

Sebastian Rushworth M.D.

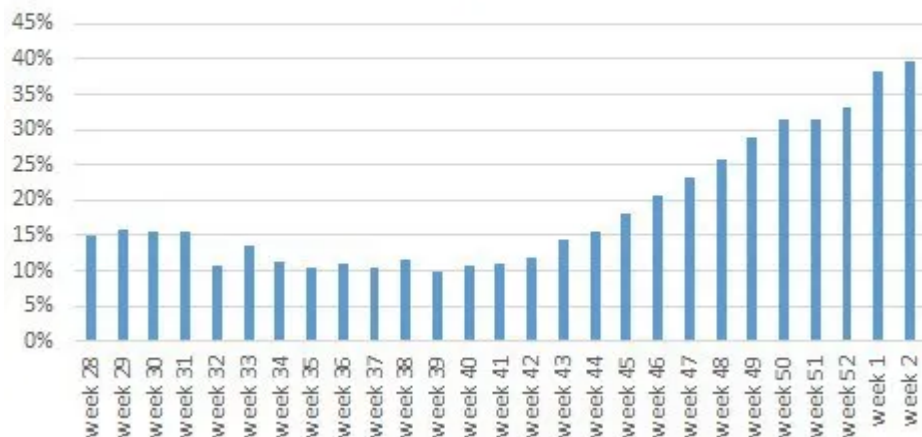
Health and medical information grounded in science

Here's a graph they don't want you to see



Here's a graph that doesn't get shown in the mass media, and that I'm sure all those who want you to stay fearful of covid don't want you to see. It shows the share of the tested population with antibodies to covid in Sweden week by week, beginning in the 28th week of 2020 (the first week for which the Swedish Public Health Authority provides data on the share of tests coming back positive).

Share of tested population with antibodies in Sweden



There is so much that is interesting about this graph. Like I said, it begins in week 28, in other words in early July, which is around the time the first Swedish covid wave was bottoming out. At the time, [I personally thought this was due to enough of the population having developed immunity to covid](#), but we now know that was wrong. Rather, it was due to seasonality – in other words, summer caused covid to disappear.

The proportion testing positive for antibodies was 15% in early July. It remained stable for a few weeks, and then started to drop, as we would expect, given that the rate of new infections was very low at the time. Your body generally doesn't keep producing antibodies forever after an infection, rather they wane. Of course, this doesn't mean immunity is waning, [as I discussed on this blog a while back](#). Although the actively antibody producing cells disappear, memory cells remain, ready to be activated at short notice if you get re-exposed to the pathogen.

After an initial reduction, the proportion with antibodies stabilized at around 10% in August, and stayed that way until October, when it started to rise, in line with the beginning of the second wave. And it's literally kept rising by a percentage point or two, every week, all autumn and winter so far. In the second week of January 2021, 40% of those tested in Sweden had antibodies to covid.

Funnily enough, mainstream media has so far shown relatively little interest in publicizing this astounding fact. I've been getting most of my statistics from SVT, the Swedish public broadcaster. They had been providing data on the share with

antibodies in Stockholm up to a month or two back, when that information discretely disappeared from their website. I wonder why.

I know some of you will respond that 40% doesn't mean anything, because the data isn't taken from a random sample. If all we had was one number, then that would be a valid point. But we don't just have one number. We have the number for every week stretching back six months. Any bias due to people preferentially getting tested after a respiratory infection that applies now, when 40% are testing positive, also applied three months ago, when 10% were testing positive. The trend is real, and cannot be denied.

Apart from that, there is another form of bias that will tend to make the proportion with antibodies seem lower than it really is. This is the fact that people who already know they've had covid generally don't keep re-testing themselves to confirm it. This group gets bigger and bigger as more and more people get covid, and this will eventually make the proportion with antibodies seem lower than it really is. So at some point, there is an inflection point. In the early pandemic, a larger share of those being tested will have antibodies than you would get from a random sample. In the late stages of the pandemic, a smaller share of those being tested will have antibodies than you would see in a random sample.

In the last few weeks the number of people being treated for covid in hospitals in Sweden has been dropping rapidly, as has the share of PCR-tests that are coming back positive. There is much discussion in the media about what the cause might be. Everyone seems to be very surprised. Is it because people are better at working from home? Or because people aren't traveling as much? Or because more people are wearing face masks?

No-one is discussing the obvious explanation – that so many people have now had covid, and have developed immunity, that the virus is having difficulty finding new hosts. In other words, Sweden's oddly controversial “herd immunity” strategy worked.

So, 40% of those tested have antibodies. And that likely underestimates the proportion of the population that is immune to covid, because antibody production

wanes much faster than immunity wanes, and because not everyone produces antibodies after infection, and because not everyone is susceptible to the virus in the first place.

At the end of the second week of January, 10,323 people had died of/with covid in Sweden. In fact, the real number is probably much lower. A recent [study carried out here in Stockholm](#) found that only 17% of those who supposedly died of covid in care homes actually had covid as the primary cause of death.

But let's assume 10,323 is correct, for the sake of argument. If 40% of Swedes have had covid, that gives an infection fatality rate of 0,25%. It's a little higher than [the global infection fatality rate determined by professor John Ioannidis](#), which is likely due to the fact that Sweden's population is older than the global average. But it's not much higher, and certainly not high enough to motivate the large scale harm imposed on us by the powers that be. That's why the fear mongers don't want you to see that graph. And that's why I hope you will help me spread it far and wide.

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Sebastian Rushworth, M.D. / 25 January, 2021 / Covid 19 / Antibodies, Covid 19, Sweden

156 thoughts on “Here’s a graph they don’t want you to see”

antoni

25 January, 2021 at 19:56

Could we know the sample size at each observation point?

Sebastian Rushworth, M.D. 

25 January, 2021 at 19:58

Sure, here’s the raw data:

<https://www.folkhalsomyndigheten.se/smittskydd-beredskap/utbrott/aktuella-utbrott/covid-19/statistik-och-analyser/antalet-testade-for-covid-19/>

Brian Steere

25 January, 2021 at 19:58

Are the tested antibodies specific to the ‘Sars-Cov-2’ viral definition?

I am all for the appreciation that fear of a novel viral extinction event was unwarranted – along with its reaction which ‘shapes’ our post Crash/Covid world order.

But while looking at disease, antibodies are by no means the first line of defence or as I would prefer resilience.

Mike

25 January, 2021 at 20:04

Thanks for the great article. I will share this.

Alison Morgan

25 January, 2021 at 20:04

This is a question, not a comment, and I apologize in advance if it's a dumb question, as I'm not a scientist. If antibodies wane over time, but memory cells remain, could we not develop a test to determine whether or not a person has memory cells against COVID?

Sebastian Rushworth, M.D. 

25 January, 2021 at 20:06

Absolutely. You can test for memory cells, but it's more expensive and complicated than testing for antibodies, so it's mainly done in research, not in clinical practice.

Anders

25 January, 2021 at 20:05

I have no objections to your analysis. It is interesting and probably ground for further investigation. But – please! – refrain from this “they” talk. Who are “they”? There is too much conspiracy talk out there on the internet anyway!

Sebastian Rushworth, M.D. 

25 January, 2021 at 20:07

It's not meant in a conspiratorial way. By they I mean the people who are intentionally trying to keep people afraid, in other words, politicians and media.

Bente Graae

25 January, 2021 at 20:09

Hi Sebastian – thanks for great posts here. I would have liked to share your post on my Facebook but it would have been better for me to share it if it had not had the message that the authorities doesn't want us to see this and that they want to keep us in fear. I would rather like to make it break as a “good news”. Yeah herd immunity works in Sweden. We are soon there so then we don't need vaccines. With the current form the post ends up with all the blames of being a conspiracy theorist. Also thanks for making me see the potential reason for why I don't have any antibodies. I went testing myself a couple of weeks ago together with my husband. He had it but I didn't. Now I think that I may have had it back in March and when he got ill during December as my daughter brought it home to us from England I would have expected that I'd get it too or alternatively would have antibodies. But neither I or my son got it though we were together all four of us all through the Christmas holidays. My antibodies might have declined since I had it, but I was still immune, right?

Heidi

25 January, 2021 at 20:15

John Ioannidis just published a paper with several other Stanford professors providing evidence that stay at home orders do more harm than good, supporting Dr. Rushworth's statement here regarding “the large scale harm imposed on us by the powers that be”.

