

Pathways

Price £ 4.00 (Free to members)

The newsletter of Leger ME/CFS Supporting Myalgic Encephalopathy or Encephalomyelitis (ME), Chronic Fatigue Syndrome (CFS), Post Viral Fatigue Syndrome (PVFS), Fibromyalgia Syndrome (FMS), Patients & Carers.

Welcome to Pathways No. 64. (Summer 2020)

Special Coronavirus Edition



You Write In

Carol writes: Now that the lockdown is lifting, I was wondering how safe it would be to obtain food from our favourite Chinese takeaway. It closed for the lockdown. Inside the shop it displays a 5 for food hygiene, and there are about a dozen food hygiene certificates displayed on the wall of its employees.



Most reputable chains and good restaurant kitchens are likely to be geared towards professional, hygienic food preparation, meaning there would be minimal risk from a freshly cooked takeaway meal. Covid-19 is a respiratory illness; spread by droplets from sneezing or coughing. There is no evidence it can be spread via any food or food packaging. For safety I would stick to hot freshly cooked food and avoid any uncooked food. You could transfer any food to a clean container and microwave any suitable food for a couple of minutes if you are not so sure providing, it does not spoil the food. Also, with you having ME/CFS, it would be better to have it delivered rather than collecting it yourself. Some restaurants and cafes have turned to producing takeaways during the lockdown. I would avoid these until things have settled down and stick with the businesses with expertise.

Jim Writes: I have watched the news items, and I am a little uncertain about President Trumps promotion of Hydroxychloroquine for prevention and treatment of Covid-19 infection. He seems to believe that this is a wonder drug. Why are we not using it in this country ?

This is definitely 'Fake News'. President Trump is more interested in re-election for the US presidential elections due in the autumn. He is the type of person that is more interested in his own personal credibility rather than the health of his people. He constantly ignores his advisors or twists their advice to his convenience. Suppose he believed that the moon was made of green cheese. Even if you sent him to the moon in a rocket, and he walked on the moon –something would be 'Fake'.

There are benefits to trying existing medicines for COVID 19 infections. There have been trials around the world of hydroxychloroquine and chloroquine. The world health organisation has recommended that all trials of these medicines stop with immediate effect. No significant benefits of hydroxychloroquine or chloroquine trials in patients with COVID-19 have been found.

Hydroxychloroquine does not significantly reduce COVID-19 related hospital admissions and is no more efficient at eliminating the virus than standard care alone, two studies published in the British Medical Journal have shown. There is evidence that someone is twice as likely to die if they have been given these medicines. The problems are related to cardiovascular side effects and heart arrhythmias. In this country these medicines are licensed for the treatment of malaria, SLE and Arthritic problems. The side effects are well known in this country and are considered if they are prescribed. For this reason, they are prescription only medicines in this country.

Ian Writes: I've heard about a drug treatment called Remdesivir that appears to shorten recovery time for people with coronavirus is being made available on the NHS. Do you think it will be of any used for CV19 infections?

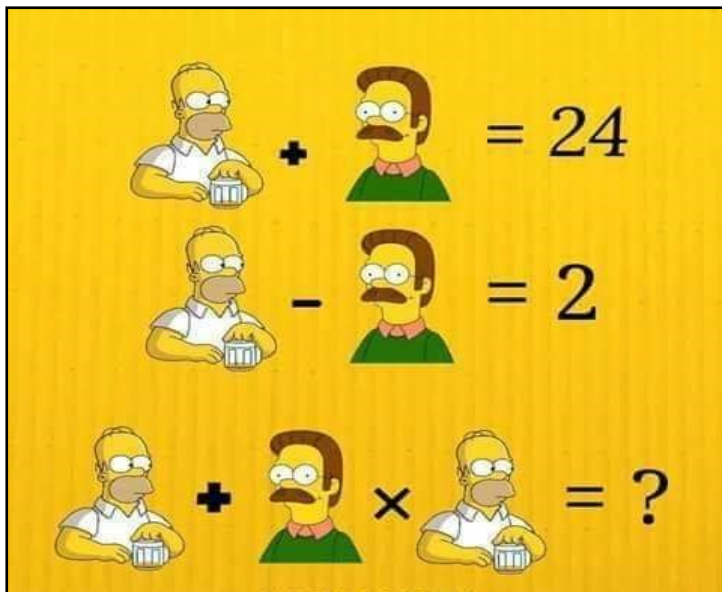
Remdesivir is an anti-viral medicine that has been used against Ebola. It is probably the biggest step forward in the treatment of coronavirus since the crisis began. The UK regulators say there is enough evidence to approve its use in selected Covid-19 hospital patients, but for the time being and due to limited supplies, it will go to those most likely to benefit, possibly in clinical trials. Early data suggests it can cut recovery time by about four days, but there is no evidence yet that it will save more lives. Watch this space.



Front Page. Grey Squirrel
photographed by Siân Roberts.

Puzzle Corner By Nichola Stockton

I hope you enjoyed the puzzles in the last issue Pathways 63. Here are the solutions



If you are a fan of mathematical Simultaneous Equations you may have used algebra to solve this puzzle. I looked at it this way. We need two numbers to add together to make 24, and take away to leave 2.

