.  
  
  
Methodology  
  
 To learn more about how this article was written, please see the Natural Medicines Comprehensive Database methodology.   
   
  
  
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