

So here are some results from a preliminary analysis of Grant Genereux's 2020 Survey of People on a low Vitamin A diet:

TOTAL RESPONSES (N) = 126

age_group	Freq.	Percent	Cum.
0-20	2	1.59	1.59
21-40	55	43.65	45.24
41-60	54	42.86	88.10
61-80	15	11.90	100.00
Total	126	100.00	

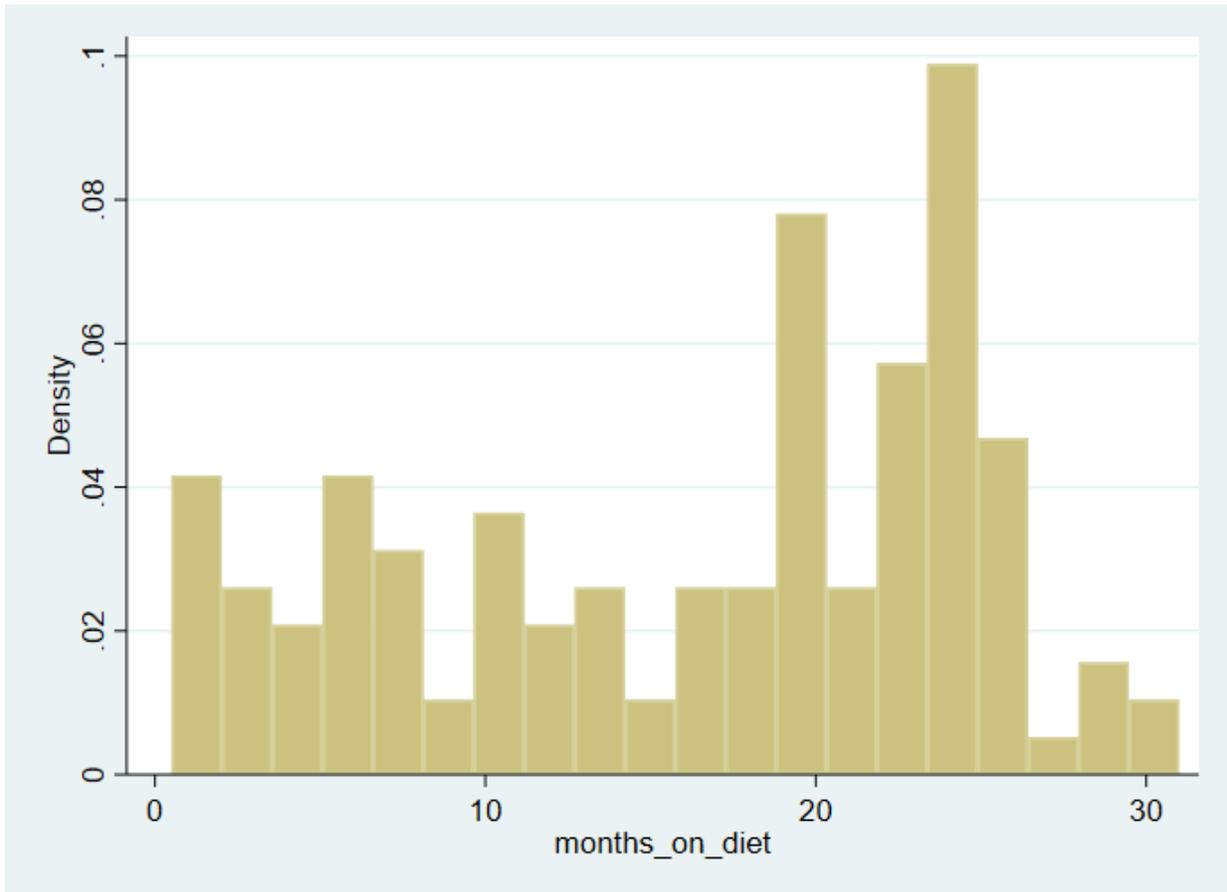
Restrictiveness (here 1=very restrictive, 5 is moderately restrictive)

	Freq.	Percent	Cum.
1	40	31.75	31.75
2	54	42.86	74.60
3	26	20.63	95.24
4	5	3.97	99.21
5	1	0.79	100.00
Total	126	100.00	

Here are some summary statistics on months on diet. The mean is 16 months. Longest is 31. There are notable spikes at 20 and 24 months:

months_on_diet			
Percentiles	Smallest		
1%	.75	.5	
5%	2	.75	
10%	3	1	Obs 126
25%	9	1	Sum of Wgt. 126
50%	19		Mean 16.32937
		Largest	Std. Dev. 8.307325
75%	24	29	
90%	25	29	Variance 69.01165
95%	26	30	Skewness -.403235
99%	30	31	Kurtosis 1.882926