Bendavid, E., Oh, C., Bhattacharya, J., Ioannidis, J.P.A., 2021. Assessing Mandatory Stay-at-Home and Business Closure Effects on the Spread of COVID-19. Eur J Clin Invest e13484. <https://doi.org/10.1111/eci.13484>

Nikolaos Karavidas

25 January, 2021 at 20:16

Dear Sebastian, could you please create a link to the website of the Swedish Public Health Authority where the graph is visible? Thanks a lot in advance and best regards. Best regards, Nikolaos Karavidas (Greece).

Anders

25 January, 2021 at 20:18

Well, “media and politicians” are a rather wide group (understatement!) and if saying “they” are intentionally trying to keep people afraid, is not a conspiracy, then I don’t know what is?

Sebastian Rushworth, M.D.

25 January, 2021 at 20:21

You’re right, it is wide. But at the moment all eight parties in the Swedish parliament are aligned in proclaiming what a severe deadly pandemic covid is. And that is largely the message coming out of mainstream media too. Very few are singing a different tune.

AhNotepad

25 January, 2021 at 20:18

Thanks for the information. I have a question, actually several. I saw a mention from a virologist who was annoyed about all the talk about antibodies. His position was viruses do not cause peoples' systems to create antibodies. I can't find this statement which I think was in Lockdown Sceptics, so I'll try to find it again. Is it as he states? Is there something different? How are antibodies detected? Is it a confusion between T-cells and antibodies?

Sebastian Rushworth, M.D. 

25 January, 2021 at 20:23

I haven't seen that article, but antibodies are created against viruses. For example, the way we diagnose hepatitis viruses is by looking for antibodies.

Flayer1

25 January, 2021 at 20:18

Where can a person in the US get that "cell memory" test? I'm willing to pay for it as I'm determined NOT to get the vaccine if I do not have this information.

Sebastian Rushworth, M.D. 

25 January, 2021 at 20:19

I put the graph together myself from the raw data available at the site I linked to higher up. Here's the link again:
<https://www.folkhalsomyndigheten.se/smittskydd-beredskap/utbrott/aktuella-utbrott/covid-19/statistik-och-analyser/antalet-testade-for-covid-19/>

Lucas

25 January, 2021 at 20:19

Thanks, but the figures are not representative. Stockholm is about 35% to 45%, but the rest of the country is more like 15% to 20%. After the first wave, the national figure was about 5% *, so your chart is overestimating it by a factor of 3. So the IFR in Sweden is not 0,25%, but about 0,75%, which seems plausible. Without the nursing homes, it is about 0,4%, which is also plausible. The Ioannidis figure is not applicable to western countries. *<https://medicalxpress.com/news/2020-05-stockholm-virus-antibodies-sweden.html>

Sebastian Rushworth, M.D. 

25 January, 2021 at 20:32

Actually, the number for Stockholm is 45% and for the rest of the country is 33%. So the rest of the country is a month or so behind Stockholm.

Anton Bakker

25 January, 2021 at 20:31

In the Netherlands they have been testing an aselect group of around 7000 blood donors for anti-bodies. They have been testing the exact same group over the last 6-9 months. The percentage is steadily growing by ~3-5% per month and was 15% at the end of November 2020. There is no data for December yet.

AhNotepad

25 January, 2021 at 20:32

Found it, it was not a virologist, but a professor Burns.

“Gordon Burns, a retired Professor of Cancer Research who has a BSc in Biochemistry, a Postgraduate Diploma and Primary MRCPATH in Microbiology, and a PhD from Cambridge with five years as a Postdoctoral Researcher in Immunology, writes:

The interviews published and the comments provided in the mainstream media on viral replication and the natural immune response are so utterly ignorant and such irresponsible misinformation that I feel obliged to comment. I will try to put things in lay terms.

First – contrary to public belief and propaganda on vaccines – viruses are not killed by antibodies. For the simple reason that – unlike bacteria and other living organisms – they are not living organisms and thus cannot be “killed”, whether by antibodies or anything else within the body.

Infectious respiratory viruses have an RNA core (for replication) and a protein coat. The protein coat consists of invariant structural proteins and the 'spike protein' that contains within it the small peptide that constitutes the cell-binding domain (CBD).

Most structural proteins are shared by viral groups such as coronaviruses.

Upon primary infection of mucosal and epithelial cells in the bronchial tract, the infected cells in distress display the viral proteins at their cell surface. Structural and spike. Cytotoxic T-cells recognise these foreign proteins and kill the infected cells. These viral proteins (structural or spike) are remembered by the T-cells which survive for (almost) life as memory T-cells.

Killed cells release viral particles that are excreted or infect other cells until the battle is won. Never to progress further.

Thus, in many cases, viral infections never proceed beyond this stage and T-cell immunity is retained. The only antibodies generated at this site are IgM and IgA antibodies.

Immunisation, by contrast, induces IgG antibodies at a distal site. These can be deleterious to primary infections.

If you like, I can extrapolate further on the IgG response, but readers should be aware of the primary response explained above.”

Sebastian Rushworth, M.D. 

25 January, 2021 at 20:36

Interesting, those things are all sensible.

dick van Vlooten

25 January, 2021 at 20:32

hi, do you have a source to go with this graph?

Sebastian Rushworth, M.D. 

25 January, 2021 at 20:37

I put the graph together myself. The raw data is here:

<https://www.folkhalsomyndigheten.se/smittskydd-beredskap/utbrott/aktuella-utbrott/covid-19/statistik-och-analyser/antalet-testade-for-covid-19/>

Thorsteinn Siglaugsson

25 January, 2021 at 20:33

Aren't there some random antibody studies that can be used for reference to figure out what the actual immunity level is?

Sebastian Rushworth, M.D. 

25 January, 2021 at 20:39

Unfortunately there don't seem to have been any done recently. The last ones that were published were all done during the first wave, in March to May. I haven't seen anything more recent.

AhNotepad

25 January, 2021 at 20:48

Which of the various antibodies is supposedly doing anything to a virus infection? If it is the IgG antibodies, I understood they are produced by various pathogens, so is there something special about the covid antibodies?

theasdgamer

25 January, 2021 at 20:49

Specifically, “viral” antibodies are created against cells with spike proteins in the cell membrane, right?

me oliveira

25 January, 2021 at 21:04

AhNotepad,
You gave us a very nice, powerful and clean explanation. A lesson.
God bless you.

Fast Eddy

25 January, 2021 at 21:21

Fantastic information!

No masks. No lockdowns. And yet Sweden is not collapsing.

It's not even in the top 20 of deaths per capita from Covid (drooping from position 5 since adopting Great Barrington)

Sweden's Covid (flu) policy is a disaster!!! Maybe the WHO needs to hire some actors to feign falling dead in the streets (as was done in Wuhan?). I strongly advise a quarantine that involves welding doors shut so the Covid Zombies cannot escape. What is WRONG with you people — get with the program!!!!

Meanwhile, much of the world is not only locking down and strapping diapers to their faces — running from their own shadows in abject fear — — they want more!!! Well they are getting more — entire countries are effectively in a martial law situation now...

Cut!

Great works fellas — that's a wrap for today. Let's all be on the set for 7am tomorrow.... stay tuned for more behind the scenes action from the filming of the Covid Zombie Apocalypse.

Very obviously... Covid is being used as cover something... it is really just a bad flu and it would soon be gone if the world followed Sweden.... so what is it that the PTB fear so much to use Covid as a cover to shut down and ultimately end civilization?

Peak Oil Will Not Be Televised (hum along...)

<https://youtu.be/Y6lx4QbGmSM>

Gary Ogden

25 January, 2021 at 21:23

Thank you, Dr. Rushworth. Most interesting.

Charles

25 January, 2021 at 21:36

would it be t cell or b cell? a specific t cell? tks

Sheldon Nolan

25 January, 2021 at 21:36

Hi i really appreciate the information its so good to know more people are putting the right information out their.

Sheldon

Remz

25 January, 2021 at 21:37

I would bet my money, atleast 80% has memory cells against (I assume 'memory cells' are the cells producing antibodies that can recognize RNA from previous contact/infection?)

AhNotepad

25 January, 2021 at 21:52

Remz, when the "antibodies" recognise the RNA, what do they do? The RNA isn't alive so they can't "kill" it. It get's inside cells, where the T-cells should be able to handle it, so what does an antibody do?

Paul Ralph

25 January, 2021 at 21:53

A couple of questions.. 1) if children have few ACE2 receptors plus killer cells therefore little to no Covid – why are they so susceptible to influenza? 2) Have influenza and forms of pneumonia really disappeared? Has proper sampling been

carried out? We've been hammered for not anticipating the winter resurgence, will take it on the chin – but is it really all Covid?