Try some out

$$12 + 12 = 24 \text{ but } 12 - 12 \text{ doesn't} = 2 \quad \times$$

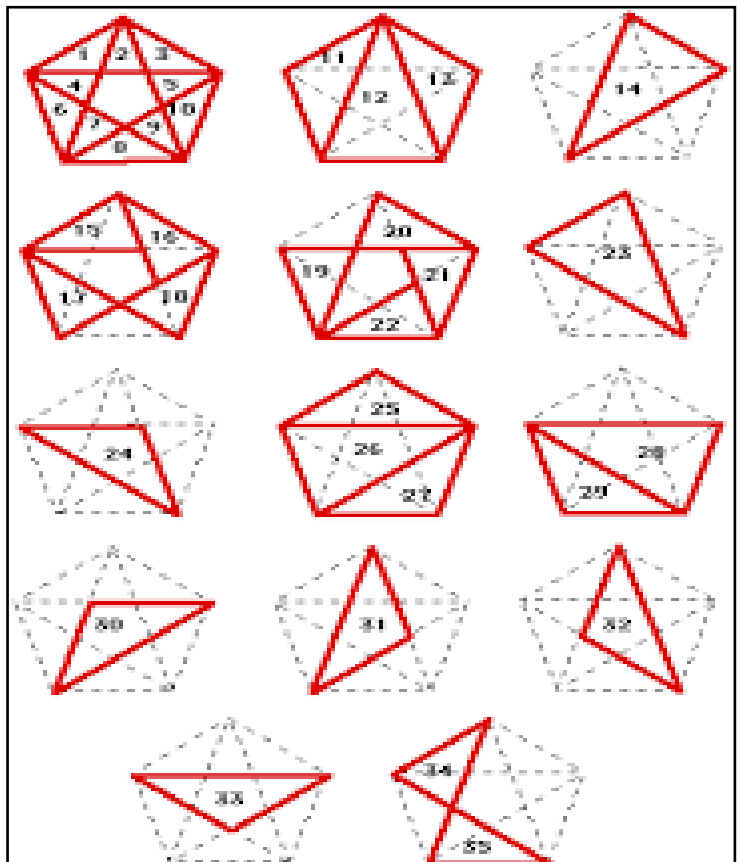
Try again

$$13 + 11 = 24 \text{ and } 13 - 11 = 2 \quad \checkmark$$

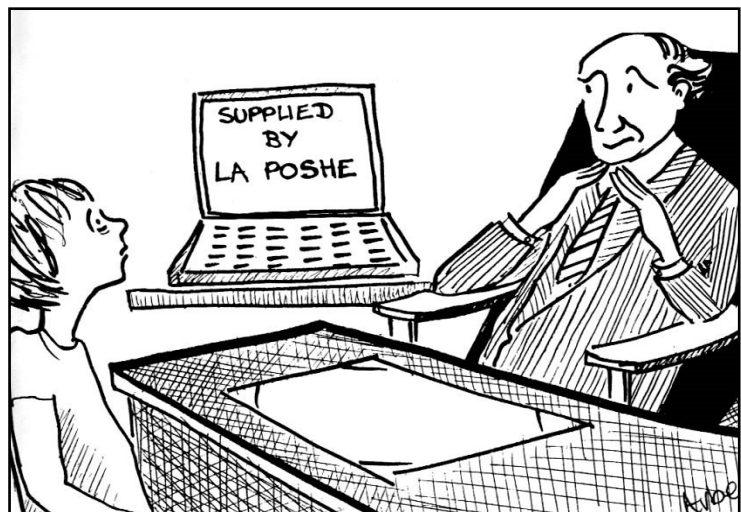
So Homer Simpson = 13
And Ned Flanders = 11

$$\text{Last line } 13 + 11 \times 13 = \\ 13 + 143 = \underline{156}$$

How many triangles are there?

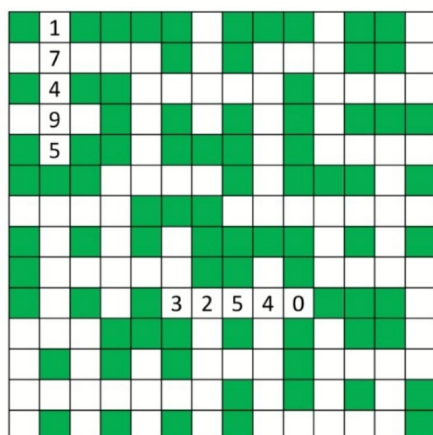


Word Search



M.E.? I NEVER DIAGNOSE A NEW ILLNESS UNTIL I HAVE BEEN ON AN ALL-EXPENSES PAID CONFERENCE ABOUT IT — PREFERABLY IN THE BAHAMAS.

Work out which of the numbers goes in each space in the puzzle below.
One of the numbers has been done for you.



3 DIGITS		4 DIGITS		5 DIGITS		6 DIGITS	7 DIGITS
149	536	1943	7561	14259	52076	405183	2394608
261	675	2845	8237	17495	57346	843925	7265713
348	796	3371	8263	28136	63307		
472	813	3491	9057	32540	65074		
483		5247	9842	37281	72751		
		5962		42310	82714		

Social distancing	Contact tracing	Protect the nhs	Track and trace
Transmission	Temperature	Epidemiology	Second wave
Coronavirus	Compliance	Nightingale	Save lives
Infection	Vulnerable	Face mask	Pandemic
Stay home	Community	Outbreak	Capacity
Hospital	Lockdown	Patient	Symptoms
Contact	Science	Cases	Cobra
Virus	Tests	Cough	Shield
Furlough	Data		

$$\begin{array}{ccc} \boxed{} + \boxed{} & = & 16 \\ + & + & \\ \boxed{} - \boxed{} & = & 12 \\ \parallel & \parallel & \\ 26 & 16 & \end{array}$$

Coronavirus Word Search

f s r w r c f k v w o o z n u c u h c w k p v z o e w w g z
i a f i b n k c n a z g y d x x o t r a n f s m a s s p i t a l p w j i i
w v z b n k c n a z g y d x x o t r a n f s m a s s p i t a l p w j i i
v e z b n k c n a z g y d x x o t r a n f s m a s s p i t a l p w j i i
q l d p w i m z z c l a b p g v a h g q x g s c g r r x e h f
l i m u c v i s d g a i v g y p c a i e l w a f a k b c u b a o g n t
u v q d v i s d g a i v g y p c a i e l w a f a k b c u b a o g n t
e e b c f r k a e i v g y p c a i e l w a f a k b c u b a o g n t
m s x o u x q t e p u p l e s o x m a l q q b c u b a o g n t
a s a r r u a a h t e m p e r a t u r e e h b o o q r w d s l n g
d l c o l b q c t e m p e r a t u r e e h b o o q r w d s l n g
h p r n o y u o j r n k y c o m p l i a n c e t v o l n j j f
q l s a u i m m j s d i c o m p l i a n c e t v o l n j j f
t r c i v g g d m j f x o u t o c n p e a k v m n p q c i v o l n j j f
a t i i h n h u s r e t o c n p e a k v m n p q c i v o l n j j f
y h e r f x w n v x p q r a o c n p e a k v m n p q c i v o l n j j f
r g n u w u r i e n r g q a j n p d r v a h t l p r e w c f
z p c s r m h t m d o s v k c g t t d c x e v r d x a j a g s
t a e k u g e y y k t s j p x k e a p c y s q c g s k u e f a
k t i f s j o i i v e r x k d k a p c y s q c g s k u e f a
g i o f t w b c v u c g r f e p s a n i t k s i s a j l b m k
h e w l a x p a g l t a n i f y n f d t e r m c w u q r v e c q
b n y e y e b p p o t h k i a c h v m d x r m c w u q r v e c q
t t c k h j w w e c h k i a c h v m d x r m c w u q r v e c q
z e o g o w i k r d e x o k b m w x p e g a i y a i a e w j
l i v u d m i r d y d n j i j h m h h q t m a c o c l o t o
k i g d e k x e r o h s c l v m o u m z a n m c x x o e p x l
r r h m t u i y k w s d e l v m o u m z a n m c x x o e p x l
k u i z u t r k c n a b r n l q e d u q t e s t s w g a b q
y s t e d h a r y v x t w w k w r v f d u c e b j z u y s j

News from the Leger ME Community Facebook Group.

Nichola Stockton

On the 8th April, the Leger ME Community Facebook page celebrated its first birthday! It now has 23 members and is a regularly active, friendly, group.

The contact with others has been a Godsend for me personally. As someone who is mostly housebound, I had previously been unable to meet other members, but through this group, I have got to know some lovely people! At this time, when family cannot visit, they have been great company.

The Facebook members have looked after each other while we have been in lockdown. From posting up to date information as up to when supermarket delivery slots become available to enjoying twice weekly 'get togethers' online. We have an online catch up on a Monday at 6pm. Then there is our 'Nights Out In' on a Friday at the same time. We have enjoyed Bingo, Quizzes and Pictionary to date.

The Facebook group uses messenger for its online gatherings which can actually be used without you needing to be on Facebook. So, if you are someone who does not care for the social media side but would like to chat to Leger ME members online, you can still get involved if you've paid your subs for this year. Just email Mike or myself for more info.

A number of our members are crafters, and some have been busy. Have a look at Crafty Corner for some highlights.

