

What foods are high in lysine and low in arginine:

There is a correlation between Lysine and Arginine in Herpes outbreaks. The general rule is reduce the amount of Arginine in your diet and increase the amount of Lysine. Lysine supplementation is also recommended. See the end of this document for info.

Fish, chicken, beef, lamb, milk, cheese, beans, brewer's yeast, mung bean sprouts and most fruits and vegetables have more lysine than arginine, except for peas. Gelatin, chocolate, carob, coconut, oats, wholewheat and, white flour, peanuts, soybeans, and wheatgerm have more arginine than lysine.

Supplementing your diet with L-Lysine helps to assure that you tilt the scales toward the lysine side, helping to prevent outbreaks. (See p.12 for dosage recommendations.)

Homeopathic treatment

Diet and Nutrition

People with viral diseases can benefit from a diet high in lysine and low in arginine. In the following chart, the foods at the top of the list have higher lysine to arginine ratios.

Diet and vitamin supplements may influence viral replication. A total approach to nutrition should be used. Use this chart as a guide or a reference only, and see what happens. Look at the absolute figures for lysine and arginine content. There is no reason to avoid a food if it has a low lysine/arginine ratio and only a few mg of arginine in it.

Ratio of Lysine to Arginine in Certain Foods, by James M. Scutero

Transcribed and calculated using data from *Agricultural Handbook, 1-23, U.S. Department of Agriculture.*

	Weight (gm)	Lys (mg)	Arg (mg)	Ratio Lys/Arg
Margarine	14.1	9	3	3.000
Plain Yogurt	227	706	237	2.979
Fruit Yogurt, lowfat	227	810	272	2.978
Plain Yogurt, skim	227	1160	391	2.967
Plain Yogurt, lowfat	227	1060	359	2.953
Swiss Cheese	28	733	263	2.787
Gruyere Cheese	28	768	276	2.783
Edam Cheese	28	754	273	2.762
American Cheese Spread	28	427	155	2.755

Gouda Cheese	28	752	273	2.755
Whey, dry, sweet	7.5	77	28	2.750
Blue Cheese	28	526	202	2.604
Provolone Cheese	28	750	290	2.586
Papaya	454	76	30	2.533
Brie Cheese	28	525	208	2.524
Camembert Cheese	28	501	199	2.518
Parmesan Cheese	28	937	373	2.512
Parmesan Cheese, grated	5	192	77	2.494
Gjetost Cheese	28	231	93	2.484
Goat Milk	244	708	291	2.433
Brick Cheese	28	602	248	2.427
Muenster Cheese	28	606	250	2.424
Beets	136	72	30	2.400
Limburger Cheese	28	475	198	2.399
Tilsit Cheese	28	578	241	2.398
Port du salut Cheese	28	563	235	2.396
Processed Swiss Cheese	28	696	293	2.375
Cream Cheese	28	192	81	2.370
Mozzarella Cheese, part s	28	699	295	2.369
Processed American Cheese	28	623	263	2.369
Mozzarella Cheese	28	559	236	2.369
Neufchatel Cheese	28	253	107	2.364
Butter	14.1	9	4	2.250
Colby Cheese	28	561	254	2.209
Monterey Jack Cheese	28	578	262	2.206
Cheshire Cheese	28	551	250	2.204
Cheddar Cheese	28	588	267	2.202
Buttermilk	245	679	309	2.197
Skim Milk	245	663	302	2.195
Half and Half Cream	242	568	259	2.193
Sherbet	193	171	78	2.192
Condensed Milk, sweetened	306	1920	876	2.192
Chocolate Milk	250	629	287	2.192

Nonfat Milk, dry	120	3440	1570	2.191
Lowfat Milk, 2%	244	644	294	2.190
Evaporated Milk	126	681	311	2.190
Ice Cream	133	381	174	2.190
Whole Milk	244	637	291	2.189
Whole Milk, dry	128	2670	1220	2.189
Nonfat Milk, dry, instant	68	1890	864	2.188
Ice Milk	131	409	187	2.187
Whipping Cream, heavy	238	387	177	2.186
Evaporated Milk, skim	128	763	349	2.186
Whipping Cream, light	239	411	188	2.186
Ice Cream, rich	148	327	150	2.180
Mango	300	85	39	2.179
Whipped Cream, pressurize	60	152	70	2.171
Apricot	114	103	48	2.146
Coffee Cream	15	32	15	2.133
Apple	150	17	8	2.125
Ricotta Cheese	246	3290	1550	2.123
Ricotta Cheese, part skim	246	3320	1570	2.115
Pear, dried	175	116	56	2.071
Eggnog	254	758	378	2.005
Applesauce, unsweetened	244	24	12	2.000
Crabapple, slices	110	28	14	2.000
Loquat	16	2	1	2.000
Apple, dried	64	37	19	1.947
Pear	180	23	12	1.917
Apricot, dried	35	89	49	1.816
Cottage Cheese, creamed	210	2120	1190	1.782
Cottage Cheese, Lowfat 2%	226	2510	1410	1.780
Cottage Cheese, dry	145	2020	1140	1.772
Fig, dried	189	228	131	1.740
Fig	65	19	11	1.727
Human Milk	246	168	105	1.600
Avocado	272	189	119	1.588