So pleased to see these data re antibodies. However, governments determined to prolong the crisis at all costs (to their people)

Anders

25 January, 2021 at 22:01

Sebastian, I appreciate all kinds of information and input on the subject. And when you keep to informing that is just fine. But when you claim that politicians and media – all in a big group – are doing what they do *intentionally* you are NOT claiming science. And that's when it becomes conspiracy theories. Witch-hunts in the 17th century might have had the intention to make people afraid. OR maybe because – due to bad knowledge – they really believed in it. Information and knowledge in the end made it stop. So keep up the good scientific work, and go on informing. But don't mix it with conspiracy ideas. Nothing will get better if people start following false prophets on the internet.

Michael

25 January, 2021 at 22:16

This is a nice article. Thanks!

One of the biggest failures during this pandemic has been the inability to generate a robust estimate of the IFR that is widely accepted. Early estimates had it at over 1%, with many people putting a 'best case scenario' at around 0.6%. Unfortunately I fear that most political decision making is still done using this figure, so any talk of herd immunity is almost considered blasphemy.

I have still seen no data that contradicts an IFR of around 0.25%.

Dr Peristeris

25 January, 2021 at 22:33

Thank you for your work Dr Rushworth.

“A recent study carried out here in Stockholm found that only 17% of those who supposedly died of covid in care homes actually had covid as the primary cause of death.”

Yes, and the same study found the covid-19 was a contributing cause of death in 75% of the cases.

Tim Fallon

25 January, 2021 at 22:45

If antibodies fade relatively quickly wouldn't it mean that many people who have had sars-cov-2 and are now immune wouldn't show up in any antibody tests later on?

Therefore herd immunity could well be higher?

Sebastian Rushworth, M.D. 

26 January, 2021 at 06:04

Yes. We saw the proportion with antibodies decline during summer, so antibodies do clearly decrease quite quickly in the population when the virus disappears. That doesn't mean immunity declines. There are probably a lot of people infected in the first wave who are still immune but who no longer have antibodies.

Mike T

25 January, 2021 at 22:48

True many people exposed to the virus won't even get to the point where they develop antibodies as it won't get past mucosal barriers etc.

Raymond

25 January, 2021 at 22:49

I have only just started reading your article and have reached the point when you say that your earlier assumption that a high percentage of the population had achieved immunity by the summer was wrong. It is just so refreshing and so unusual to hear someone prepared to re-examine their earlier positions and to say “no, not quite right on that one”. Science doesn’t always have to advance one funeral at a time after all.

Tim Fallon

25 January, 2021 at 22:49

Governments and the MSM all over the world are clearly colluding to generate maximum covid19 fear with a view to pushing the rushed experimental vaccines on us all, this is no conspiracy theory, this is fact.

AhNotepad

25 January, 2021 at 22:55

Anders, you may not believe in conspiracy theories, but in the UK at least, it is not theory, it is fact. SAGE have been using fear as a tool from the start. Look up “fear” in <https://journals.sagepub.com/doi/full/10.1177/0163278720983416>. Fear is their main tool, an emotion. Is this informing and treating people as adults? No. We have to stand on blue circles in supermarkets. Don’t believe me? I was told off today when I went shopping because I was not standing on one, even though the nearest person in front of me was 4m away, and the till operator was behind a screen. That wasn’t good enough, I was disobedient as I wasn’t standing on the effin blue circle. Not a conspiracy theory, the government is now using shops to employ thugs to frighten, and in some cases, they assault non compliant customers. Its a conspiracy – FACT.

spanishbride

25 January, 2021 at 23:22

Hi from NZ and The BFD. May I please have your permission to republish this article with full attribution and a link back to your site? We have previously re-published one of your articles (thank you) and would love to do so again.

Sebastian Rushworth, M.D. 🧑

26 January, 2021 at 06:11

Sure, I'd be happy to let you re-publish the article.

Paul M

25 January, 2021 at 23:57

UK Figures to December 2020 here

<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/articles/coronaviruscovid19infectionsinthecommunityinengland/antibodydatafortheukjanuary2021> very similar shape of graph bottoming out in August. Only the percentage positive range is much lower from 5% in August to around 12% in December.

Robin Taylor

26 January, 2021 at 00:03

You say that “In the last few weeks the number of people being treated for covid in hospitals in Sweden has been dropping rapidly, as has the share of PCR-tests that are coming back positive” adding that “Everyone seems to be very surprised”.

I would have thought that 'they' would put it down to the greater restrictions that were recently implemented?

drandywett

26 January, 2021 at 00:12

The timing of vaccination introduction will be interesting to mark on this graph as time moves on

Mike B

26 January, 2021 at 00:25

On the subject of conspiracy fact please review this Lecture by Marc Van Ranst, Belgian Flu Commissioner, at the ESWI/Chatham House Influenza Pandemic Preparedness Stakeholders Conference on 22 January 2019

<https://www.youtube.com/watch?v=UZMr7AELojQ>

If analysing this presentation doesn't raise your suspicions then may I draw your attention to Dave Cullen's excellent work which contains some helpful contextual material.

<https://www.bitchute.com/video/Hmxo720ccw4V/>

Vidar Johansen

26 January, 2021 at 02:16

Hi Sebastian! Thanks for pointing out the obvious with reasonable explanations. You do great work! Keep it up. I have a question, regarding these so-called mutations from UK and South-Africa. Have they specific PCR tests for these or do they test in a different way to detect these alleged mutations we're supposed to be so afraid of?

Sebastian Rushworth, M.D. 

26 January, 2021 at 07:02

PCR can't detect different strains. They use genome sequencing to do that.

Hanna

26 January, 2021 at 02:19

Thank you very much for all your information!

Khurram

26 January, 2021 at 02:26

<https://www.immunology.org/public-information/bitesized-immunology/pathogens-and-disease/immune-responses-viruses>

It seems antibodies are first line of defence before cell is invaded by virus

lapogus

26 January, 2021 at 03:44

Yes. Most T cell studies concluded that 50-80% of people had prior immunity or 'T cell cross reactivity'. IIRC only 17% of the passengers on the Diamond Princess cruise ship tested positive – same ventilation system, many of these shared a cabin with their partners who did develop symptoms. T cell immunity is the elephant in the room that no governments want to talk about because it makes a nonsense of the claim that everybody has to be vaccinated.

lapogus

26 January, 2021 at 04:03

The fact is that politicians and ‘experts’ in the UK have conspired to frighten us – and the media have been very happy to join in as fear sells newspapers and increases ratings. All detailed here: <https://evidencenotfear.com/how-sage-and-uk-media-created-fear-in-the-british-public/> It only takes takes a few people to conspire and the idea that politicians and officials never do this is naive to say the least. ‘Conspiracy theorist’ is an ad hominem label used by politicians and the media to try to discredit people – it’s lazy and underhand tactic which shouldn’t be necessary if they have a good case or evidence.

Dirk

26 January, 2021 at 04:05

Where did you find the data on antibody testing? Is there information on how many such tests are been done and what the criteria are for conducting a test?

Paul

26 January, 2021 at 07:51

Anders... please.. this is third time you commenting like this on this post. Sebastian presented data (government data), but he feels “they” media/politicians are pushing unnecessary fear constantly towards ordinary people. We live in a open society where people are allowed to raise there voices and he did it. I personally think he always presented sound data and he is entitled to express his worries and concerns. I totally agree with him that “they” are pushing fear and I think many feel the same way. So don’t tell him what he should and should not do, that’s not polite and also not good behavior. This data is very interesting and shows that closing down a society isn’t the best way forward. Also this gives our society the data to trust that “we” are actually doing the right thing... because we have to get back to normal... this type of lockdowns are making people’s mental health fastly deteriorate and common sense is quickly lost and that is something you and I and all of us should be worried about. Plus people need to get back to work. Small businesses are important and many peoples livelihood depend on it.

Foggy

26 January, 2021 at 09:22

Western democracies can not use force to contain lockdowns and behaviour. Instead, fear is the weapon of choice. Fear is created by manipulation of messaging and data. Fear is maintained by closing down channels of debate – observe how “comment” forums have been “temporarily” closed down for months on end by the BBC, MSN and yahoo.

The media also skips between cases and death trends depending upon which shows the worst trajectory. Boris Johnson identifies a “deadlier” strain which becomes a headline despite minimal scientific underpinning for the claim.

