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## Something Important for Asian Health

52 messages

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**Kewei Zhou**

Fri, Feb 7, 2025 at 8:52 PM

To: wuj95@mcmaster.ca

Hey Jianhan,

I found something that might be important for Asian health, but I don't have the credentials to get this published in a paper, nor the language abilities to write an article about this in Chinese language, & the guy I used to publish stuff with went inactive years ago. I think this could be pretty big. It would take maybe a day or two for you to write this in more formal language & get it either published in a paper, or on Zhihu like the other guy did. I found your email by looking you up on Google.

It boils down to this. East & Southeast Asians (who eat soy proteins & have vitamin B12 deficiencies) have significantly smaller testicles than other races. Hispanics have the largest testicles. East & Southeast Asians produce less testosterone & sperm as a result. But Mongolians & Buryats have the same testicular size & function parameters as White Russians, & they're very similar to East & Southeast Asians genetically, so it's probably not genetic. So I compared East & Southeast Asians' lifestyles & diets to that of other groups, & I think it might have something to do with soy & tea, which are really the only things that consumptively differentiate us from other groups.

### (1) Siberian Asian Testis Weights

<https://pmc.ncbi.nlm.nih.gov/articles/PMC8596582/>

In 2021, Buryats & Russians both had a median total testicle weight of 40g, & Yakuts had a median total testicle weight of 36g.

Russians & Buryats & Yakuts were all very similar in terms of semen volume & sperm count & sperm concentration & motility & morphology, as well as LH & FSH & Testosterone & Estradiol & Inhibin B.

[https://www.researchgate.net/figure/PCA-of-the-native-populations-of-Sakha-in-the-context-of-other-Eurasian-and-American\\_fig5\\_239941273](https://www.researchgate.net/figure/PCA-of-the-native-populations-of-Sakha-in-the-context-of-other-Eurasian-and-American_fig5_239941273)

You can see Buryats & Mongolians & Yakuts tightly clustered in the bottomright of the rectangle cutout below the PCA plot. (They're basically East Asians, with about 10% to 15% Ancient North Eurasian input. ANEs were like 75% West Eurasian & 25% East Eurasian.)

Buryats & Yakuts do not eat soy products.

### (2) East & Southeast Asian Testis Weights

<https://gwern.net/doc/biology/1986-diamond.pdf>

Hong Kong Chinese in 1986 had a mean testicle weight of either 8g or 9g.

<https://onlinelibrary.wiley.com/doi/pdf/10.1002/j.1939-4640.1998.tb02015.x>  
<https://pubmed.ncbi.nlm.nih.gov/9639052>

This is from 1998. (Dietary deficiencies were very common in China, & it makes a difference in testicle weight. But still, the gap is pretty big.) The Chinese from China had a mean testicle weight of 13.7g. Hispanic Americans,

25.9g. White Americans, 21.0g. The Chinese had about half or less sperm production & leydig cell count compared to Hispanics or Caucasians.

<https://pmc.ncbi.nlm.nih.gov/articles/PMC5904753>

The mean testicular volumes (average of the left and right testis) of normal Korean men, fertile Chinese men, fertile Thai men, and normal Chinese men were 19.4, 17.7, 17.2 and 17.0 mL, respectively. These values are smaller than those from a European study showing that the mean testicular volumes in fertile men from four European cities were 23.5 mL (Copenhagen), 23.0 mL (Edinburgh), 22.5 mL (Paris) and 23.0 mL (Turku). In our study of fertile Japanese men, the mean testicular volume was 21.5 mL.