Here is a visual depiction of this:



IS THE DIET WORKING FOR YOU:

working_for_you	Freq.	Percent	Cum.
No	3	2.42	2.42
Yes	98	79.03	81.45
Too early to tell	23	18.55	100.00
Total	124	100.00	

AVERAGE NUMBER OF MONTHS ON DIET BY 'WORKING FOR YOU':

working_for_you	mean(months~t)
No	6.833333
Yes	17.2602
Too early to tell	12.5

Here I calculated changes in conditions by subtracting how they were before from how they are now (=condition now - condition before)
so a larger negative number indicates a larger reduction in severity of the condition

No values were calculated if the severity was marked 1 both before and after or if either were left blank.

So the # of observations is the number of people who either:
 1. Saw an decline in severity
 2. Saw an increase in severity
 3. Saw no change but started at a level higher than 1

Also, i threw out the results for aggressiveness/irritability. The reason is that the order of the questions was reversed: they were asked to first rate their aggressiveness now and then before, whereas all the other questions were asked in the reverse order (first before then now). I'm sure some people caught the mistake (at least one person commented on it, which is how I caught it). But I'm sure some people did not. And indeed the average reduction (-.3) is much smaller than almost all the other conditions.

Hopefully the variable names here are easy enough to interpret
 They follow the same order as the survey questions (unless I made a mistake somewhere):

Variable	#Obs	Mean	Std. Dev.	Min	Max
depression	87	-2.574713	2.644134	-9	6
anxietycha	100	-2.97	2.484111	-9	3
compulsive	64	-2.421875	2.415589	-9	1
mood/wellbeing	112	-2.839286	2.855542	-9	5
brainfog	100	-3.54	2.262652	-9	0
add/adhd	43	-2.186047	2.547228	-9	5
memoryloss	90	-2.277778	2.022501	-6	3
narcolepsy	20	-2.65	2.560325	-8	0
insomnia	94	-2.712766	2.678558	-9	6
lethargy	113	-3.132743	2.354723	-9	5
dizziness	51	-2.490196	2.403103	-7	1
ataxia	53	-2.396226	2.0507	-9	0
eczema	52	-1.807692	2.574677	-9	3
seb-derm	33	-2.363636	2.655398	-8	5
rosaceac	23	-2.956522	2.754802	-9	1
psoriasis	18	-2.388889	2.004081	-6	2
acnechange	69	-1.971014	2.612025	-9	3
dryskin	104	-2.057692	2.754791	-9	5
cheilosis	48	-2.4375	2.592183	-9	2
hairloss	96	-1.614583	2.704265	-9	5
brittlefingernails	69	-2.115942	2.329707	-9	3

rheum-arthritis	16	-1.5	1.932184	-4	4
osteoarthritis	14	-1.785714	1.80506	-4	2
jointpain gen	72	-2.361111	2.519253	-9	4

bonegrowth	15	-.7333333	1.667619	-5	1
osteoporosis	16	-1.0625	1.481834	-4	1
crohns	7	-1.714286	2.360387	-5	1
colitis	7	-3.285714	3.498299	-9	1
ibdandother	70	-2.971429	2.648332	-9	4

blurred vis.	75	-1.88	2.223705	-9	2
lightsensitive	90	-2.588889	2.587326	-9	3
cataractsc	11	-1.181818	3.487641	-9	5
othervis.probs	69	-1.304348	2.038629	-7	3
hearingloss	40	-1	1.64862	-7	3

HBP	19	-2.052632	2.368161	-6	3
highcholest	36	-2.194444	2.447383	-7	2
leuk/neut/cytopenia	10	0	1.490712	-3	2
anemia	17	-2.588235	2.425356	-9	0
irondeficiency	17	-2.058824	2.946833	-9	1

hemochromatosis	29	-1.344828	2.831908	-9	5
high tsh	23	-.9565217	1.637022	-6	1
gum disease	58	-2.086207	2.41548	-8	1
otherdentprob	58	-1.706897	2.420734	-7	4
season.allerg	61	-2.196721	3.064962	-9	6

foodallerg.	48	-1.916667	2.842185	-9	6
muscleweak	79	-2.392405	2.533963	-8	2
overweight	58	-2.293103	2.347142	-9	2
underweight	35	-1.914286	2.883742	-8	3
lossofappetit	34	-3.352941	3.54095	-9	7

heartburn	41	-3.121951	2.882665	-9	4
lowlibido	71	-2.126761	3.111865	-9	4
erectile dysf	25	-1.44	2.310844	-9	1
mentsrual pain	12	-3.083333	3.553701	-9	4
menstr. irreg.	18	-3.111111	4.309891	-9	3

endometriosis	2	-9	0	-9	-9

The average change was -2.3. So a reduction of over 2 points on the 10-point scale. Not bad!