It’s very easy to see why people can read “conspiracy” into what is actually a blatant and unbalanced propaganda campaign.

AhNotepad

26 January, 2021 at 09:38

Khurram, I’m now confused. I thought T-cells were mobilised first, and only if that failed were antibodies manufactured.

Tim

26 January, 2021 at 09:46

Sebastian, this may be 180 degrees wrong, in which case I apologise, but I mention it on the offchance that it might spark useful thoughts: might it be possible that, in a population demonstrated to have had a long-term exposure to Covid, mass-testing showing a low level of antibodies actually suggests that the prevalence of the virus at that point in time is also relatively low? (i.e. that if one believes that B cells re-activate antibodies in response to a step-up in societal viral presence, then mass-

testing for IgM/IgG (as Andorra did last spring) is a coincident indicator of the prevalence of virus circulating at that point?

Sebastian Rushworth, M.D. 

26 January, 2021 at 10:09

Interesting thought. I think in a population that has herd immunity and has had it for a few years, the proportion with antibodies is likely to be quite low, and remain low, because the virus is circulating at a low level due to widespread immunity, and most people aren't exposed frequently enough to ramp up antibody production again. That's just my guess.

Jhomar

26 January, 2021 at 10:07

I suppose we shouldn't shorthand it and use "they" and just use the government and media. I myself am prone to this.

spanishbride

26 January, 2021 at 10:07

Thank you very much Sebastian.

Dick

26 January, 2021 at 10:15

Thank you very much.

I do agree with the remark already made...wording here, in this good news, is extremely important.

I did share your fabulous tweet, however somewhat reluctant because of the

sentences in it that mention a 'they' and 'I wonder why'.

In all respect, these specific phrases can be interpreted as a kind of conspiracy thinking.

I really appreciate your take on things and your various neutral analyses of research. Please please stay away from conspiracy thinking without proof.

My 5 cents...

Anyway:

Keep up your good work

Stephen McGrail

26 January, 2021 at 11:09

Dr Rushworth,

For the sake of argument I'm willing to assume that the 40% figure is roughly accurate (though I don't believe there's an adequate empirical warrant for this assertion given the absence of a random sample of the whole population). But even if this is accurate there are many uncertainties and questions re: your assertion that the Swedish 'herd immunity' strategy "worked".

40% of population being immune is insufficient for herd immunity given ~70% need to acquire resistance (perhaps 80% is needed). So, Sweden may only be around half way there with a high-ish death count. Similar to how seasonality was missed, you ought to consider other variables that may help to explain the change (rapid decline in hospitalisations & share of PCR-positive test results).

One thing to consider is that the herd immunity threshold is dynamic in relation to public behaviour and related public health measures. 40% immunity likely wouldn't prevent another future epidemic wave if policies and behaviours get relaxed in the future.

Olof Erik Liljeström

26 January, 2021 at 11:26

Thank you

Johannes Gmeiner

26 January, 2021 at 11:40

Hi Sebastian, thanks for this interesting post! I have a question that might be a bit offtopic, but it's also related to herd immunity: In a press conference of the austrian government, the Oswald Wagner of the med-uni vienna has claimed that in Manaus there has been another wave of covid-19, even though 75% of the population has been infected already. Thus herd immunity "wont work". They believe a new mutation is responsible for this new wave. Do you have any thoughts on this?

Sebastian Rushworth, M.D. 

26 January, 2021 at 12:06

Most likely the study finding that 76% were infected in the first wave was wrong. Another study covering the same period found only 14% had been infected in the first wave.

Mike

26 January, 2021 at 12:12

If things are being overplayed, why are there 38000 people in hospital, and many more not even getting there?

Paul

26 January, 2021 at 12:59

As a student I learned that antibodies can bind to surface proteins of the virus so that the virus can't enter the cell. Call it killing or whatever. A virus that can't enter a cell is not really virulent anymore.

Lucas

26 January, 2021 at 13:02

data source for the 33%? This may be including Stockholm area, so the rest of the country would still be in the 20% range. Swedish IFR definitely in the 0.6% to 0.8% range, as everywhere else in Europe/USA. Also, there is always a 4 week lag between infections and deaths, Sweden is famous for its lagging death count. And infection rate in seniors probably lower than in younger people, which again means real IFR higher than your estimate.

Sebastian Rushworth, M.D. 

26 January, 2021 at 13:06

No, the 33% is excluding Stockholm. I've posted the link higher up in this thread a couple of times.

Paul

26 January, 2021 at 13:24

What should he write instead if they?

Calantina

26 January, 2021 at 13:44

This is naive haha. 100% of people with HIV create antibodies to HIV. Doesn't mean they work and effectively suppress the virus or stop it transmitting – hence the

epidemic and lack of effective vaccines lol 🤔

Johannes Gmeiner

26 January, 2021 at 13:54

I hope you're right, thanks!

Francisco G Nobrega

26 January, 2021 at 16:08

A VERY valuable post! And one that points to the natural solution – herd immunity – to this badly managed pandemic in terms of early intervention – the incredible anomaly of waiting for a disease to get worse before care starts.

SalkiN

26 January, 2021 at 16:30

What do you do, if you are the person in charge to handle a catastrophic event like a “killer-virus-pandemic”?

Yes. First, you try to calm down everybody, who is involved in it. You don't go out shouting: “We all will be killed!”

But what was done right from the start? Horrendous pictures, horrendous death counts, horrendous whatever.

And what was our “famous” German virologist, Drosten, telling us now? There will be 100.000 new infections daily in the summer!

How on earth does he know this? Six months ahead? At the present time, when vaccination frenzy commences?

No, there is no conspiracy. This is the bloody truth.

So, we need to wake up and get our fundamental human rights back.

They can frighten us, but they can't break our free will.

Love has always been around. And will be there forever. We need to look into our inner self. Good luck ...

Anders

26 January, 2021 at 16:46

AhNotepad: Merriam Webster defines “conspiracy theory” as “a theory that explains an event or set of circumstances as the result of a secret plot by usually powerful conspirators”. A state that uses capital punishment for homicide might argue that it prevents people from killing each other because of the “fear” of dying yourself. We might argue whether this is efficient tactics, but it is by no mean a “conspiracy” – it is open to anyone the see what is going on. If authorities use fear to help people avoid spreading a deadly decease, it must neither be a conspiracy. The most simple explanation is that politicians do what they have to do to seem doing something active. And the press do what they do because some view sell better than others. There is no pedophile ring in a pizza cellar i Washington running those things... And no evidence that there is any other group of powerful conspirators either.

Paul: I do really value the work Sebastian is doing. And that is why I think he should avoid conspiracies because he “feels” something. It just puts stains on his scientific work.

jenshappel

26 January, 2021 at 17:50

Dear Sebastian,

No-one is discussing the obvious explanation – that so many people have now had covid, and have developed immunity, that the virus is having difficulty finding new hosts. In other words, Sweden’s oddly controversial “herd immunity” strategy worked.

Well this is impossible. By definition of WHO herdimmunity can only be reached by vaccination. So you must be wrong.

Please help me out. Who was the inventor of the vaccine against the spanish flu. Google can't find it.

Beside the blasphemy against the WHO ☺ again a nice article.

Please continue disbelieving and keep following the religion called science

Regards

Jens

Thorbjørn Willoch

26 January, 2021 at 17:56

That is the correct way of doing it. The numbers Sebastian comes with are worthless

jenshappel

26 January, 2021 at 18:00

Dear Sebastian,

one more serious comment. Could you describe how the descision is made to test somebody. Is this done regulary after an infection at hospital, do people just come to certain testing centers and do a test at free will. That would help to get a better picture how representative the result is.

By the way I already spread your information. Today I published an article about a comparison between Sweden and Germany. Including a link to your website.

Maybe that is of interest for your German readers.

<http://www.deliberationdaily.de/2021/01/corona-schweden-deutschland-2/#comment-207786>

Regards

Jens

Sebastian Rushworth, M.D. 

26 January, 2021 at 18:29

Thanks Jens. The antibody tests happen entirely at the discretion of private citizens. They book a time on-line, and then they go to a lab and leave a sample. No health care providers are involved in the decision.

Mike

26 January, 2021 at 18:23

I am sorry but this is confusing for those with the tiniest knowledge of statistics. The population of interest would be the residents in Sweden. There is no such thing as a tested population since the persons being tested are different each week. Hence the diagram would better be labeled as 'Share if tested individuals with antibodies', And you already pointed out that this weekly sample is not random. That's right, it is a sample, not the population.