Crafty Corner

By Nichola



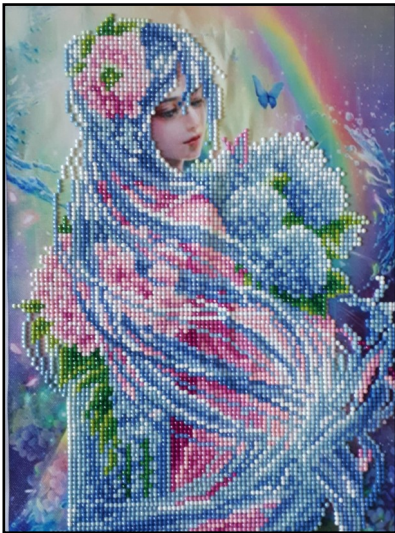
I've been enjoying some more elaborate card making projects this time.



Claire has had a tulip-tastic time sewing these beautiful flowers. She's also turned her hand to non hospital grade face masks.

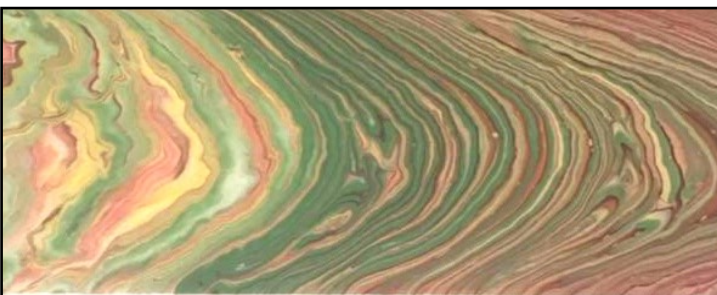


Mick enjoys painting by numbers and 5d diamond art to produce some very striking results.



This was made from a piece of turned wood by Stan, and then I decorated it with acrylic paint - Ann :

And finally, Anns poured acrylics techniques.



Colouring Corner Have a go at colouring in this picture



A Summer Garden in Full Bloom

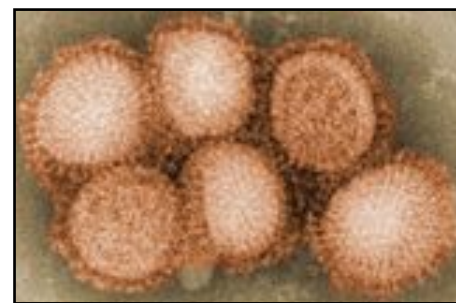
FOREGROUND: Marigold (*Tagetes* sp.), Petunia (*Petunia x hybrida*),
WATERING CAN: Larkspur (*Delphinium* sp.), African Daisy (*Gerbera jamesonii*), Zinnia (*Zinnia elegans*).

Over One Hundred Years ago: Pandemic Spanish flu: with thanks to Wikipedia.

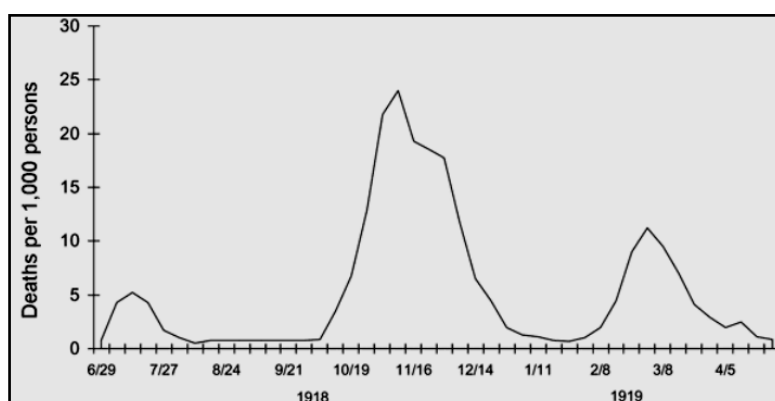
Spanish flu, also known as the 1918 flu pandemic, was an unusually deadly influenza pandemic caused by the H1N1 influenza A virus. Lasting from spring 1918 through spring or early summer 1919, it infected 500 million people – about a third of the world's population at the time. The death toll is estimated to have been anywhere from 17 million to 50 million, and possibly as high as 100 million, making it one of the deadliest pandemics in human history.

To maintain morale, World War I censors minimized early reports of illness and mortality in Germany, the United Kingdom, France, and the United States. Newspapers were free to report the epidemic's effects in neutral Spain, such as the grave illness of King Alfonso XIII, and these stories created a false impression of Spain as especially hard hit. This gave rise to the name "Spanish" flu. Historical and epidemiological data are inadequate to identify with certainty the pandemic's geographic origin, with varying views as to its location.

Most influenza outbreaks disproportionately kill the very young and the very old, with a higher survival rate for those in between, but the Spanish flu pandemic resulted in a higher than expected mortality rate for young adults. Scientists offer several possible explanations for the high mortality rate of the 1918 influenza pandemic. Some analyses have shown the virus to be particularly deadly because it triggers a cytokine storm, which ravages the stronger immune system of young adults. In contrast, a 2007 analysis of medical journals from the period of the pandemic found that the viral infection was no more aggressive than previous influenza strains. Instead, malnourishment, overcrowded medical camps and hospitals, and poor hygiene, all exacerbated by the recent war, promoted bacterial superinfection. This superinfection killed most of the victims.



Looks similar to CV19?
The 1918 Spanish flu was the first of two pandemics caused by H1N1 influenza A virus; the second was the 2009 swine flu pandemic.



Three pandemic waves: weekly combined influenza and pneumonia mortality, United Kingdom, 1918–1919.
A possible second wave of CV19 is of major concern.

Coromandel Hospital Board.
INFLUENZA EPIDEMIC.—ADVICE TO SUFFERERS.
COURSE OF TREATMENT.

A list of instructions for the guidance of persons who are attacked by influenza, or who suspect they have contracted the complaint, has been drawn up by Dr. J. P. Frengley, acting-chief health officer, and Dr. T. J. Hughes, district health officer, at Auckland. The instructions are as follows:

1. Go to bed directly you feel symptoms like pain, in the head and limbs, or a "cold."
2. Go to bed in a room not occupied by a person who is well, and stay there until the temperature returns to normal.
3. On going to bed take a drink of any kind as hot as possible, remove sheets, and lie between blankets.
4. Take light diet, such as milk, beef tea, soups, and gruel.
5. Don't depress yourself by looking at the bad side.
6. Remember the large majority of persons who take ill get well.
7. Only one member of the family of the house should visit the patient's room.
8. Don't allow people to come into your room and loiter there.
9. If no doctor has prescribed for you, take ammoniated quinine in a half to a teaspoonful dose in plenty of water every four hours.
10. Add one teaspoonful of boric acid or borax, one tablespoonful of baking soda, and one teaspoonful of salt to a large tumblerful of hot water. Sniff up this solution as hot as can be borne through the nose, then gargle the throat with the solution as hot as can be borne. Brush the teeth with the same solution, or with any antiseptic tooth-paste. Do all these three times a day.
11. If you sneeze or cough, try to put your handkerchief before your nose or mouth. Remember, the minute droplets passing from you in sneezing or coughing carry the germs of infection to others.
12. Keep in bed till you feel you are quite able to get about; this will be when your temperature is down to normal.
13. Don't go outdoors, except into direct sunshine, until the catarrh or "cold in the head," if you have this symptom, is quite gone.