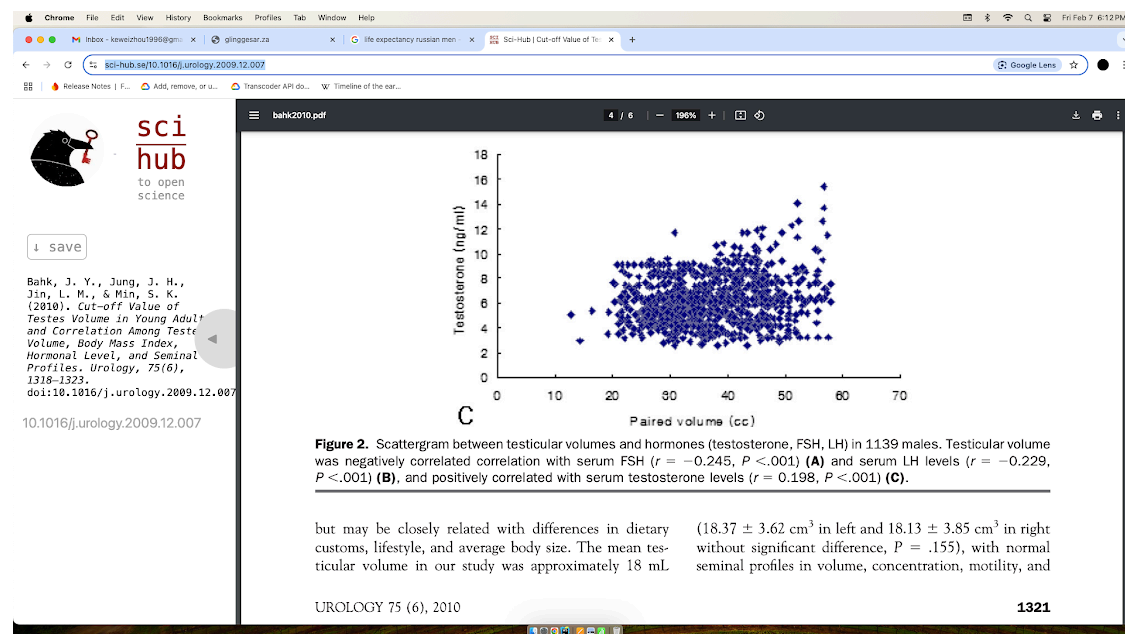
According to our comparison of the results from different Asian studies, the mean semen volumes of China (north/south/central), Thailand, Singapore and India were 3.0/2.9/2.4, 2.5, 2.4 and 2.5 mL, respectively. In contrast, semen volume of the fertile Japanese men was 3.2 mL; which is the highest value among the Asian men examined here. These values from Asian men appear to be lower than those from European men (4.2, 4.1, 3.9 and 3.8 mL for French, Finnish, Scottish and Danish men, respectively).

This study of fertile Japanese men was from 2007. The European study was from 2001 (<https://sci-hub.se/10.1093/humrep/16.5.1012>). The studies for the other East & Southeast Asian men were all from the 1980s. The Chinese men in the first quoted paragraph are Hong Kong Chinese.

<https://sci-hub.se/10.1016/j.urology.2009.12.007>

During 54 months from January 2004, 1139 normal young men, 19-27 years old in military service were enrolled.

The mean testicle weight for Korean military conscripts in 2009 was 18.2g.



<https://sci-hub.se/10.1111/j.1745-7262.2008.00340.x>

Here's a 2008 Japanese study that also shows a marked increase in testosterone average & standard deviation beginning at 50g, & a marked decrease beginning at 20g. The average **total** testicle weight for the men in this study was 36.8g.

Notably, men with 20g or less total testicle weight produce almost no sperm.

[https://www.researchgate.net/publication/357379208\\_Ultrasonic\\_testicular\\_size\\_of\\_24440\\_adult\\_Vietnamese\\_men\\_and\\_the\\_correlation\\_with\\_age\\_and\\_hormonal\\_profiles](https://www.researchgate.net/publication/357379208_Ultrasonic_testicular_size_of_24440_adult_Vietnamese_men_and_the_correlation_with_age_and_hormonal_profiles)

The mean testicle weight for Vietnamese adult men in 2021 was 13.6g.

(3) Soyfood Consumption by Country

[https://www.researchgate.net/publication/316876299\\_Soyfood\\_and\\_isoflavone\\_intake\\_and\\_risk\\_of\\_type\\_2\\_diabetes\\_in\\_Vietnamese\\_adults](https://www.researchgate.net/publication/316876299_Soyfood_and_isoflavone_intake_and_risk_of_type_2_diabetes_in_Vietnamese_adults)

Vietnamese adults in 2017 consumed an average of 20g of isoflavones per day.

<https://pubmed.ncbi.nlm.nih.gov/17951484/>

This study was from 2007. It looked at Hong Kong women.

Results indicated that the daily intake of total isoflavones was 7.8 +/- 5.6 mg in the study population. Non-Cantonese women had a higher intake of 10.7 +/- 7.6 mg compared with 7.3 +/- 5.0 mg in Cantonese women (P = 0.04).