Thanks for interesting posts though!

Ken Garoo

26 January, 2021 at 18:34

“In other words, Sweden’s oddly controversial “herd immunity” strategy worked.”

It is not a strategy, it is a natural fact resulting from individual variation in immune response arising more effectively in heterogenous populations.

Kermack, William Ogilvy, and A. G. McKendrick. 1927. “A Contribution to the Mathematical Theory of Epidemics.” Proceedings of the Royal Society of London. Series A 115 (772): 700–721. <https://doi.org/10.1098/rspa.1927.0118>.

Sebastian Rushworth, M.D. 

26 January, 2021 at 18:43

I know, I was being intentionally tongue in cheek. Sweden never had a herd immunity strategy, in spite of claims to the contrary in international media. Instead there was a recognition that the virus would continue to spread until herd immunity was achieved. The main difference with other countries was that the decisions during the early part of 2020 were being made by epidemiologists, who were looking at the overall effects on public health of all decisions they took, not just myopically looking at covid statistics.

Mia

26 January, 2021 at 21:55

The number of People being treated for covid in hospitals in sweden is not dropping. Where do you get this from? Quite the contrary, this second wave has hit harder.

The intensive care unit has fewer patients now than april, but not a significant difference. But the inpatient care is significant higher now than before. Heres some statistics: <https://www.socialstyrelsen.se/statistik-och-data/statistik/statistik-om-covid-19/sammanfattande-statistik-over-tid/>

Kind of wish you were right tho, been hoping our strategy has been the way to go. But sadly we too have a lot of flaws in our way of handling this!

Sebastian Rushworth, M.D. 

27 January, 2021 at 05:56

On the 5th of January, there were 3,022 people in hospital with covid in Sweden. That number has now dropped to 2,132. That is a 30% reduction in three weeks. Here's the link: <https://www.svt.se/datajournalistik/corona-i-intensivvarden/>

Mia

26 January, 2021 at 22:36

I might have misunderstood though, since english isnt my first language. The numbers are indeed going down since week 2. But i dont see this significant at all, and I wouldnt feel less scared if media showed this. It was the same steep from may 6 -may 20. And it was very cold here in may. It snowed.. so no summer weather then.

Sebastian Rushworth, M.D. 

27 January, 2021 at 07:01

No-one knows what causes seasonality, whether it is due to temperature, or humidity, or sunlight, or something else. But we do know that most respiratory viruses do behave in a highly seasonal manner, and that is especially true of coronaviruses. And the seasonal effect isn't binary, like an on-off switch, it is a continuum – respiratory viruses begin to disappear in spring, and are at their least prevalent in mid-summer.

Gareth Hawker

27 January, 2021 at 09:31

This looks excellent when Sweden is compared with the UK, but critics prefer to compare Sweden unfavourably with its neighbours, Norway, Denmark and Finland. Euromomo shows that those countries have had close to zero excess mortality, whereas Sweden's figure has been much larger, about half the UK's. Would you be able to comment on why Sweden seems to have done so poorly compared with its neighbours?

Sebastian Rushworth, M.D. 

27 January, 2021 at 09:35

I wrote about this a while back:

<https://sebastianrushworth.com/2020/12/06/why-did-sweden-have-more-covid-deaths-than-its-neighbors/>

Jozef Kis

27 January, 2021 at 10:03

Loved reading your reply and would like to know more . Thank you Jozef Kis

Brian Steere

27 January, 2021 at 11:13

Am I right in that 'hospitalised with covid' or treated in hospital for covid, includes all who for whatever reason are admitted into a hospital, and in the process of which tested and aggregated as a 'positive covid case'?

I regard this sort of deliberate vagueness as obvious from the start but those who are reacting in fear, cannot see it. While those invested in promoting the narrative of fear for their own reasons do not want it to be seen.

These two groups – the narrative management, and the fearful seeking protection, together operate a mutual dissociation from relational honesty. I see this as a protected investment in a reality (or identity) that lacks foundation or substance, no matter how much fear, funding and sacrifice is directed to establish or feed it.

AhNotepad

27 January, 2021 at 11:43

Brian, this could be why there are so many “cases”

<https://www.globalresearch.ca/your-coronavirus-pcr-test-positive-you-still-might-not-have-covid-19/5735461>

Stephen McGrail

27 January, 2021 at 13:02

A further brief comment (in addition to my one above) which indirectly raises questions about the graph and key inferences you're drawing from it (e.g. about the IFR for COVID) is that the data in other countries suggests the IFR for COVID is unlikely to be 0.25%. The myopic focus on Sweden is potentially problematic, especially given the poor quality data that you are working with.

For starters 0.32% of New York City has already died from COVID and their cases and deaths have been rising again over the past couple of months suggesting that herd immunity has not been achieved there.

Or consider the UK: 0.15% of the UK population has thus far died from COVID and, prior to the third lockdown, there was no sign of a significant amount of immunity building up to begin to suppress the epidemic (e.g. similar to percent you claimed for Sweden).

I recognise there will be differences across different populations, but many places suggest a higher IFR (perhaps ~0.5 – 0.8%)

Joes

27 January, 2021 at 13:48

Very nice, thank you!

Paul

27 January, 2021 at 13:50

@Stephen McGrail: What about the Ioannidis study? I mean, this is Stanford, and Ioannidis is one of the most respected scientists worldwide. I don't know whether his figures are absolutely true. However, we can consider it serious data, can't we?

Stephen McGrail

27 January, 2021 at 14:49

Paul,

Yes we can though people tend to simplistically cite the 0.23% IFR figure from that paper and fail to make clear that: (i) the 0.23% figure is the median IFR for COVID-19 derived from his dataset of seroprevalence studies; and (ii) many other epidemiologists who are studying the COVID-19 IFR have pointed to important issues with many of the seroprevalence studies he relies upon (e.g. one concern is poor and/or inappropriate samples for estimating population-wide prevalence), along with other aspects of his data and overall methodology, which they contend are likely mean that his analysis will under-estimate the IFR for COVID-19.

So, rather than appealing to authority, like any study we should carefully review the data and methods, etc, and recognise that it's just a single study based on data of variable quality, and which uses a methodology that other epidemiologists are highly critical of.

We ought to avoid what's been termed "single study syndrome" and, instead, consider the conclusions of multiple relevant studies.

Paul

27 January, 2021 at 15:31

@Stephen McGrail: I am absolutely with you. And one swallow does not make a summer. Ioannidis made very clear, that they found a huge variance. However, given the fact that politicians shut down almost the whole world, this seems to me a minor issue. In my humble opinion, we focus too much on how dangerous Covid-19 really is and not enough on the damage caused by the "therapy".

For Germany it's hard to see any significant excess mortality at all. But what exactly is significant when it comes to yearly mortality rates? I checked the numbers for the years 1950 to 2020. The graph looks like a sine wave showing a peak in the mid 70s and very low rates around 2005. Since 2010 the mortality rate has steadily increased. 2020 is pretty much exactly in the middle. Please, see for yourself:

<https://i.imgur.com/p2GoZSd.jpg>

Data are not changed or corrected in any way. This is original data from our authorities.

Does this make Corona a joke? No, not at all. But I really can't see a catastrophic pandemic event. We could discuss the effect of lockdowns. Evidence is very weak. But that's not my point. The graph might put things into perspective, I hope.

Hans Eriksson

27 January, 2021 at 15:42

Part 1. I believe your 40% estimate is wildly optimistic. Why? You can only know the actual infection rate if you test a randomised set of people symptoms or not. That

was done twice with a few thousand people in April/May by FHM when they still were trying to prove that there was a high level of immunity in the community. But there wasn't so they gave up. However it is done in the UK by the ONS. In the latest test ending 16th January they had done 493,809 swab tests and found a current infection rate of about 2%. Follow this link

<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurveyspilot/22january2021#number-of-people-in-england-who-had-covid-19>. You can also download all

historical data, they started on 26th April 2020. See tab 1d in spreadsheet. There we find 7,027,300 total infections, or slightly over 10% of the UK population. Follow this link

<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/datasets/coronaviruscovid19infectionsurveydata>.

