



Eating Oranges And Their Peels Seems To Have Temporarily Lowered My Biological Age



Kingsley G. Morse Jr.

<https://kingsleymorse.ch>

kingsley@loaner.com

July 22, 2025

0.1 Abstract

Adding oranges and their peels to my diet seems to have significantly lowered my biological age for a few days. I replicated the improvement in a second experiment. The biggest age reversal was 3 years younger. The most significant p value was 0.002¹. The improvement went away after about 10 days.

0.2 Methods

I

1. try to measure my biological age every day[1]² and
2. look for safe interventions to try lowering it³.

My interest in testing citrus fruit, and particularly its peel, came from

1. the report of a clever artificial intelligence (AI) prediction that a molecule found in citrus peels, diosmin, would extend life span[2],
2. reports that another molecule found in citrus peels, hesperidin, extended the life spans of lab animals and
3. a cool naturopath observing that the peel has much to teach us,

For my first experiment, and if I recall correctly, I added about a third of an orange and its peel to my daily diet for 3 consecutive days.

For my second experiment, I added half of an organic Valencia orange and its peel to my daily diet for 2 weeks.

I kept trying to measure my biological age daily. I looked for a significant change.

¹Statisticians often say a change is significant when its statistical “p value” is less than 0.05.

²My latest and preferred biological age clock is called “BA CG 5.3”. I made it. I haven’t released its details.

³“First, do no harm.” Attributed to Hippocrates.

0.3 Results

Both of my experiments seem to have lowered my biological age by a maximum of about 3 years.

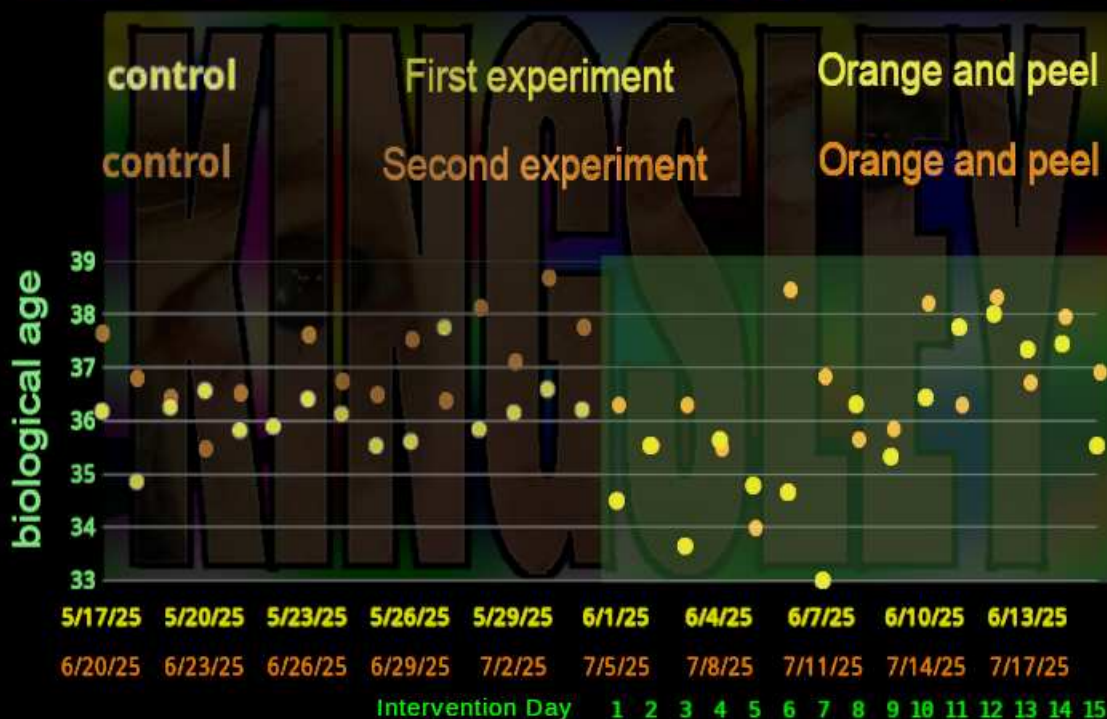
The youngest biological age in my first experiment was reached after a week.

The youngest biological age in my second experiment was reached after 5 days.

The most significant age reversal in my first experiment had a p-value of 0.003.

The most significant age reversal in my second experiment had a p-value of 0.002,

Eating Orange And Its Peel Briefly Lowered Estimated Biological Age



July 21, 2025

<https://kingsleymorse.ch>



0.4 Discussion

Maybe

1. citrus fruits and/or their peels are potential confounding factors when measuring biological age, so
2. it would make sense to hold their intake constant while testing other interventions of biological age.

If the biological age lowering effect of oranges and their peels is unsustainable, maybe it makes sense to

1. eat
 - (a) a Valencia orange and
 - (b) its peelonce a month and
2. accept their
 - (a) lesser and
 - (b) temporarybenefit(s).

The lowest biological age in my first experiment was recorded a few days after I evidently stopped eating an orange and its peel. I wonder if there was a delayed effect.

I suppose it may be interesting to test

1. other
 - (a) citrus fruit and/or
 - (b) their peels, or
2. just
 - (a) diosmin,
 - (b) hesperidin or
 - (c) orange peels.

If I understand correctly, the clever use of AI that predicted diosmin would extend lifespan was trained on fewer than 5,000 experiments, and maybe only 1,559. I expect AI could predict more and/or better life-extending interventions if it were trained on more data. My ginormous spread sheet currently summarizes over 45,000 life span experiments[11].

More research is needed.

0.5 Conclusion

Eating oranges and their peels seems to have temporarily lowered my biological age for a few days.

0.6 Conflict of Interest

None.

0.7 References

1. What I learned from trying to measure my biological age throughout 2018
2. Extreme Gradient Boosting algorithm classification for predicting lifespan-extending chemical compounds
3. Kingsley's Fast Screen For Anti-Aging Compounds Worked With Cocoa
4. Drinking More Green Tea Seems To Have Made Me A Year Younger In Just A Month
5. Not Eating For 14 Hours A Day For A Month Seems To Have Made Me About A Year Younger
6. Cooking Raw Tomatoes Seems To Have Made Me About A Year Younger
7. Hawthorn Berries, Prickly Ash and Horse Chestnut Lowered Biological Age
8. More Lecithin and Hemp Seed Oil, and Less Fish and Olive Oil, May Have Lowered My Biological Age
9. A Water Filter That Increases pH Seems To Have Lowered My Biological Age By About A Year
10. Using A Waterpik Seems To Have Lowered My Biological Age By About A Year
11. Kingsley's Big Spread Sheet Of Life Span Experiments

0.8 Running List Of Successful Interventions

My testing suggests eight interventions lowered my biological age.

They're summarized in the chart below.

I excluded oranges and their peels because their benefit was fleeting.

month/year	intervention	change in biological age in years	p value
2/2015	cocoa[3]	-2.0	0.03
1/2017	green tea[4]	-1.6	0.02
8/2017	intermittent fasting[5]	-0.9	0.02
6/2020	tomatoes[6]	-0.9	0.03
2/2021	Hawthorn berries, prickly ash and horse chestnut[7]	-0.9	0.04
4/2021	lecithin & hemp seed oil, with less fish and olive oil[8]	-1.5	0.01
7/2022	high pH water pitcher[9]	-1.2	0.02
9/2023	waterpik[10]	-1.7	0.003