<https://pubmed.ncbi.nlm.nih.gov/15228989/>

This study was from 2004. It looked at rural adult women in mainland China.

Soy food consumption and information on age, education and medical history were collected on 1,188 subjects in Gansu Province and Hebei Province, China using a food frequency questionnaire to gather data on food intake over the past year. Weight and height were simultaneously measured. The results showed that 1139 (95.9%) rural women consumed soy foods in the past year. The average intake of soy foods and isoflavones was 38.7 +/- 58.2 (median = 23.5) g/d and 17.7 +/- 26.6 (median = 8.9) mg/d, respectively.

<https://pubmed.ncbi.nlm.nih.gov/16965235>

This study was from 2006.

The results indicate that older Japanese adults consume approximately 6-11 g of soy protein and 25-50 mg of isoflavones (expressed as aglycone equivalents) per day.

<https://pmc.ncbi.nlm.nih.gov/articles/PMC7043982>

This study was from 2019.

According to the Korean National Nutrition Survey, daily mean intake of total genistein and daidzein in the Korean population is estimated to be 21.0 mg per person.

<https://pubmed.ncbi.nlm.nih.gov/12725653/>

This study was from 2003.

The isoflavone intake in Ireland, Italy, The Netherlands and the UK is on average less than 1 mg/d.

Generally, the only people in the world who eat significant amounts of soy products are East & Southeast Asians, & not Mongolians & Siberian Asians.

#### (4) The Effects of Soy Consumption on the Testes

<https://www.saspublishers.com/article/9701/download/>

Rats who ate for 8 weeks a diet that was 20% soy flour experienced an 80% drop in testosterone, & a 60% drop in testicle weight.

This isn't even soy isoflavones. This is just regular soy flour, as a proportion of their total diet that is similar to how East & Southeast Asians eat.

<https://sci-hub.se/10.1097/01.ju.0000046780.23389.e0>

5mg/kg of genistein is just as bad or even sometimes worse than 300mg/kg of genistein when it comes to maternal diet. Suppression of pubertal markers (80% deficit), testis length & width (10% deficit), penis length (10% deficit), testosterone (50% deficit), & sexual activity (50% deficit) was equal or worse in male rats born to mothers who ate 5mg/kg of genistein vs. male rats whose mothers ate 300mg/kg of genistein. East & Southeast Asians eat about 10mg/kg to 20mg/kg of genistein, & convert a lot of that into equol.

These male rats didn't even eat genistein after they were born, as the title of the study states.

<https://pmc.ncbi.nlm.nih.gov/articles/PMC4076408/>

This study shows something relevant to what (10) (& the Zhihu post on animal fat & soy & height) discusses. Rats born to mothers who ate soy vs. rats born to mothers who didn't, & who didn't eat soy in their life, experienced average to slightly above androgen production in the early stages of their life & puberty, but this production declined to half that of the control rats in the later stages of puberty. Meanwhile, their estrogen production followed the opposite development, in which they experienced half the estrogen production of that of control rats in the early stages of their life & puberty, but up to 30% more estrogen production in the later stages of puberty. This is reflected in the development of their testes, in which the control rats had slightly smaller testes in the early stages of their life & puberty, but somewhat larger testes in the later stages of puberty.

[https://www.researchgate.net/publication/342246524\\_The\\_effect\\_of\\_pre-\\_and\\_postnatal\\_exposure\\_to\\_a\\_mixture\\_daidzein\\_and\\_genistein\\_on\\_the\\_reproductive\\_system\\_of\\_male\\_rats](https://www.researchgate.net/publication/342246524_The_effect_of_pre-_and_postnatal_exposure_to_a_mixture_daidzein_and_genistein_on_the_reproductive_system_of_male_rats)

This study confirms the previous studies.