Hans Eriksson

27 January, 2021 at 15:44

Part 2. Has the UK been “seeded” to the same extent as Sweden? Probably higher given the higher death rate per capita. One can also elegantly put to bed the long outstanding argument about Infection Fatality Rate – 100,000 have sadly died, means 1.5%. Don't forget Long Covid with estimated 150,000 cases in Sweden, or 15% of the estimated 1 million infections based on the ONS study, but applied to the Swedish population. You propose this pandemic should be left to run freely? Could take 10 years with 1.5 million with long covid and 150,000 dead. That's a big cost for a society. Instead follow the lead of Taiwan, Vietnam, Cambodia, Rwanda, Australia, New Zealand and a few others. Stop the disease as early as possible, and be diligent in testing, tracing and isolation. Vaccine is now coming.

Hans Eriksson

27 January, 2021 at 15:44

Part 3. The fall in infections seen now in Sweden are thus NOT because of some immunity – but because of the new restrictions that have been put in place. I think you should leave this sort of analysis to those who have the requisite education i.e. PhD in immunology, virology and mathematical statistics, and experience. Flaunting incorrect information is risky in a pandemic as it MAY impact people's behaviour causing unnecessary further spread of the disease with increased health care load and also long term health problems and ultimately morbidities.

jenshappel

27 January, 2021 at 16:13

Hi, could you give a source for the 150.000 Long Covid Cases? The study I know showed 2.5% with some symptoms after 90 days.

The 2.5% had been the result by asking the people with Covid if they still have issues. There was no reference cohort that had been asked the same question, so the 2.5% are obviously more on the high side. After 90 days the study stopped. So no one knows what the result would have been after 120 days.

But for the moment lets assume 2.5% is correct. That would mean 6. Mio. Swedes had Covid-19. That would be roughly 60%. That number is higher than der share of test with positive antibody result.

So either you number of 150.000 is way to high or the share of immunity is already much higher in Sweden.

Regards

Jens

Hans Eriksson

27 January, 2021 at 16:37

There was a Novus investigation that found 150,000 in Sweden with long covid. Referred to here in summary. <https://www.svt.se/nyheter/inrikes/statscheflakaren-tror-inte-det-finns-150-000-langtidssjuka-mycket-hog-sifra>

Gareth Hawker

27 January, 2021 at 17:27

Thanks for the reply. I mentioned it in a conversation on Twitter, and tweeter responded with some very informed comments. I wonder what you make of them?

<https://twitter.com/GarethHawker/status/1354166291561668609>

AhNotepad.

27 January, 2021 at 18:24

Stephen, you cannot draw conclusions from much of the publicised data about covid deaths. 1) you don't know exactly what people died of. 2) even with test results the test data is so bad given the number of cycles that many of the claimed cases were probably not valid. 3) Given most of the western countries are attacking their own people, how can you trust anything, let alone data.

Anthony Blighe

27 January, 2021 at 18:27

“Here's a graph they don't want you to see” is such good clickbait, but I agree, much better to keep it as “here is some interesting data” rather than a blame game. I think perhaps some people over estimate our species' ability to conspire and underestimate our ability to make really big cock-ups. This is exacerbated by group-think and the wrong incentives, such as the need to sell newspapers.

AhNotepad

27 January, 2021 at 18:40

Hans wrote *“Part 3. The fall in infections seen now in Sweden are thus NOT because of some immunity – but because of the new restrictions that have been put in place. I think you should leave this sort of analysis to those who have the requisite education i.e. PhD in immunology, virology and mathematical statistics, and experience.”*

Have you evidence that lockdown restrictions have had ANY beneficial effects? I would not believe the analysis reported in MSM since it is generated by mostly modellers and behavioural psychologists. Their main intent is to cause fear.

Also read <https://tomwoods.com/death-by-lockdown/>

Hans Eriksson

27 January, 2021 at 18:57

AhNotepad wrote: “Have you evidence that lockdown restrictions have had ANY beneficial effects?”

We know that countries that stopped the pandemic early Taiwan, South Korea, New Zealand and Vietnam have come out on top with healthy economies and healthy people. Lockdowns are needed for those countries that were stupid enough not to understand the seriousness, but they were done too late. Lockdowns aren't the solution, they should be used to slow the spread so that test, trace and isolate can be done.

AhNotepad

27 January, 2021 at 19:08

Hans, Malcolm Kendrick has just uploaded an article on lockdowns. In it he lists many factors to take into account to work out the interactions that would affect

outcomes. The number of possible interactions is at least 1.09×10^{28} . have a look at the article

Angelo

27 January, 2021 at 19:14

Part 1

@ Hans Eriksson: please, could we stop say that the fall in infections is CERTAINLY due to restrictions like there is not even a doubt about it? There is nothing scientific about this sentence. If you want to be more specific please enlighten us about what restrictions, cause saying “restrictions” in a vague and generic way, as I said, is certainly not scientific. And the fact that it’s not a certain thing is confirmed by the fact that each country is following its own path and there is not a sure way of handling the pandemic and making cases drop.

To me it seems just a correlation without a clear and incontrovertible causality. Why do you think cases fell during Spring even in Sweden, even without restrictions?

In Austria for example there have been a lot of restrictions since the end of October 2020 (at last they decided a curfew of 24 hours since 27th December until 7th February...24 hours a day, think about that...), and cases dropped.

In Switzerland until Christmas restaurants, bars, museums, schools were open and, guess what, cases and deaths dropped anyway and almost at the same time, between November and December.

These two countries are very similar, confining, with pretty much the same population (but Switzerland population density is double of the Austrian one), but, guess what, since November 2020 they have had pretty much the same number of Covid deaths (6.800 in Switzerland, 6.400 in Austria).

Angelo

27 January, 2021 at 19:14

Part 2

@ Hans Eriksson: also maybe you're not aware that Argentina and Peru imposed a lot of restrictions for many months (from March 2020 to October or something like that) and, guess what, they ended up with a number of Covid deaths per population bigger than Brazil. And cases rised up even in July, during lockdown, and dropped only during September. So where is the correlation between restrictions and fall in infections? Not saying that Brazil "strategy" was correct, the point is that too many examples show us that lockdowns are not as effective as you claim they are.

In Italy since November we divided territory in 3 zones, with 3 different levels of restrictions. And, guess what, cases dropped in all the 3 zones, maybe with more restrictions they dropped a bit faster but it's not a big difference.

So please, let's not forget that correlations doesn't always mean causality. Since in this matter there are a lot of counterexamples that show us that restrictions are not always as effective as you claim they are.

Paul

27 January, 2021 at 19:33

@AhNotepad: Again, Ioannidis from Stanford couldn't confirm that lockdowns provide significant benefits. At least, let us be fair and sound. While I don't believe in lockdowns, I cannot be 100% sure that they are useless. Too many factors come into play. But how can you be sure that lockdowns DO work?. Again, too many aspects have to be considered. South Korea has a very young populaton. This might change something, don't you think. Or let's talk about China. The virus just disappeared after less than three months? Only 5000 Covid-related deaths in a population of more than 1 billion? Because the lockdown worked so well? I wouldn't say it's absolutely impossible. But highly unlikely it is. Germany did great – with a lockown. Switzerland did not so great – with a lockdown. Sweden did ok – no lockdown. French did not ok at all – with a very strict lockdown. The french border is 20 miles from where I live. No hotspot at all on the german side. How would you explain that? We all should probably ask more questions and give less answers.

EB Hart

27 January, 2021 at 22:22

Luxembourg, Andorra, Denmark, Iceland and Diamond Princess cruise ship: all places where entire populations were tested, in some cases multiple times, indicate at least 0.5% of those infected die, higher where populations are elderly, obese, have respiratory or blood clotting comorbidities or are Vitamin D deficient.

Ann

27 January, 2021 at 22:43

You mean these prophets? <https://archive.org/details/og-event201>

Because I agree Klaus Schwab is not elected to be our feudalmaster. He is falsely leading this disaster.

Ann

27 January, 2021 at 22:47

<https://youtu.be/-LToSnz8A4>

Paul

28 January, 2021 at 07:54

Do you have links to the original data for these countries? Or is this “data” coming from the media? The Diamond Princess seems to be an argument for the opposite. This was an worst case scenario with a lot of old people locked down for weeks. Even an IFR of 5% would be ok for me. However, we need answers to the question: Why does the IFR vary so much between countries and even for the same country. It is very unlikely that the virus itself is very deadly in Bergamo but not in Palermo.

David

28 January, 2021 at 09:44

<https://www.timesofisrael.com/experts-say-serology-tests-unreliable-as-immunity-doesnt-require-antibodies/>

Paul

28 January, 2021 at 10:54

@David: This might be true or not, but it does not mean very much in this context. The graph does not show people who are 100% immune. Nobody said this. It simply shows a time pattern of the infection spreading. This can give very useful information on how effective lockdowns or masks are.