Owing to there being no chemist in Coromandel, Influenza Remedies will be dispensed at the Hospital, at 1s per bottle. Arrangements have been made for fumigations at the Hospital, and Mr Denize's Mart.

S. JAMES, Chairman C.H.B.

Coromandel Hospital Board (New Zealand) advice to influenza sufferers (1918). In response to the epidemic, the Health Minister contacted local authorities, giving them the initiative to organise relief efforts. Central committees were formed, and areas divided into blocks with "depots". Coromandel Hospital Board issued this advisory leaflet - even a hundred years ago peoples' mental health was considered, as the advice included "Don't depress yourself by looking at the bad side". Thanks to Archives New Zealand Reference: BAAK 19836 A49/83 Material from Archives New Zealand Te Rua Mahara o te Kāwanatanga.



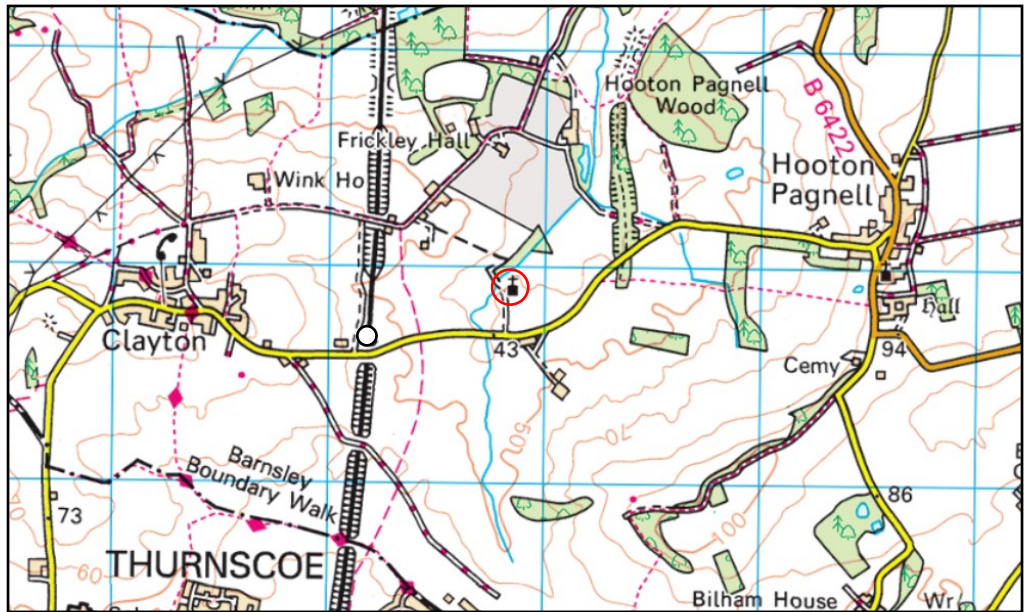
Precautions taken in Seattle, Washington during the "Spanish Influenza" pandemic would not permit anyone to ride on the street cars (trams) without wearing a mask. 1918.

*Ammoniated quinine tincture was used as an antipyretic in a similar way to aspirin, ibuprofen or paracetamol.

Out and About Around Doncaster: Frickley All Saints Church

Anyone casually driving through the countryside around Doncaster would notice that each village would have an ancient church. Most stand out on the raised plot of land. One of the reasons for this is because the local mine owners and later the National Coal Board always left a pillar of coal directly underneath the churches, while mining underneath the remainder of the countryside. This caused the land to drop. This gave us the flood features like Sprotborough Flash and Mexborough pastures.

If you travel to Clayton there is no church, but the nearby village of Hooton Pagnell which is a similar size has quite a prominent building. About halfway between the two villages from the road you can see an isolated church in the middle of the fields. The church is still in use and is accessed by a grassed track.



So, what is the reason for the unusual location? The story dates back to plague times, when Frickley village was effectively burnt to the ground and re-sited on the top of the hill following a plague epidemic. The only proof that the village was ever anywhere else is the oddly sited church. Being the only stone building of the time, it was left where it was, and survives to this day as an active place of worship in the Parish of Bilham. The church is a small ancient structure, with a tower. From time to time there are open days. In the interior are some cylindrical columns, and between the nave and chancel is a handsome Norman arch, and it is a grade II listed building. One interesting feature of the graveyard includes an inscription for someone "cruelly murdered on the highway between Clayton and Frickley".

Historically, Frickley itself had a railway station in the country where the railways line crosses the road between the two villages which was closed in the early 1953. The other claim to fame is Frickley Colliery, where the brass band originated, although is not really in Frickley. It is about two miles away in South Elmsall. The colliery was called Frickley because it was on land owned by Frickley Hall. The former colliery site is now a country park.



COVID –19 Data File.

Common symptoms: fever (98.6%), weakness (69.6%);,cough (59.4%);.muscle pains (348%);.difficulties breathing (31.2%);

Less common symptoms: diarrhoea (10.1%); nausea and vomiting (10.1%), dizziness (9.4%), headaches (6 .5%);,stomach pain (2.2%);

Incubation period: 0-14days;

Severity: Data from 44,000 oases of COVID-19 in China suggest that 80.9% of oases are mild, 13.8% are severe and 4.7% are critical. Severe cases are more prevalent in older people and those with an existing long-term condition. such as cardiovascular disease, diabetes, respiratory disease or hypertension;

Transmission: person-to-person spread between dose contacts (up to 1.8 metres) through respiratory droplets;

Diagnosis: COVID-19 is suspected based on clinical symptoms. Diagnosis are only confirmed when there is a positive laboratory test;

Treatment of COVID-19 is symptomatic, such as providing oxygen. Medicines specifically licensed for COVID-19 are not currently available.

%	Clinic cases from Chinese outbreak for comparison
69%	Cough (dry cough)
22%	Temperature 37.5-38 C
22%	Temperature >38 C
38%	Fatigue
34%	Sputum (productive cough)
19%	Shortness to breath
15%	Muscle Aches
14%	Sore throat
14%	Headache
12%	Chills
5%	Nasal congestion
5%	Nausea and vomiting
4%	Diahorrea
24%	Any comorbidity

Comparison with other conditions

<u>SYMPTOMS</u>	<u>COVID-19</u> (from mild to severe)	<u>Cold</u>	<u>Flu</u>	<u>Hay fever</u>	<u>ME/CFS</u>
Fever > 37.8	Common	Rare	Common	No	Normally low
Cough	Common (usually dry & continuous)	Mild	Common (usually dry)	Sometimes (usually dry)	No
Shortness of breath	Sometimes	No	No	No	Sometimes
Headache	Sometimes	Rare	Common	Sometimes	Common
Sore throat	Sometimes	Common	Sometimes	Itchy throat	sometimes
Runny/stuffy nose	Rare	Common	Sometimes	Common	uncommon
Sneezing	No	Common	No	Common	uncommon
Aches and pains	Sometimes	Common	Common	No	Common
Fatigue	Sometimes	Sometimes	Common	Sometimes	Always
Diarrhoea	Rare	No	Sometimes (for children)	No	sometimes
Low of taste and smell	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes (metallic taste)

Covid – 19 Red Flag Symptoms

While the majority of Covid –19 cases are relatively minor, a significant proportion will need admission to hospital. The table to the right shows the symptoms for which immediate medical help is needed.