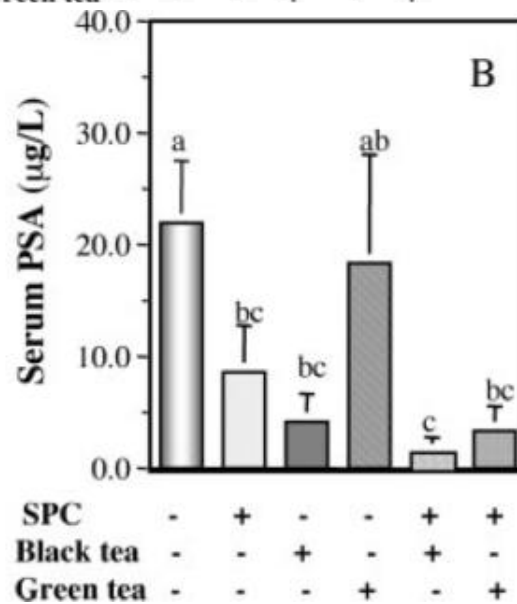
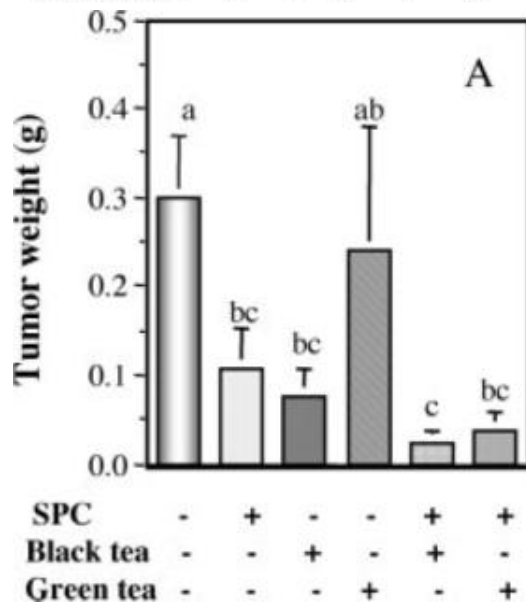
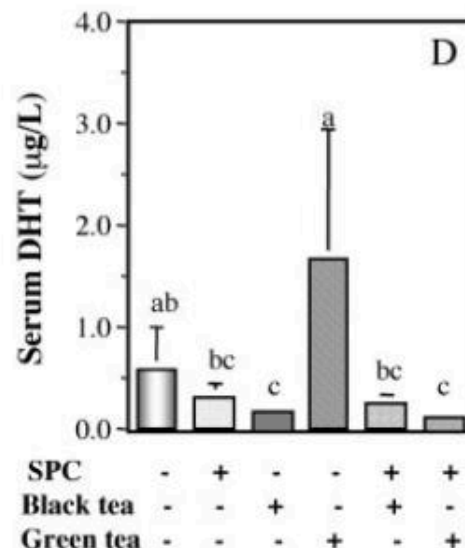
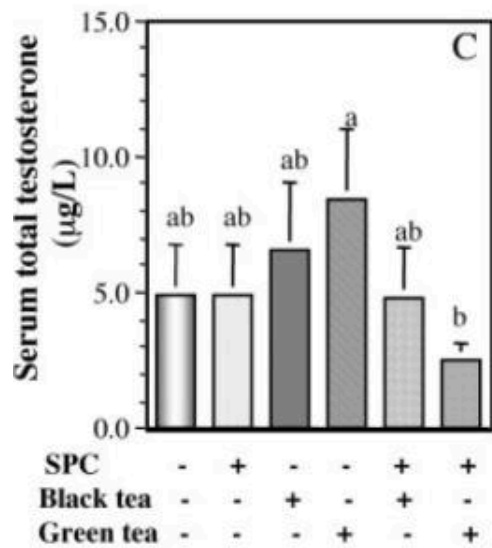
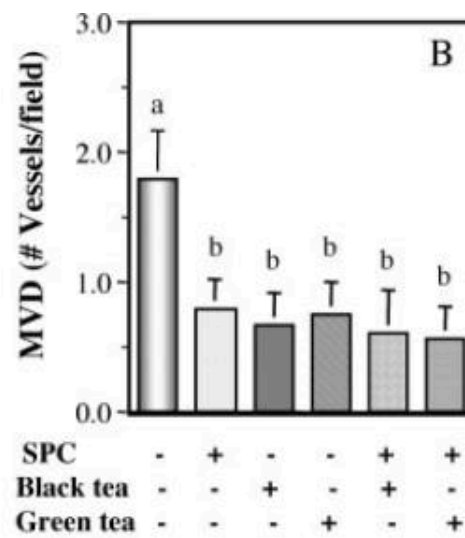
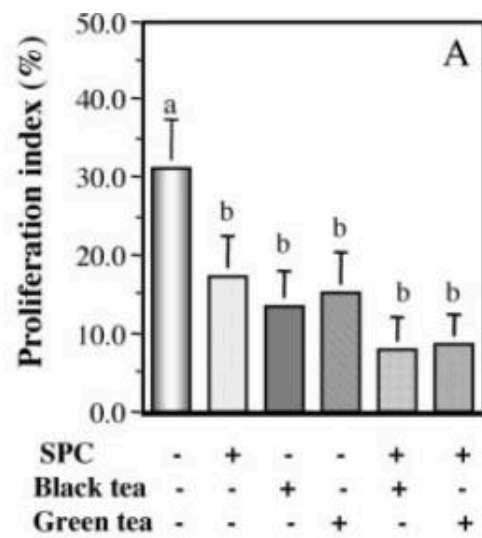
#### (5) The Effects of Tea Consumption on the Testes