Salmon	85	1550	1000	1.550
Swordfish	85	1550	1000	1.550
Haddock	85	1480	961	1.540
Smelt	85	1380	897	1.538
Snapper	85	1600	1040	1.538
Pollock	85	1520	989	1.537
Eel	85	1440	938	1.535
Catfish	85	1420	925	1.535
Anchovy, in oil, drained	20	531	346	1.535
Whitefish	85	1490	971	1.535
Tuna, in water	165	4480	2920	1.534
Cod	85	1390	906	1.534
Flat fish, flounder and s	85	1470	959	1.533
Mackerel	85	1450	946	1.533
Shark	85	1640	1070	1.533
Carp	85	1390	907	1.533
Pike	85	1500	979	1.532
Herring	85	1400	914	1.532
Sardines, in oil, drained	24	542	354	1.531
Bass	85	1380	902	1.530
Perch	85	1450	948	1.530
Bluefish	85	1560	1020	1.529
Halibut	85	1620	1060	1.528
Tomato	123	41	27	1.519
Turnips	130	47	31	1.516
Tomato juice	243	54	36	1.500
Soybean sprouts	70	386	266	1.451
Canadian Style Bacon	454	7370	5100	1.445
Wild pheasant	371	7470	5240	1.426
Pork Spareribs	454	4730	3340	1.416
Tomato paste	262	282	200	1.410
Liver cheese	28	334	237	1.409
Chicken, dark meat, w/o s	109	1860	1320	1.409
Chicken, light meat w/o s	88	1730	1230	1.407

Chicken neck	79	298	212	1.406
Summer sausage	23	318	228	1.395
Pineapple	155	39	28	1.393
Pork leg	454	7550	5530	1.365
Pork loin chop	151	1950	1430	1.364
Pork Shoulder	454	7140	5240	1.363
Potato	150	190	140	1.357
Chicken breast	181	2500	1870	1.337
Cream of Mushroom soup	244	127	95	1.337
Turkey noodle soup	244	212	159	1.333
Celery	120	32	24	1.333
Chicken drumstick	110	1160	872	1.330
Potato, baking	202	283	214	1.322
Beef Flank steak	454	7270	5500	1.322
Chicken gumbo	244	161	122	1.320
Chicken noodle soup	241	219	166	1.319
Beef Round steak	454	7320	5550	1.319
Beef noodle soup	244	261	198	1.318
Vegetable w/beef soup	244	344	261	1.318
Cream of Asparagus soup	244	112	85	1.318
Porterhouse steak	454	6560	4980	1.317
Beef T-bone steak	454	6330	4810	1.316
Beef Sirloin steak	454	6880	5230	1.315
Knockwurst	68	634	482	1.315
Beef Rib roast	454	6050	4600	1.315
Beef Short ribs	454	5430	4130	1.315
Beef Chuck roast	454	6900	5250	1.314
Beef Tenderloin	454	6990	5320	1.314
Persimmon	200	55	42	1.310
Squash, summer	130	85	65	1.308
Chicken leg	231	2470	1890	1.307
Chicken, light meat	116	1920	1470	1.306
Ham, boneless	454	6750	5170	1.306
Chicken canned, boned	142	2500	1920	1.302

Turkey, dark meat	152	2620	2020	1.297
Cream of chicken soup	244	215	166	1.295
Chicken heart	6.1	79	61	1.295
Turkey, light meat	180	3540	2740	1.292
Bratwurst, ckd	85	910	706	1.289
Turkey, canned boned	142	3040	2360	1.288
Italian sausage, ckd	67	1020	792	1.288
Pork sausage	28	252	196	1.286
Wild quail	405	6660	5180	1.286
Chicken thigh	120	1310	1020	1.284
Chicken, dark meat	160	2150	1680	1.280
Goose, domesticated	320	4010	3150	1.273
Pork and beef sausage	13	141	111	1.270
Bologna, beef and pork	28	250	198	1.263
Peach, dried	130	151	120	1.258
Black bean soup	247	415	331	1.254
Bean w/ frankfurters soup	250	415	331	1.254
Peach	115	20	16	1.250
Corned Beef, brisket	454	5100	4100	1.244
Pastrami	28	375	302	1.242
Bologna, beef	28	254	205	1.239
Frankfurter, beef	45	389	314	1.239
Ground beef, regular	113	1560	1260	1.238
Cream of celery soup	244	73	59	1.237
Ground beef, lean	113	1670	1350	1.237
Chicken liver	32	35	352	1.236
Duck liver	44	624	505	1.236
Turkey liver	102	1540	1250	1.232
Mortadella	28	358	291	1.230
Goose liver	94	1160	943	1.230
Plum	5.5	90	74	1.216
Green beans	110	97	80	1.213
Chicken back	177	1090	900	1.211
Beef smoked, chopped	28	467	386	1.210

