

Does Milk Consumption Protect From the Corona Virus Infection Covid-19

1.0 Abstract

Milk has some properties of an Angiotensin Converting Enzyme Inhibitor (ACE Inhibitor) [4] ACE inhibitor are a class of drugs that lower blood pressure. The Corona Virus acts on the ACE2 receptors in the lungs. SARS-CoV-2 Cell Entry Depends on ACE2 and TMPRSS2 and Is Blocked by a Clinically Proven Protease Inhibitor[2] It was proposed to examine the affect of how high milk consuming countries fared with low milk consuming countries when confronted with the Corona Virus Covid-19. The author previously did a study to see the effect of drinking beer and correlating beer consumption with death rates from the Corona Virus Covid-19. It was found that the highest beer drinking countries correlated with less Covid-19 cases and less Covid-19 deaths. For a country that drank less than 40 liters per year of beer, there did not seem to be a protective affect.[1] It was found, that the death rate from high milk drinking countries was about half of the low milk consuming countries.

It was also suggested that fermented soy products like soy sauce and miso, used in many far east nations also have ACE2 inhibitors. “Does Fermented Soy Affect the Incidence of Corona Virus Infection in Japan”[3] However there was not enough data to analyze, however Japan and Korea and other nations in the area did have diminished affects from the Corona Virus. The author wanted to also investigate how the corona virus Covid-19 was affected by per capita milk consumption by state in the United States, but no per capita data was available by state.

2.0 Data

Milk contains arachidonic acid, which can increase interferon IFITM1[6] IFITM1 helps fight viral infections

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However the amount of infections in each group remained the same. The countries that were excluded were Italy, Taiwan, Hong Kong, Israel, Turkey, Iran, and Iraq. It is becoming more clear, that more sunshine or higher temperatures have an effect on Corona Virus Covid-19 infections, reducing their rate. So countries in the Southern Hemisphere and the South part of the Northern Hemisphere were excluded. Other countries that were excluded, were ones that did not have infections or it was difficult to obtain data on beer consumption.

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High Milk Consumption Countries

Milk consumption per capita kg/yr	Country	Corona Virus Cases	Corona Virus Deaths	Death rate percentage	Population of Country in Millions	Corona Virus Cases per Million
431	Finland	359	0	0	5.5	65.27273
341	Netherlands	2051	58	2.8278888	17.1	119.9415
341	Sweden	1301	10	0.7686395	10.1	128.8119
319	Switzerland	3115	33	1.05939	8.7	358.046
292	Ireland	366	2	0.5464481	4.9	74.69388
285	Estonia	258	0	0	1.3	198.4615
277	Denmark	1057	4	0.3784295	5.8	182.2414
261	Norway	1590	6	0.3773585	5.4	294.4444
259	Germany	12327	28	0.2271437	83.8	147.1002
258	Austria	1646	4	0.2430134	9	182.8889
255	United States	9269	151	1.6290862	331	28.00302
238	Romania	260	0	0	19.2	13.54167
236	Belgium	1486	14	0.9421265	11.6	128.1034
235	Slovenia	286	1	0.3496503	2.1	136.1905
		35371	311		515.5	68.61494
	Death Rate Percentage		0.879251			

Low Milk Consumption Countries

232	United Kingdom	2626	104	3.960396	67.9	38.67452
226	Iceland	250	0	0	0.3	833.3333
205	Poland	287	5	1.7421603	37.8	7.592593
195	Czech Republic	522	0	0	10.7	48.78505
188	Canada	727	9	1.2379642	37.7	19.28382
174	Latvia	71	0	0	1.9	37.36842
174	Bosnia	39	0	0	3.3	11.81818
164	Spain	14769	638	4.3198592	46.8	315.5769
164	Russia	147	0	0	146	1.006849
159	Hungary	58	1	1.7241379	9.7	5.979381
156	Bulgaria	92	2	2.173913	6.9	13.33333
143	Slovakia	105	0	0	5.5	19.09091
72	Japan	899	29	3.2258065	126	7.134921
9	South Korea	8413	84	0.9984548	51.3	163.9961
		29005	872		551.8	52.56433

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Death Rate Percentage 3.006378

3.0 Discussion

It was found that the high milk consuming countries per capita had a death rate of 0.88 percent and the low milk consuming countries per capita had a death rate of 3 percent. So high milk consuming nations per capita had a death rate that was about one third of the low milk consuming nations per capita. These death rates are lower than what we have seen with other studies. This is explained because the low beer consuming nations were excluded from the study. So if there is an actual relationship to beer and milk affecting corona virus infections and death, we could expect, instead over a 3 percent death rate, we could achieve about a 0.7 percent death rate by increasing beer consumption in the low beer consuming countries per capita and by increasing milk consumption in the low milk consuming countries per capita. The amount of milk needed would be about 0.5 liters(2 cups) per day of milk consumption. The amount of beer would be about 0.2 liters (6 oz) of beer per day. It has also been shown, that arachidonic acid, a saturated fat in milk and meat, increases IFITM1 interferon, which helps fighting the start of viral infections. [5] Also note, that linoleic acid, an omega 6 fatty acid in many vegetable oils, turns into arachidonic acid in the body[6]

Spain and Italy use very much olive oil, which has very little linoleic acid, therefore it would reduce the amount of arachidonic acid produced in the body, and thus limit the starting of Interferon IFITM1, which fights the start of viral infections. This may partly explain the high death rates in Spain and Italy, compared to other nations.

During this time of the Corona virus infection it might be useful to substitute some of that olive oil for some corn oil. Balance is always good anyways. If you are not a high fat milk drinker, it might be useful to start, or start eating some high fat Greek yogurt.

Italy was not included in the results because Italian adults don't drink much milk, even though milk consumption in Italy is high.[7]

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4.0 References

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