I discounted studies that used unreasonable amounts of green tea.

<https://pmc.ncbi.nlm.nih.gov/articles/PMC3058706/>

Green tea blunts androgen receptor function in rats.

<https://pmc.ncbi.nlm.nih.gov/articles/PMC2683253/>



Androgenically, green tea is pretty good on it's own, & black tea & soy isoflavones are pretty bad on their own, & combining black tea & soy isoflavones doesn't seem to be much worse than just eating soy isoflavones, but, somehow, for some reason, combining green tea with soy isoflavones produces, not a result that is as equally bad as just eating soy isoflavones, but a result that is much worse. & many East & Southeast Asians tend to eat both together.

<https://nopr.niscpr.res.in/bitstream/123456789/12615/1/IJEB%2049%289%29%20689-697.pdf>

Higher doses of green tea extract are bad for all testicular parameters. The testicles of the high dose rats (20 cups of tea a day), after 26 days, shrank by 20%. The high dose rats also experienced an 80% decrease in serum testosterone levels.

This seems contradictory with the previous result, but maybe it's like how steroids shrink your balls. Green tea consumption might be mimicking the effects of steroids. I'm not sure. But you generally don't want to be eating something that flipflops your hormone profile.

<https://www.ijtsrd.com/papers/ijtsrd42471.pdf>

This study has similar results as the previous study.

<https://www.ijcep.org/index.php/ijcep/article/view/318/457>

Another study showing the testicular degeneration following green tea consumption.

#### (6) The Effects of Vitamin B12 Deficiency & Soybean Consumption (180g per kg of feed) on the Testes

[https://www.jstage.jst.go.jp/article/jnsv/53/2/53\\_2\\_95/\\_pdf](https://www.jstage.jst.go.jp/article/jnsv/53/2/53_2_95/_pdf)

Control rats had 2.6g testes. B12 deficient rats had 0.8g testes. (It's not about a single vitamin. It shows the importance of eating enough of everything.)

[https://www.researchgate.net/figure/Prevalence-of-deficiency-in-vitamin-B12-and-folate-among-Chinese-women-in-Shaanxi\\_fig3\\_268232713](https://www.researchgate.net/figure/Prevalence-of-deficiency-in-vitamin-B12-and-folate-among-Chinese-women-in-Shaanxi_fig3_268232713)

46% of Chinese women in Shaanxi in 2014 had Vitamin B12 deficiency. This percentage probably used to be much higher just a few decades ago.

Vitamin B12 deficiency affects about 12.5% of adults in the United States who are 19 years of age and older. It affects about 12.3% of adults who are 60 years of age and older.

#### (7) The Effects of Different Fats & Nonsoy Proteins on the Testes

<https://pmc.ncbi.nlm.nih.gov/articles/PMC4752153/>

High fat diets (doesn't matter whether it's SFAs or PUFAs or both) all increase rat testis weight by like 3% after 16 weeks. So they don't really do anything.

<https://sci-hub.se/10.1016/j.fct.2007.08.045>

SFAs & PUFAs (even soybean oil) & nonsoy proteins have no effect on rat testicle weight. So it seems to be a soy protein AKA isoflavones thing. Soybean oil has no isoflavones.

#### (8) The Effects of Soy Sauce on the Testes

[https://aunj.journals.ekb.eg/article\\_276887\\_15c679d97d02834519a0a11f82b05341.pdf](https://aunj.journals.ekb.eg/article_276887_15c679d97d02834519a0a11f82b05341.pdf)

Even soy sauce is bad for your testicles, despite not having isoflavones. There are other phytoestrogens & substances in soy products that don't bind to the estrogen receptors nearly as strongly as genistein, daidzein, equol, etc. But they probably have other effects on other receptors & hormones that we haven't measured.