But are the changes in the table above statistically significant? We can check this with a simple t-test. **The changes for all of the conditions were statistically significant**, with the following exceptions: Cataracts (n=11); leukopenia/neutropenia/thrombocytopenia (n=10); endometriosis (n=2). These were conditions with a small n and/or just a little bit of change.

Then I correlated these changes with:

1. The number of months they've been on the diet
2. The inverse strictness of their diet (so 5 represents no vit a intake and 5 represents moderate)
3. A measure of the months on the diet multiplied by the strictness measure

Below are the results. I only show results that were significant at the 0.1 significance level. Generally the two-tail cutoff is 0.05 but I'm using the higher one-tail cutoff of 0.1 to show results. ***The lower the significance level, the less likely the correlation is due to chance.***

Anyway these results are just descriptive and suggestive and need to be taken with a huge grain of salt for many reasons, one of which is that people who have a bad experience with the diet are likely to bail out so the results will tend to skew positive.

I am surprised by the average number of months people have been on the diet who still say it's too early to tell (12.5 months). Perhaps that group is experiencing some improvement but not as completely as they had hoped at this point (Actually I could check that). All of the correlations -- not just the statistically significant ones, are in the expected direction, *except where noted otherwise*

CORRELATION OF CHANGES IN CONDITION SEVERITY WITH MONTHS ON DIET --

Results show longer time on diet correlates to larger reduction in symptom severity, which is not exactly surprising but will hopefully encourage people to stick with it.

CONDITION	CC	SIG
depression	-.17	(.10)
mood	-.22	(.02)
brainfog	-.24	(.01)
memoryloss	-.28	(.01)
insomnia	-.17	(.10)
eczema	-.36	(.001)
dry skin	-.21	(.03)
cataracts	-.64	(.04)
other vision	-.24	(.05)
high tsh	-.36	(.09)
gum disease	-.36	(.005)
overweight	-.27	(.04)
underweight	-.28	(.10)

* CC = Correlation coefficient; SIG = statistical significance level

The following blood-related disorders had positive correlations though not remotely significant: Leuko-/Neutro-/Thrombocyto-penia, anemia, irondeficiency, and hemochromatosis

CORRELATION OF CHANGES IN SYMPTOM SEVERITY WITH RESTRICTIVENESS

(1=moderately restrictive, 5=very restrictive)

anxiety	-.16	(.10)	
adhd	-.31	(.04)	
memoryloss	-.18	(.09)	
narcolepsy	-.37	(.11)	
lethargy	-.23	(.01)	
joint pain	-.23	(.05)	
anemia	.51	(.04)	** Note this is a positive correlation so more restrictive correlates w/worsening
hemochromatosis	-.36	(.05)	
seasonal allergies	-.36	(.05)	
muscle weakness	-.26	(.02)	

* CC = Correlation coefficient; SIG = statistical significance level
 The following were positively correlated but **not statistically significant**: Anxiety, ataxia, seb-derm, psoriasis, cheilosis, hair loss, bone growth, crohns, light sensitivity, other visual problems, iron deficiency, high tsh, erectile dysfunction, excessive menstrual pain, menstrual irregularities

CORRELATION OF CHANGES IN SYMPTOM SEVERITY WITH A MEASURE OF MONTHS ON DIET MULTIPLIED BY RESTRICTIVENESS

compulsive behavior	-.25	(.05)
mood change	-.25	(.01)
brain fog	-.29	(.004)
adhd change	-.30	(.05)
memory loss	-.33	(.003)
narcolepsy	-.38	(.10)
insomnia	-.19	(.07)
lethargy	-.27	(.003)
eczema	-.38	(.005)
dry skin	-.27	(.005)
joint pain	-.22	(.06)
osteoperosis	-.42	(.10)
cataracts	-.63	(.04)
other vision probs	-.23	(.05)
high cholesterol	-.33	(.05)
gum disease	-.39	(.002)
other dental health	-.24	(.07)
seasonal allergies	-.23	(.08)
muscle weakness	-.26	(.03)
overweight	-.32	(.01)
loss of appetite	-.38	(.03)
low libido	-.25	(.04)

* CC = Correlation coefficient; SIG = statistical significance level

The following conditions had a positive but **not significant** correlation:
psoriasis, cheilosis, hair loss, rheumatoid arthritis, osteoarthritis,
Leuko-/Neutro-/Thrombocyto-penia, anemia, iron deficiency,
hemochromatosis, erectile dysfunction, excessive menstrual pain,
menstrual irregularities

I also tried collapsing the arthritis and joint pain responses but this did not change the results.

Same with collapsing the IBD/colitis/crohns responses.