Michael Burke

28 January, 2021 at 13:48

Nice article and comments. Well done.

I'd like to ask if there any reason for the steep fall off in Sweden Covid deaths starting around January 9th?

All other death/infection changes correlate quite well using a shift of around 15 days, but this trend starts to all intents and purposes on the same day as the infection fall off.

As a non-expert it would seem to me as if people were still testing positive in the 15day period up to 9th January but had become more far more hardy to the infection. By the way for those like me who cannot afford a monthly payment (my employment status changed due to Covid) would it be possible to allow one off contributions to the patrons fund?

Sebastian Rushworth, M.D. 

28 January, 2021 at 14:11

Hi Michael, the Swedish authorities have become slower and slower at registering deaths over the course of the pandemic, and now we really can't trust the death numbers until they're about a month old. So the apparent drop-off in deaths starting early January could be illusory, we won't know for another couple of weeks.

One-off contributions can be made to [paypal.me/sebrushworth](https://www.paypal.me/sebrushworth) – thanks!

KARIN LAURITZEN

28 January, 2021 at 14:03

What's your comment on this one

<https://www.facebook.com/financialtimes/videos/3981885985177965/>

Virginia A

28 January, 2021 at 19:52

I tested positive for the hepatitis C virus because I have antibodies. But when they did the RNA test, it showed that I didn't have the virus, just that I was exposed to it.

David

28 January, 2021 at 20:45

And here is the company that now sells that T-Cell test for \$150 out of Washington State.

<https://www.t-detect.com>

Mary

29 January, 2021 at 08:20

That was exactly my thinking. And since viruses are considered not “alive” because they depend on other organisms’ DNA for their own reproduction... I wonder where they go off season to vacation, and upon what DNA they then survive during vacation ? ... and why seek “other DNA outside of human population or even animal to survive” for summer “vacation”?? ... what is their “reasoning” if I can say so, Lol??.. and therefore what causes them to suddenly wake up from vacation without DNA -if they don’t survive without DNA to begin with- and begin infecting DNA cells to continue surviving???

Which brings me to Burns’s statement:

“ Killed cells release viral particles that are excreted or infect other cells until the battle is won. Never to progress further.”

If Killed CELLS -not viruses- by T Cells causes viral particles to excrete to infect other cells how then are they exterminated while in the body with constant available cells to infect?

How do viruses stop doing what they do in our bodies if not destroyed ??

Sounds like there are other unknown mechanisms.

In this light vaccines do not work against viruses via antibodies. So their claim of antibody dependence is all a sham.

This is why studies find that subjects when with high antibodies still get infected & sick when exposed; and low antibody subjects have not gotten infected when exposed.

A remote island once was found that natives had zika antibodies but had never been sick. Seems like their immune system did not need vaccine-teaching.

How do we know that OUR IMMUNE system takes care of pathogens immediately and NOT a vaccine, and thus why we do not get sick ?

How do we know when our immune system was the one to keep us from illness and not a vaccine??

The above virus/T Cells scenario seems to answer those, doesn't it?

We go back to the virus that started the mass vaccination concept: smallpox and the assumption at the time that cowpox created an immunity to smallpox...

All based on:

NO isolated smallpox or cowpox viruses

NO before & after bloodwork, before and after vaccinations

NO verification or purification of vaccines

NO verification or purification of raw arm to arm pus

NO controls

How in the world did they conclude it's all antibodies from all that unscientific mess?!!

Indeed a SHAM!

Mary

29 January, 2021 at 08:43

A conspiracy is a real factual act: when 2 or more conspire to perform an anonymous or secret act

When that conspiracy is discovered, it simply is no longer anonymous or secret , but KNOWN.... REGARDLESS of the perpetrators stopping or carrying on with their conspiracy. So it does not cease to be a conspiracy because it is found out.

If a secret war attempt is conspired, but then discovered, but then the acts continue...it is still a war conspiracy.

The facts are all over your TV screen and channels and in your face the discovered conspiracy of pumping fear into YOU, its audience. It's been found out! And they make no attempt to keep it from you with their relentless hypnotic repetitions of WHAT THEY WANT YOUUUU TO BELIEVE!!!

What do they say?.... the best kept secret is in plain sight??!!

Mary

29 January, 2021 at 09:07

The WHO has changed their definition of herd immunity. And before that the medical establishment did.

Herd immunity originally was only possible through natural wild infection.

Paul

29 January, 2021 at 12:15

@Mary: "And since viruses are considered not "alive" because they depend on other organisms' DNA for their own reproduction... I wonder where they go off season to vacation, and upon what DNA they then survive during vacation?"

Malibu perhaps or Hawaii? But then, it's hard to get on a plane these days. But they will manage it. Sneaky little bastards! ☐

amperrynd

29 January, 2021 at 12:21

A study from U.C. San Diego in November showed very long lasting immunity, perhaps lifelong, from natural infection, including mild and asymptomatic. We don't know how long vaccine immunity will last but I'd bet it would be very

prolonged. However wouldn't natural immunity be better seeing that it is a response of the immune system to a whole range of viral elements than just one albeit very important protein. I can't seem to find this answer. Do you have an opinion?

Now it's being estimated that a large portion of the American public has been infected. A study from the CDC in November estimated 14% as of September 2020. I saw a recent estimate of 20% by Dr Paul Offit who based it on 3 times the number of the 20 million cases determined by testing. I would think it was larger but even that is substantial.

Wouldn't these things lend credence to the idea that we should take a position of preferentially vaccinating those shown to be vulnerable to serious consequences of the virus and allowing natural infection to occur in the others.

As in Sweden cases throughout the U.S. are now trending down significantly. The death trend is stable but one would expect to see a decline soon. ER cases have been declining since the beginning of the year. As you suggest for Sweden, may we not now be seeing the effects of the natural plus vaccine immunity in the U.S. ?

Sebastian Rushworth, M.D. 

29 January, 2021 at 13:51

My guess is that the real infection will grant better and longer lasting immunity than the vaccine, for the reasons you suggest. There are examples of vaccines that give better immunity than real infection, but they are the exception, not the rule.

I think you're right, we now have so much immunity that the virus is having trouble finding new hosts. The vaccine may be helping, but I think it is primarily due to the fact that a large portion of the population have now had covid, at least here in Sweden, where only a very small portion of the population have so far been vaccinated.

Ann

29 January, 2021 at 12:38

Ny studie från who. Covid 19 mildare än influensa. "bad decisions". Väldigt kort sammanfattning.

https://www.who.int/bulletin/volumes/99/1/20-265892/en/?fbclid=IwARoOgqzhS547_aI-XhQoQUkYP4p1zfJuJKV3iMfESDa9rIbxrsPCWV1H-zE

Brian

30 January, 2021 at 00:25

Left out of reflecting on Sweden's death toll is the role of immigrants with darker skin
Esp victim to covid19 due to low vitamin D

<https://www.google.com.au/amp/s/abcnews.go.com/amp/International/wireStory/coronavirus-takes-toll-swedens-immigrant-community-70593594>

Mandating vitamin D would lower the death toll everywhere

<http://www.drdauidgrimes.com/2021/01/covid-19-and-vitamin-d-miracle-in.html?m=1>

briansteere

30 January, 2021 at 12:32

While mandating Vit D supps in winter would indeed significantly support resilience against respiratory illness and complications arising from it, I would MUCH prefer and align with an open honest education of the facts.

The resort to state mandates to organise and direct human being is anathema to a culture of freedom, responsibility and cultural flowering. This childlike dependency on and resort to state legislature is the underlying lack of resilience or immunity to attack by deceit that uses fear and threat to bring in regulatory schemes that turn the Law into a support for legal fictions or contractual obligations into which living

beings are induced to consent to by the working of such narratives of fear and threat into social norms.

The current trend is for a sealed social system of control with no real user access and thus no requirement for user education and responsibility beyond task compliance to social utility. Thus no SAY in what is mandated to be added to water, food, medical and biological interventions, prophylactics, or genetic controls – along with psychological requirements for ‘active compliance’ as the maintaining of credits set against disposal as a social debit.

Nothing personal to your desire to help – but in one sentence you illustrated something that underlies a the public demand for its own slavery under a corporately captured state.

briansteere

30 January, 2021 at 12:44

There is also a dissociated childlike naivete in the need to NOT believe in loveless or hateful intentions operating against the public good and the lives of others, under mask of virtue.