Pork Bacon	454	2900	2400	1.208
Beef, dried	28	673	557	1.208
Brotwurst	28	323	268	1.205
Polish sausage	28	315	262	1.202
Salami, hard	10	182	152	1.197
Bologna, pork	28	341	285	1.196
Chicken wing	90	698	585	1.193
Braunschweiger	28	258	217	1.189
Duck, domesticated	287	2610	2210	1.181
Lentil sprouts	77	548	470	1.166
Lettuce, romaine	56	58	50	1.160
Lettuce, iceberg	75	60	52	1.154
Caviar, black and red	16	293	254	1.154
Cauliflower	100	108	96	1.125
Vienna sausage	16	127	113	1.124
Liver	113	1570	1420	1.106
Guava	112	21	19	1.105
New England Clam Chowder	244	251	229	1.096
Cream of potato soup	244	83	76	1.092
Spinach	55	98	90	1.089
Kale	67	132	123	1.073
Chicken rice soup	241	251	234	1.073
Kielbasa	28	286	267	1.071
Frankfurter, beef and por	45	407	382	1.065
Whole Egg	50	410	388	1.057
Egg White	33	206	195	1.056
Whole Egg, dried	5	155	147	1.054
Watermelon	160	99	94	1.053
Cabbage, chinese	70	62	59	1.051
Corn	154	210	200	1.050
Sweet potato	130	105	100	1.050
Turnip greens	55	54	52	1.038
Abalone	85	1090	1060	1.028
Oysters	84	444	433	1.025

Clams	180	1720	1680	1.024
Scallops	85	1060	1040	1.019
Banana	175	55	54	1.019
Asparagus	134	194	192	1.010
Oat flakes	48	583	579	1.007
Mayonnaise	185	1400	1400	1.000
Vegetarian vegetable soup	241	99	99	1.000
Beet greens	38	20	20	1.000
Endive	50	32	32	1.000
Leeks	124	97	97	1.000
Pumpkin	245	96	96	1.000
Shrimp	85	1500	1510	0.993
Crab	85	1350	1360	0.993
pea soup w/ham	253	696	703	0.990
Lima beans, cooked	170	765	775	0.987
Egg Yolk	17	189	193	0.979
Okra	100	82	84	0.976
Broccoli	88	124	128	0.969
Chicken gizzard	37	465	484	0.961
Strawberries	149	37	39	0.949
Collards	186	140	72	0.931
Minestrone soup	241	183	198	0.924
Carrots	110	44	48	0.917
Dates	83	50	55	0.909
Peppers, sweet	100	38	42	0.905
Radish	45	16	18	0.889
Watercress	104	172	200	0.860
Swiss chard	36	36	42	0.857
Eggplant	82	42	50	0.840
Tomato soup	244	51	61	0.836
Cabbage, common	70	40	48	0.833
Wheat germ	180	1330	1790	0.743
Peas, green	146	463	625	0.741
Brussels sprouts	88	130	178	0.730

Tangerine	116	27	37	0.730
Orange	180	62	85	0.729
Onions, green	100	4	6	0.667
Mushrooms	70	48	72	0.667
Cucumber	104	22	36	0.611
Wheat granules	28.4	101	169	0.598
Corn grits	242	68	114	0.596
Snails	85	1250	2100	0.595
Wheat, shredded	23.6	79	133	0.594
Wheat flakes	33	101	171	0.591
Cream of wheat	251	98	166	0.590
Pistachios, shelled	128	1640	2790	0.588
Corn, puffed	28.4	65	112	0.580
Wheat, puffed	12	49	85	0.576
Squash, winter	205	902	1590	0.567
Bran flakes	47	177	314	0.564
Elderberries	145	38	68	0.559
Plantain	148	89	160	0.556
Oats, puffed	28.4	175	320	0.547
Oatmeal	234	78	147	0.531
Cashews	160	246	470	0.523
Chestnuts, fresh	160	246	470	0.523
Rice, puffed	14	38	73	0.521
Yams	200	89	191	0.466
Pumpkin seeds & squash	140	2530	5570	0.454
Garlic	3	8	19	0.421
Macadamia nuts	134	434	1200	0.362
Blackberries	145	17	49	0.347
Blueberries	145	17	49	0.347
Onions, mature	160	90	262	0.344
Grapes, slip skin	153	13	42	0.310
Grapes, adherent skin	160	24	78	0.308
Peanuts	144	1450	5050	0.287
Peanut butter	15	176	613	0.287