Doctors will need to send patients to hospital for suspected viral pneumonia if any of the following symptoms occur.

- the body temperature is greater than 38C
- the breathing rate is greater than 20 breaths per minute
- the heart rate is greater than 100 beats per minute or
- the oxygen saturation is less than 94%

Seek immediate medical help if any of the following symptoms occur

Covid 19

Severe shortness of breath at rest
Difficulty breathing
Pain or pressure on chest
Cold clammy pale or mottled skin
New confusion
Becoming difficult to rouse
Blue lips or face
Little or no urine output
Coughing up blood

Other conditions,

Neck stiffness (meningitis)
Non-blanching rash (septicemia)

What happens if things go wrong and hospital treatment is needed?

If we take the case of the prime minister Boris Johnson, his problem started mildly, but within a few days it progresses quite quickly to him needing oxygen because of breathing difficulties. Normally on a general ward 28% oxygen is available through a free flow mask. However, further deterioration occurred, and he was taken into intensive care where he would have been put on a CPAC machine which feeds oxygen into a special mask under pressure (something like is used for sleep apnoea treatment). Fortunately, he improved and was well enough to be moved back onto a general ward after three days. He described his Covid experience as a 'beast'. There is no doubt that he is still suffering from his encounter, and possibly with post viral fatigue for some time..

About a third of hospital admissions end up as critical cases. Here problems like pneumonia—swelling (inflammation) of the tissue in one or both lungs occurs. At the end of the breathing tubes in your lungs are clusters of tiny air sacs, alveoli. These tiny sacs become inflamed and fill up with fluid and debris like dead lung cells. This effectively hampers oxygen and carbon dioxide gas exchange, causing a knock-on effect of stress lead to failure on other organs like the heart and kidneys. There are things like anti-inflammatory drugs which may help.

Ultimately people this ill would die from multi organ failure. What happens is the patient is sedated – given a light anaesthetic. They are then intubated—a pipe from a respirator machine is placed in the throat and this effectively mechanically ventilated the patient. Sometimes an artificial lung is used which feeds oxygen directly into the blood. Sometimes if kidney failure occurs, the patient is connected to a dialysis machine. Some are placed on a life support machine. The whole point of the intensive care is to give support for patients' bodies to fight the infection and hopefully recover. Complications occur because the blood become sticky with a tendency to clot and cause thrombosis, a stroke or heart attack. This is easily fixed with anticoagulant drugs. Diabetics usually have weakened immune systems, and so may not fight the infection very well. People with heart disease or circulatory conditions may not tolerate the stress. I have heard reports of high doses of adrenalin needing to be given to maintain failing blood pressure. Patients are usually fed through a nasal gastric tube.

What is quite clear is that people from the Black, Asian, and Minority Ethnic (BAME) origin seem to be more prone to a poor outcome. People who are older have a poor outcome, but there are cases where people over 100 years old have survived. There is also emerging evidence that the people who have a poor outcome are deficient in a type of white blood cell, known as a T cell. There is currently research into interleukin 7, a medicine which stimulates production of the deficient T cells numbers. There are questions as to if chloroquine derivatives have any role to play. The US president Donald Trump has advocate them, against the information given by his advisors. However, at the time a writing several research projects have found that chloroquine kills more people than it saves.

COVID 19 and ME/CFS

Considering the vast majority, of the Leger ME members report a viral infection triggering ME/CFS, it is logical to expect that another viral encounter could cause further adverse effects. The ME Association stated :-

We (the MEA) are starting to receive reports about previously healthy people who have had (or probably had) coronavirus infection and have not been able to return to their normal level of health and energy levels in the weeks following the onset of symptoms. These reports are largely from people who have managed at home and not had a more serious infection that required hospital admission. Some reports are from health professionals. It seems likely that some of them are experiencing what is called post viral fatigue (PVF), or a post viral fatigue syndrome (PVFS).

We are also receiving reports from people with ME/CFS (myalgic encephalomyelitis/ chronic fatigue syndrome) who have had this infection and now have a significant exacerbation of their ME/CFS symptoms - especially a further reduction in energy levels. The ME Association has a lot of experience in dealing with people who develop prolonged and debilitating fatigue (sometimes with other symptoms as well) following a viral infection – as well as people with ME/CFS who relapse following another infection. We are now expecting to see a number of new cases of ME/ CFS that follow coronavirus infection fatigue. This is why we have produced some guidance on how we feel that convalescence and good basic management of post infection fatigue can lessen the chances of this turning into a more permanent and debilitating illness.

I have distributed a literature available from the MEA to about two dozen people.

How can we best defend ourselves against a COVID 19 infection ?

- 1) Firstly, follow the lockdown rules and advise as closely as possible.
- 2) Ensure that you have balanced nutrition, in particular with Vitamin D levels. Many Leger ME members have depleted vitamin D which does result in more pain and fatigue.
- 3) If you suffer from another chronic condition like diabetes, asthma, COPD cardiovascular problems etc., ensure that you get the best control possible

I have included advice from the ME Association and British Dietetic Association in the following pages.



What should I do?

Updated guidance for England



Stay home
whenever possible



Work from home
if you can



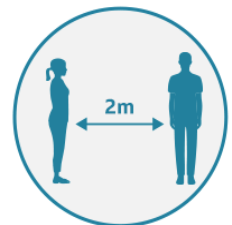
Avoid public transport
if possible



Take unlimited exercise
outside*



Enjoy parks and public spaces
without exercising*



But always keep your
distance in public

Reducing the risk of catching Coronavirus if you have ME/CFS

by Dr Charles Shepherd, Medical Director of the ME Association

People with ME/CFS are already in a vulnerable/high risk group when it comes to catching this infection - mainly because it is highly likely to cause an exacerbation of existing symptoms, or a more persisting relapse. The general risk from catching coronavirus also increases further if you have any of the factors below that are being identified as likely to make people more vulnerable to the infection. In particular:

- Age over 70 years
- Male
- Obesity
- Black, Asian or minority ethnic background (BAME).
- Having other chronic medical conditions – e.g. coronary artery disease, diabetes, respiratory disease
- Vitamin D deficiency. (*This is a local problem with almost all Leger ME members.-ed*)

In addition, there are a number of social, work and demographic situations which make people more likely to catch the infection:

- Having a high-risk occupation - working in health and social care, retail, and public transport
- Spending all or much of your working time indoors away from home where a lot of people gather in places such as shops or offices
- Living in a part of the UK where there have been a disproportionate number of cases of COVID-19
- Living in a residential or care home

So, it is important for everyone with ME/CFS to do all they can to reduce the risk of catching this infection. This means adopting a way of living that is based on individual circumstances and individual risk factors.

- Almost zero risk - staying at home, not going anywhere, and not meeting anyone else
- Low risk - staying at home for most of the time but going out for a walk or an occasional visit to the shops
- Higher risk – leaving the house and going to work or school, or using public transport, or living with people who are going to work or school or using public transport

What follows is a 10-point guide to the most important measures that will help to prevent you catching this infection. The basis for this guidance is very simple. People who are infected pass on the virus in tiny droplets that are spread from the mouth during coughing, spluttering and even breathing. Viral droplets can also be passed on by people who are displaying no obvious symptoms. So, a friend, or neighbour, or caller at the door, who looks and feels well could still be infected and spreading the infection. These virus laden particles then land on surfaces where they remain (for up to 72 hours on some hard surfaces) and can be picked up if someone touches the infected surface. An infected hand or finger then touches the eyes, mouth or nose and the virus enters the body.