An abusive ‘parent’ or parental substitute can thus inculcate a childish irresponsibility as an intentional arrested development.

Competing rivalry will ally and conspire to ‘win’ by resort to trickery. This is self-evident.

What is NOT helpful is the contagion of a dissociated paranoia. In this I am attempting to be specific to observed and experienced reality, and not fitted to narrative leverages that operate ways to deny and distort genuine communication. ‘They’ are very adept at setting such baited traps to a sleepwalking ‘blind trust’ – or blank cheque to set and execute agenda in an arena of which you cannot even see because you are fitted to a version of reality that is akin to a playpen.

AhNotepad

30 January, 2021 at 14:35

brian, they may not have to endure the slavery. for long
<https://www.minds.com/newsfeed/1200901313511268352>

Tim

30 January, 2021 at 15:02

Hej Sebastian, could you please help me out here: are the Antibody test taken from only infected people (with positive PCR Test results)? Or can anybody in Sweden get an antibody Test?

Sebastian Rushworth, M.D. 

30 January, 2021 at 15:03

Anyone can get an antibody test.

Tim

30 January, 2021 at 15:14

So you would only state that the test is not random due to the willingness of an individual to get the test, which is influences the sample, right?

Sebastian Rushworth, M.D. 

30 January, 2021 at 15:29

Exactly. It's not taken from a random sample. People are deciding on their own whether to get the test or not, which introduces various biases.

Ronald Eliosoff MD

30 January, 2021 at 16:20

A hypothesis:

A general principle of virology is that lower inoculi lead to less virulent infections.

<https://www.sciencedirect.com/science/article/pii/S1201971220304707>

I wonder if the very act of not wearing masks in Sweden causes people to be more careful about social distancing. For example cyclists who don't wear helmets may paradoxically have less head injuries because they may take less risks.

By not wearing masks and social distancing shoppers in grocery stores may wind up being more exposed to tiny doses of coronavirus that their immune systems can handle and they thereby might develop milder infections.

AhNotepad

30 January, 2021 at 17:40

Ronald, i think the connection between masks and possible distance maintenance is flawed. In Stockholm people get their hair cut, and other close distance activities without wearing masks. I don't wear a mask, and I am not concerned about how close I get to people, as long as I don't dislike them. I take vitamin D and I'm still alive (at the last assessment). For something to illustrate plans dreamed up by the anointed https://youtu.be/GDlF-z_x7vc is about food, but the plan and it's failure to work because of stupid, confused people, it is spot on.

Ronald Eliosoff MD

30 January, 2021 at 22:46

I live in Ottawa, Canada. When I went to the grocery store this morning it was packed with elderly folks dutifully wearing masks of varying qualities. Some of them were also wearing eye shields. I wonder if in Sweden elderly people wouldn't be going to grocery stores, but would be having their groceries delivered to their homes. Basically, I am wondering if you Swedes may have found effective ways of protecting your elderly and if we could learn from your experience.

Sebastian Rushworth, M.D. 

31 January, 2021 at 07:01

Home delivery of groceries has certainly increased a lot over the course of the last year. I think the elderly are however the ones who have embraced it the least, and who are most likely to actually go to a grocery store.

IL

31 January, 2021 at 00:36

“Apart from that, there is another form of bias that will tend to make the proportion with antibodies seem lower than it really is. This is the fact that people who already know they’ve had covid generally don’t keep re-testing themselves to confirm it. This group gets bigger and bigger as more and more people get covid, and this will eventually make the proportion with antibodies seem lower than it really is. So at some point, there is an inflection point. In the early pandemic, a larger share of those being tested will have antibodies than you would get from a random sample. In the late stages of the pandemic, a smaller share of those being tested will have antibodies than you would see in a random sample.”

It’s speculation.

IL.**briansteere**

31 January, 2021 at 16:21

cyclists who don’t wear helmets may paradoxically have less head injuries because they may take less risks.

I understood it was motorists who were more careful relative to unprotected people.

But you can confound yourself in the long grass for as long as you find it meaningful.

Masks evolved as the filtration and immune supporting membranes of our nose and bronchial organs.

Facial communication is the primary language of infancy and contextual basis for human interaction.

elizabethhart

2 February, 2021 at 07:00

There is much to investigate in regards to the panic to vaccinate the entire global population against a virus that currently isn't a serious threat to most people, despite the fear-mongering media headlines.

What happens now, with a growing number of fast-tracked experimental coronavirus vaccine products being pressed among the global community?

How much thought has gone into this unprecedented global coronavirus vaccination campaign, and the possible consequences?

I am now taking this matter directly to the TGA, the Australian regulator of vaccine products.

FYI, see my email to Adjunct Professor John Skerritt asking the TGA to consider if Covid-19 vaccines could facilitate the evolution of more virulent variants:

<https://vaccinationispolitical.files.wordpress.com/2021/02/tga-submission-could-covid-19-vaccines-facilitate-the-evolution-of-more-virulent-variants.pdf>

Tim

2 February, 2021 at 14:24

Dear Sebastian, thank you very much for your article and your answers until now. I admire Sweden for their independent way. Since I'm from Germany and I love data, I have a question that you might answer.

Looking at the dates from folkhalsomyndigheten it appears, that only very little

older people, above 80, are in ICU (Intensivvera. Can you explain to me why? Is it an ethical thing that they don't want the older people to suffer even more?

If I have a look at data from other countries, the deaths in that age group are the same, however the ICUs are flooded with above 80s. Would the comparison between Sweden and other countries show that ICU doesn't even help that much as thought for older people?

Tusen Tak

Sebastian Rushworth, M.D. 

2 February, 2021 at 14:29

Hi Tim,

I don't know what it's like in other countries, but in Sweden the ICU doctors are generally skeptical about admitting people over the age of 80, especially if they have a lot of co-morbidities. The basis for this is that they are very unlikely to benefit from treatment in an ICU.

alanpcarro

3 February, 2021 at 14:50

Would that not also apply to influenza or pretty much ANY virus or bug?

Stephen McGrail

4 February, 2021 at 17:00

The Swedish Public Health Agency are warning of a potential third wave:

<https://www.thelocal.se/20210204/sweden-is-at-risk-of-a-third-wave-of-covid-19-public-health-agency>

They may not be correct, of course, but they clearly don't believe the herd immunity story you're telling.

Surely it would be wise to properly (or further) consider why. They have access to all the data you're considering and no doubt much more relevant information. They're further highlighting the importance of the covid restrictions and related behavioural changes (re: the wider changes you're considering in declining hospitalisations et al and whether this continues or, alternatively, a third wave develops).

Sebastian Rushworth, M.D. 

4 February, 2021 at 17:10

The "behavioural changes" can't explain the decline – as far as I can tell there haven't been any behavioural changes, apart from a slight increase in the proportion wearing face masks from one in ten to one in four. Shops are still open and full of people. And public transport is still running and packed during rush hour. The government hasn't used the emergency measures it enabled for itself in early January.

The public health authority is choosing to play it safe, which is sensible for a government agency. I can on the other hand say what I truly believe. If I'm wrong I'll be shown to be so in the near future. And I think Anders Tegnell agrees with me. He said in an interview last week that he thought the recent decline was due to population immunity.

Pete

4 February, 2021 at 20:48

Interesting article. You might find this "covid death table" interesting. I've been using it since March 2020 to help me track/think about what is going on.

<http://www.neverletdatagetinthewayofagoodstory.com>

Stephen McGrail

5 February, 2021 at 02:00

A few quick comments on your interesting reply Dr Rushworth:

- 1) To assess whether you're right there would need to be the complete removal of public health measures etc and then wait and see if there's a third wave. This isn't going to happen. So, your ideas about current herd immunity won't be properly put to the test.
- 2) I used to listen closely to Tegnell but his credibility has fallen. He thought there'd be widespread population immunity by the end of May (he was wrong). He thought Sweden would be spared a major second wave because of the build up of immunity (he was wrong). Now he thinks more recent trends reflect the build of immunity. He may be wrong again (or "third time lucky"?)..
- 3) On behaviour, key ones are those epidemiological studies indicate are central to transmission – key places include: workplaces (% of pop working from home), large social events (I undersand public events of more than eight people are banned), the extent of lengthy indoor social contact between households (e.g. having people over to socialise), etc. Would be good to hear more on this.

Stephen McGrail

5 February, 2021 at 02:02

*understand (in a typo above I wrote "undersand"!).

Sebastian Rushworth M.D. /