Coconut, shredded	80	118	437	0.270
Almonds	142	946	3540	0.267
Rutabaga	140	55	207	0.266
Pecans	108	315	1190	0.265
Sesame seeds	150	1240	4990	0.248
Hickory nuts	15	70	298	0.235
Brazil nuts	140	757	3350	0.226
Tahini	15	82	378	0.217
Grape juice	253	25	119	0.210
Tangerine juice	247	17	84	0.202
Pine nuts	28	256	1330	0.192
Orange juice	248	22	117	0.188
Hazelnuts	135	459	2480	0.185
Walnuts	100	466	2520	0.185

To avoid herpes attacks, balance out the high-arginine foods with high-lysine foods. A classic combination is eating brown rice with cooked dried beans. While brown rice is high in arginine (190 mg), the dried beans have an excess of 270 mg. of lysine, which more than compensates for the lack of lysine in the brown rice. Another approach is to eat very small portions when eating high-arginine foods like hazel nuts and peanuts. Eating certain foods and avoiding others can reduce the pain and prevent recurrences of herpes attacks.

Popcorn has a high arginine to lysine ratio, but those prone to herpes can still enjoy it. After popping, sprinkle with Nutritional Yeast (from the health store). This adds a cheesy flavor to the popcorn. The arginine is neutralized because one tablespoon of nutritional yeast contains 190 mg. more lysine than arginine.

Fish, meats and dairy products are high in lysine. However, eating too much of these high protein foods can make the body too acidic, which can also cause a herpes outbreak. Moderation is the key. Good sources of lysine are also found in wheat germ, legumes and in many fruits and vegetables.

		High-Lysine Foods Foods to Eat		High-Arginine Foods Foods to Avoid			
mg. excess lysine	food	portion		portion	food	mg. lysine deficiency	
930	fresh fish	4 oz		1/2 cup	hazel nuts	-2250	
880	shark	4 oz		1/2 cup	brazil nuts	-2110	
810	canned fish	4 oz		1/2 cup	peanuts	-2060	
740	chicken	4 oz		1/2 cup	walnuts	-810	
720	beef	4 oz		1/2 cup	almonds	-710	
520	goat's milk	1 cup		1/2 cup	cocoa powder	-650	
420	cow's milk	1 cup		2 Tblsps	peanut butter	-510	
420	lamb	4 oz		1/2 cup	sesame seeds	-450	
410	mung beans, cooked	1/2 cup		1/2 cup	cashews	-420	
380	pork	4 oz		1/2 cup	carob powder	-310	
280	cheese, all types	1 oz		1/2 cup	coconut	-290	
270	dried beans, cooked	1/2 cup		1/2 cup	pistachio nuts	-240	
240	lima beans	1/2 cup		1/2 cup	buckwheat flour	-230	
220	cottage cheese, dry	1/2 cup		1/2 cup	chickpeas (garbanzos)	-210	
210	mung bean sprouts	1/2 cup		1/2 cup	brown rice, cooked	-190	
190	nutritional yeast	1 Tblsp		1/2 cup	pecans	-180	
130	soybeans, cooked	1/2 cup		1/2 cup	oatmeal, cooked	-130	
120	egg	1		1/2 cup	raisins	-130	
100	human milk	1 cup		1/2 cup	sunflower seeds	-120	

Chart is from *The Saturday Evening Post Family Cookbook*.

How to take a Lysine supplement

During flare-ups: Take 1000 mg three times a day with meals.

If you suffer from recurrent or frequent herpes outbreaks you can take a maintenance dose of 1000 mg of lysine per day.

General Interactions with Lysine

Do not take lysine with milk or dairy products.

Very large doses of lysine can increase the toxicity of aminoglycoside antibiotics (i.e. gentamicin, neomycin and streptomycin).

Side Affects

Most common side affects of Lysine have been abdominal cramps and diarrhea. These have been reported by those taking extremely high doses of lysine (more than 10 g per day).

Other remedies helpful in managing herpes infections:

- Aloe Vera
- Lemon Balm (*Melissa officinalis*)
- Resveratrol (a very potent antioxidant from grape seed)
- Garlic
- Lactoferrin (a potent antimicrobial protein found in colostrum)

Homeopathic treatment

One of the reasons that your body doesn't overcome herpes naturally is that it remains hidden and undetected by your body's immune system. Herpes outbreaks are also common when your immune system is compromised and when you're under stress.

Homeopathic treatment works by strengthening your body's own immune system to recognize and fight the virus. We can help you. Schedule a consult with our homeopath, Gabrielle Traub.

Call (858) 531-5279 or visit www.DiscoverHomeopathy.com