1. STAY AT HOME. Although the advice here has changed to Stay Alert in England, other regions of the UK are still advising people to Stay at Home. For most people with ME/CFS, Stay at Home will be the most important thing you can do - as this should eliminate almost all contact with people who are infected and surfaces that are infected.

2. SOCIAL DISTANCING. The guidance here is to keep at least 2-metres from other people. But there is good research evidence to indicate that tiny viral particles can travel further than 2-metres, especially when an infected person is coughing or spluttering. Consequently, I have chosen to try and keep a 4-metre distance where possible. And if you do meet people that you are not living with, try to avoid direct face-to-face conversations.

For further details about Membership of the ME Association please contact Gill Briody and her team.

You can contact them by post, telephone or email and they will get back to you as soon as they can.

Address: The ME Association, 7 Apollo Office Court, Radclive Road, Gawcott, Bucks, MK18 4DF

Telephone: 01280 818963 weekdays, between 9.30am and 3.00pm

3. DON'T TOUCH SURFACES OUTSIDE THE HOUSE. If you are out of the home environment try to avoid touching any sort of surface, especially hard surfaces where lots of other people will have put their fingers, as well. High risk surfaces include ATM machines, door handles, hand rails, supermarket trolleys and anything that people touch on public transport. And avoid cash transactions in shops wherever possible.

4. DON'T TOUCH YOUR FACE. It's not easy – but if you are outside the house try to resist touching your face, especially eyes, nose or mouth with your fingers – which may have been in contact with a virus infected surface. (*A face mask can help here - ed*)

5. WASH YOUR HANDS REGULARLY WITH SOAP AND WATER. Washing your hands with soap and warm/hot water for at least 20 seconds is still the most effective way of removing the virus from your hands. Soap dissolves the fatty coating of the virus and makes it inactive. Hand washing means making sure that you wash between your fingers and your fingertips with the soap. Dry your hands properly afterwards (with either a paper towel or one that isn't used by anyone else). Never use shared towels away from home.

Repeated hand washing can also dry out the skin and cause cracks. So it's worth using a good moisturiser cream after hand washing is done. If you are out and about carry a bottle of alcohol-based (62% or more) hand sanitiser and possibly a pair of disposable gloves to use if you are going to be touching surfaces. If someone comes to the home, a care worker for example, make sure they wash their hands when they come in and preferably when they leave.

6. POST, PARCELS AND SHOPPING. For some people with ME/CFS, these may be the only surfaces that you are dealing with that may be infected. Although the virus may not remain active for long on paper and cardboard I leave my post in a pile in the hall for a few days, then open it all at once on the floor and wash my hands afterwards. A modified approach can be used for online shopping when it is being delivered by van or by a neighbour.

7. STAY SAFE AWAY FROM HOME. If you decide to leave the house for a daily walk or for going to the shops, maintaining social distancing is obviously very important. If you are lucky enough to live in an area with not many people around this a very low risk activity – as viral transmission out in the fresh air is far less likely than in a closed indoor area. If you are not so lucky, and can only do so in streets with plenty of people on them, this becomes a riskier thing to do. Being away from home on crowded public transport, or in shops and offices with lots of people about, is a higher risk activity. If you are working indoors away from home try to have a window open to allow some fresh air in.

8. TAKE A VITAMIN D SUPPLEMENT. Many people with ME/CFS are deficient in the vitamin D - the so called sunshine vitamin. Vitamin D is essential for bone and muscle/mitochondrial health as well as immune system function and antiviral activity. There is growing evidence to indicate that being deficient in vitamin D increases the risk of developing a more serious COVID-19 infection. So, everyone with ME/CFS, especially those who do not go outside, should be taking a 10 microgram vitamin D supplement. Medical reference: COVID-19 'ICU' risk is 20-fold greater in the Vitamin D Deficient. BAME, African Americans, the Older, Institutionalised and Obese, are at greatest risk. Sun and 'D'-supplementation – Gamechangers?

9. FACE MASKS. Simple face masks may help to protect other people if you have a respiratory infection. But they will not provide much protection to you from catching an infection from someone else. They can even be counter-productive if you are touching them and moving them around because they are uncomfortable for long periods of time. The only type of mask to offer this level of protection is the type worn by health professionals.

10. MEETING A FRIEND OR RELATIVE. Not surprisingly, many people with ME/CFS are desperate to see a friend or relative, or new addition to the family. When/if this happens, the same approach to social distancing should be applied. And while children are largely immune from developing serious problems with COVID-19 infection, current research indicates that they can be infected without having any symptoms and so be vectors for further transmission. So, hugging your children or grandchildren is not a good idea at the moment!

Vitamin D

Sunshine, not food, is where most of your vitamin D comes from. So even a healthy, well balanced diet, that provides all the other vitamins and goodness you need, is unlikely to provide enough vitamin D. Read on to find out the best ways to get enough vitamin D safely.

What is vitamin D?

You make vitamin D under your skin when you are outside in daylight, which is the reason vitamin D is sometimes called the 'sunshine vitamin'. A vitamin is something that helps our body function – a 'nutrient' – that we cannot make in our body.

Vitamin D is different because even though we call it a vitamin, it is actually a hormone and we can make it in our body.

What does vitamin D do to the body?

Vitamin D works with calcium and phosphorus for healthy bones, muscles and teeth. Vitamin D is also important in protecting muscle strength and preventing rickets, osteomalacia and falls.

Even if you have a calcium-rich diet (for example from eating plenty of low-fat dairy foods and green leafy vegetables), without enough vitamin D you cannot absorb the calcium into your bones and cells where it is needed. Vitamin D may have other important roles in the body, but there isn't enough evidence at the moment to make any conclusions.

What happens if i don't get enough vitamin D?

Some babies are born with low levels of vitamin D and some do not get enough in breast milk; this can result in fits or rickets.

Older children who do not get enough vitamin D can also develop rickets. Rickets can cause



permanent deformities to the bone, weaken muscles and reduced growth.

Adults who don't get enough vitamin D can develop osteomalacia. This makes the bones softer as the minerals needed to keep them strong cannot get into the bone. People with osteomalacia experience bone pain and muscle weakness.

When is vitamin D made in skin?

The amount of vitamin D you make depends on how strong the sunlight is. You will make more in the middle of the day, when the sun is strongest. You will also make more when you are in direct sunlight than in the shade or on a cloudy day.

Sun safety

It is the sun's ultraviolet rays that allow vitamin D to be made in the body. You do not have to sunbathe to make vitamin D. In the UK, ultraviolet light is only strong enough to make vitamin D on exposed skin (on the hands, face and arms or legs) during April to September. However strong sun also burns skin so we need to balance making vitamin D with being safe in the sun - take care to cover up or protect your skin with sunscreen before you turn red or get burnt. Find out more about sun safety on the NHS Choices website.

During the autumn and winter, we get vitamin D from our body's stores and from food sources but these are insufficient to keep up vitamin D levels. The only way to ensure a healthy vitamin D status at this time of year is to take a supplement.