#### (9) The Effects of Caloric Restriction on the Testes

<https://journals.sagepub.com/doi/full/10.1177/0192623308320275#t2-0360687>

[https://journals.sagepub.com/cms/10.1177/0192623308320275/asset/images/large/10.1177\\_0192623308320275-fig2.jpeg](https://journals.sagepub.com/cms/10.1177/0192623308320275/asset/images/large/10.1177_0192623308320275-fig2.jpeg)

Rats who ate 35% less than rats who ate ad libitum, over the course of 6 weeks, didn't lose any testis weight, relatively. So caloric restriction, the sort that Chinese people experienced relative to Europeans & Americans, a few decades ago, probably doesn't explain the gap.

## (10) The Effects of Soy Isoflavones on Bone Growth

<https://pmc.ncbi.nlm.nih.gov/articles/PMC8652289/>

I've read that small to medium variations in epiphyseal growth plate height don't really have an effect on growth rate.

This study is in line with the Zhihu post on animal fat & soy & height. Rats who ate soy proteins AKA isoflavones grew most in their early puberty but their growth rate slowed down in their later puberty. Rats who ate whey protein didn't grow as fast in their early puberty but their growth rate accelerated in their later puberty & they eventually caught up to & then overtook in bone length the rats who ate soy proteins, & with about 20 days (or 20%) of growth left, & despite starting with a bone length deficit. & their bones were also larger & denser & betterformed. They started with a 4% bone length deficit, but ended with a 0.5% to 2% bone length advantage. Urban Beijing Chinese are about 177cm tall as of a few years ago.  $177 \times 1.045 = 185$ .  $177 \times 1.06 = 188$ .

Refer to (4) & to the Zhihu post on animal fat & soy & height.

## (11) Conclusion

Chinese diet staples, such as soy products & tea products, semicastrate both the men & women? that consume them as a staple. & 5mg of Genistein a day is all it takes. The combination of soy products & tea products is also worse than either alone.

Chinese people are also severely lacking in basic dietary knowledge.

We might see alot more Daniel Dae Kims, Bayarbaatars, and Hu Bings, after eradicating soy products from our societies.

## (12) Miscellaneous

My testicles are each a little more than 2 inches long.

I once took 5mg of a drug a day for some months. According to studies, it shouldn't have had any effect on my androgens, but I was no longer able to maintain an erection or visually imagine sexual fantasies, and I was no longer tired after waking up or after masturbating. I used to pass out after masturbating, but not anymore after getting on this drug. After getting off this drug, all these effects went away, and I was able to get erections that were harder & lasted longer than then the erections I used to get, before taking that drug regularly. Soy contains many phytoestrogens, many of which convert to more potent phytoestrogens, such as equol, in specifically East & Southeast Asians, due to the specialized bacteria in our stomachs. So the effects you see in those rats, many of whom probably don't have those bacteria, are only a fraction of the effects we might be experiencing from being born to mothers who ate soy, and from eating soy throughout our lives. Our bodies might have changed at an age too young for us to remember, too young for us to be able to compare to something before the change.

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**Kewei Zhou**

Fri, Feb 7, 2025 at 9:13 PM

To: wuj95@mcmaster.ca

It's possible that eating soy as much as we have for the past 3000 years has culled smallballs genes from our gene pool, & that once we remove soy from our diets & societies entirely, our testicles will turn out to be the largest in the world.

It'd be like how Rock Lee took off his leg weights in his fight with Gaara.

Buryats & Yakuts are just East & Southeast Asians who haven't gone through this selection process.

But it's also possible that our balls might shrink after removing soy from our diets & societies.

So we'd better do controlled studies in mainland China.

[Quoted text hidden]

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**Kewei Zhou**

Fri, Feb 7, 2025 at 9:17 PM

To: wuj95@mcmaster.ca

So it's not that soy causes epiphyseal growth plates to close earlier by direct action (or maybe it does, on top of all this), it's that soy changes the way the body produces hormones. Without soy, you produce more testosterone as you grow older, and less estrogen. With soy, you produce more estrogen as you grow older, and less testosterone. One of the ways