Groups at risk of low vitamin D

- babies and young children, and children and adolescents who spend little time playing outside
- pregnant and breastfeeding people

- people over 65 years old because their skin is not as good at making vitamin D
- people with darker skin tones –people of Asian, African, Afro-Caribbean and Middle Eastern descent – living in the UK or other northern climates
- if you always cover most of your skin when you are outside
- the further north you live, the less sufficiently strong sunlight there is for you to make vitamin D
- anyone who spends very little time outside during the summer – the housebound, shop or office workers, night shift workers
- if the air is quite polluted

Which foods contain vitamin D?

Help your body get more vitamin D by eating plenty of vitamin D rich foods, including:

- oily fish such as salmon, sardines, pilchards, trout, herring, kippers and eel contain reasonable amounts of vitamin D
- cod liver oil contains a lot of vitamin D, but don't take this if you are pregnant
- egg yolk, meat, offal and milk contain small amounts but this varies during the seasons
- margarine, some breakfast cereals, infant formula milk and some yoghurts have added vitamin D

Where are vitamin D supplements available?

Vitamin D supplements and multivitamins are now widely available to buy from chemists/pharmacies, supermarkets and health food shops. Some people who are pregnant or breastfeeding and children aged six months to four years may qualify for Healthy Start vitamins which contain vitamin D. Ask your health visitor about this.

A supplement only needs to contain 10 micrograms to meet the recommendation – those with a higher content of vitamin D are unnecessary and could be harmful in the long run.

Who needs a vitamin D supplement?

- All adults and children over the age of one should consider taking a daily supplement containing 10 micrograms of Vitamin D especially during autumn and winter.
- Those in the at risk groups, as above, should consider taking a supplement containing 10 micrograms of Vitamin D all year round.
- All babies under one year should be given a daily supplement of 8.5-10 micrograms unless they have more than 500mls of fortified formula milk.

Taking a vitamin D supplement as well as eating foods rich in vitamin D and spending a lot of time outside in sunshine is not a problem.

However do not take more than one supplement containing vitamin D (count cod-liver oil as a supplement) as you could exceed the 10 micrograms recommendation. Always choose a supplement tailored to the age group or condition, as fish liver oils and high dose multivitamin supplements often contain vitamin A, too much of which can cause liver and bone problems, especially in very young children, and the elderly.

Summary

Vitamin D works with calcium and phosphorus for healthy bones, muscles and teeth. You make the most vitamin D under your skin when you are outside in the middle of the day in the summer months.

You can get vitamin D from some foods including fortified foods and everyone is recommended to take a supplement, especially during autumn and winter.

There are some at risk groups who are recommended to take daily vitamin D supplements all year round. If you are concerned you are not getting enough vitamin D, speak to your doctor, health visitor, or ask to be seen by a dietitian.

The Tale of Mary Mallon, aka "Typhoid Mary"

With thanks to Wikipedia

Mary Mallon was born in 1869 in Cookstown, County Tyrone. She migrated to the USA in around 1883-1884. She lived with her aunt and uncle for a time and later found work as a cook for affluent families. From 1900 to 1907, Mary worked as a cook in the New York City area for seven families. In 1900, she worked in Mamaroneck, New York, where, within two weeks of her employment, residents developed typhoid fever. In 1901, she moved to Manhattan, where members of the family for whom she worked developed fevers and diarrhoea, and the laundress died. Mary then went to work for a lawyer and left after seven of the eight people in that household became ill.

In August 1906, Mary took a position in Oyster Bay on Long Island, and within two weeks, 10 of the 11 family members were hospitalized with typhoid. She changed jobs again, and similar occurrences happened in three more households. She worked as a cook for the family of a wealthy New York banker, Charles Henry Warren. When the Warrens rented a house in Oyster Bay for the summer of 1906, Mary went along too. From August 27th to September 3rd, six of the 11 people in the family came down with typhoid fever. The disease at that time was "unusual" in Oyster Bay, according to three medical doctors who practiced there. Mary then was hired by other families, and outbreaks followed her.

However, in late 1906, one family hired a typhoid researcher named George Soper to investigate. He published the results on June 15, 1907 in the Journal of the American Medical Association. He believed Mary might have been the source of the outbreak. He wrote:

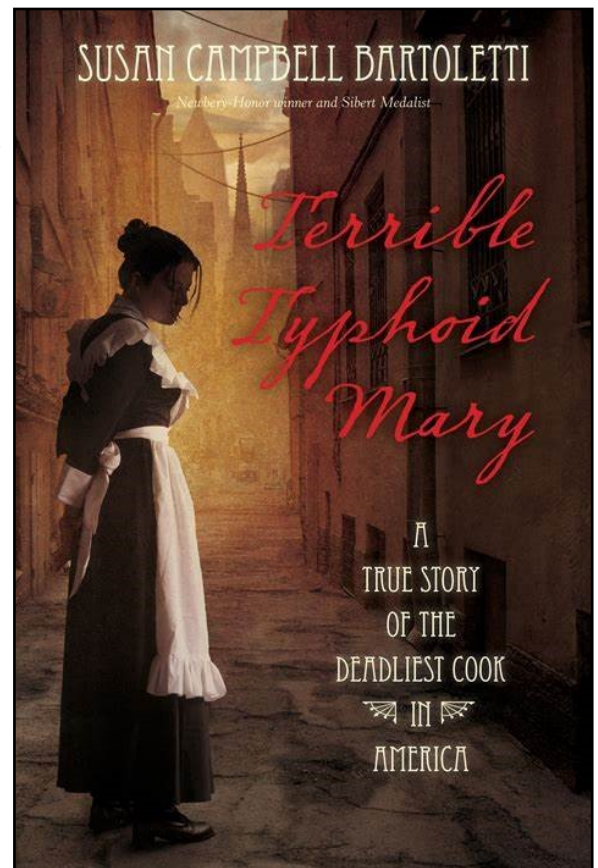
It was found that the family changed cooks on August 4. This was about three weeks before the typhoid epidemic broke out. The new cook, Mary, remained in the family only a short time and left about three weeks after the outbreak occurred. Mary was described as an Irish woman about 40 years of age, tall, heavy, single. She seemed to be in perfect health.

Soper wondered how there could be typhoid outbreaks in well-to-do families. By then, it was known that typhoid typically struck in unsanitary environments. He discovered that a female Irish cook, who fit the physical description he was given, was involved in all of the outbreaks. He was unable to locate her because she generally left after an outbreak began, without giving a forwarding address. Soper learned of an active outbreak in a penthouse on Park Avenue and discovered Mary was the cook. Two of the household's servants were hospitalized, and the daughter of the family died of typhoid. When Soper approached Mary about her possible role in spreading typhoid, she adamantly rejected his request for urine and stool samples, even coming after him with a meat cleaver. When Mary refused to give samples, he decided to compile a five-year history of Mary's employment. Soper found that of the eight families that hired Mary as a cook, members of seven claimed to have contracted typhoid fever. On his next visit, he took another doctor with him but again was turned away. During a later encounter when Mary was hospitalized, he told her he would write a book and give her all the royalties. She angrily rejected his proposal and locked herself in the bathroom until he left.

First quarantine period (1907–1910).

The New York City Health Inspector determined she was a carrier. She was arrested as a public health threat. Under questioning, she admitted that she almost never washed her hands. This was not unusual at the time; the germ theory of disease still was not fully accepted. Mary was held in isolation for three years at a clinic located on North Brother Island.

While quarantined, she was forced to give stool and urine samples, which indicated massive amounts of typhoid



bacteria in her gallbladder. Authorities suggested removing her gallbladder, but she refused as she did not believe she carried the disease. She was also unwilling to cease working as a cook. However, Mary attracted so much media attention that she was called "Typhoid Mary" in a 1908 issue of the Journal of the American Medical Association. Later, in a textbook that defined typhoid fever, she again was called "Typhoid Mary." Eventually, the New York State Commissioner of Health, decided that disease carriers should no longer be kept in isolation and that Mary could be freed if she agreed to stop working as a cook and take reasonable steps to prevent transmitting typhoid to others.

On February 19, 1910, Mary agreed that she was "prepared to change her occupation (that of a cook), and would give assurance by affidavit that she would upon her release take such hygienic precautions as would protect those with whom she came in contact, from infection." She was released from quarantine and returned to the mainland.

Release and second quarantine (1915–1938).

Upon her release, Mary was given a job as a laundress, which paid less than cooking. After several unsuccessful years of working as a laundress, she changed her name to Mary Brown and took jobs as a cook against the explicit instructions of health authorities. For the next five years, she worked in a number of kitchens; wherever she worked, there were outbreaks of typhoid. However, she changed jobs frequently, and Soper was unable to find her. In 1915, Mary started another major outbreak, this time at Sloane Hospital for Women in New York City. Twenty-five people were infected, and two died. She again left, but the police were able to find and arrest her when she took food to a friend on Long Island. After arresting her, public health authorities returned her to quarantine on North Brother Island on March 27th, 1915. She was still unwilling to have her gallbladder removed. Mary remained in quarantine for the remainder of her life, a period of just over 23 years. She became a minor celebrity and occasionally was interviewed by the media. They were told not to accept even water from her. Later, she was allowed to work as a technician in the island's laboratory, washing bottles.



Mary spent the rest of her life in quarantine and she died of pneumonia at age 69. A post-mortem found evidence of live typhoid bacteria in her gallbladder, confirming the findings of three decades earlier. Among the infections Mary caused, at least three deaths were attributed to her; however, because of her use of aliases and refusal to cooperate, the exact number is not known. Some have estimated that she may have caused 50 fatalities. Other healthy typhoid carriers identified have been identified. Today, the phrase "Typhoid Mary" is a colloquial term for anyone who, knowingly or not, spreads disease or some other undesirable thing. Children in the USA who refuse to wash their hands and knows as 'Typhoid Marys'.

Typhoid is a bacterial disease. It is sensitive to antiseptics and disinfectants. There are antibiotics and there are vaccines available for people going abroad. Modern sanitation has more or less eliminated the disease, but it is still a problem in underdeveloped countries. A specialist recipe of Mary was peach ice cream, and this is believed to be the major source of contamination. If she had specialised in a cooked dish e.g. apple pie, cooking would have killed off any infection.

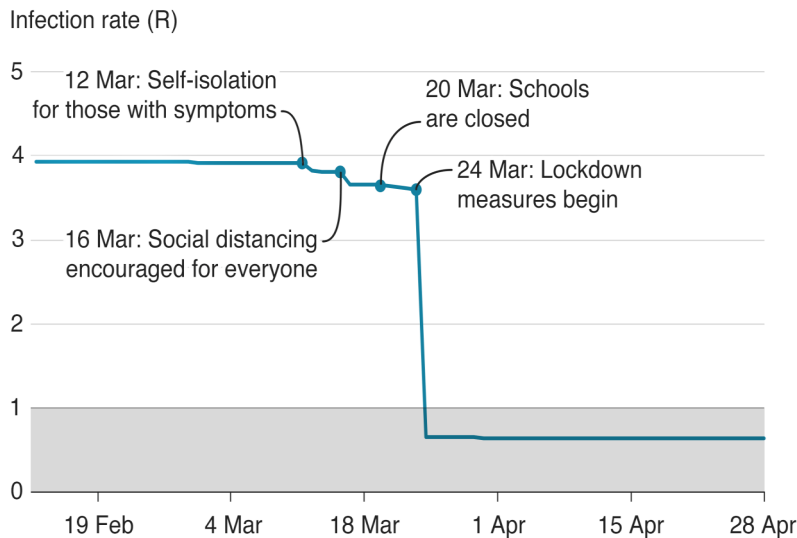
Some doctors believe that there are there are symptomless carriers of CV19 around. That is why hand washing and social isolation are the main strategies to deal with the CV19 infection.



The Lockdown and Associated Politics.

With the CV19 pandemic and no medicines to fight it, the Government had no choice but to put the country into lockdown from 12th March. This effectively reduce the rate of transmission or the R factor.

How the lockdown cut the rate of infection in the UK

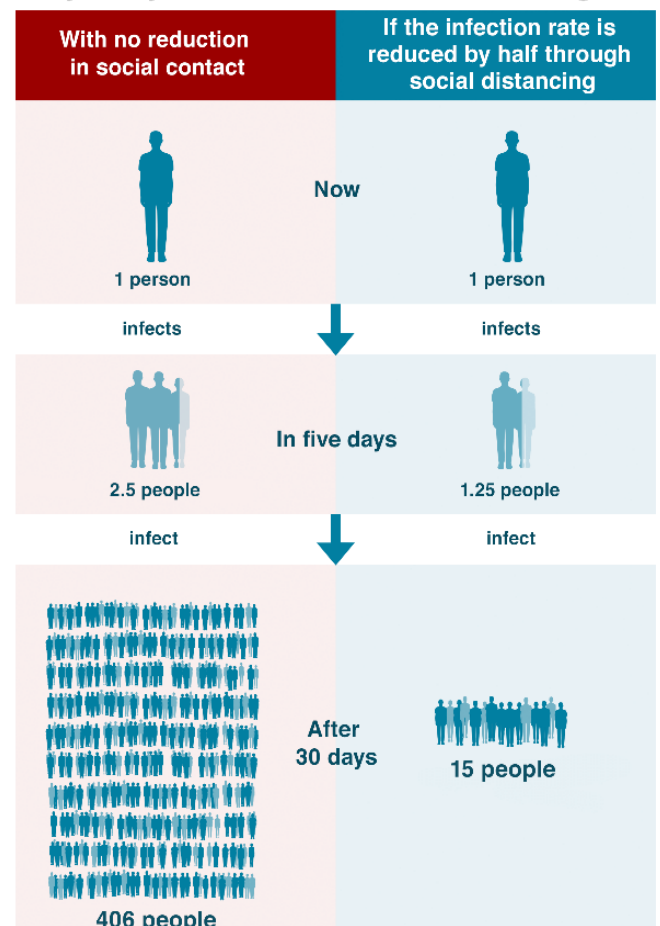


R refers to the “effective reproduction number” and, simply put, it’s a way of measuring an infectious disease’s capacity to spread. The R number signifies the average number of people that one infected person will pass the virus to. The R number isn’t fixed, but can be affected by a range of factors, including not just how infectious a disease is but how it develops over time, how a population behaves, and any immunity already possessed thanks to infection or vaccination.

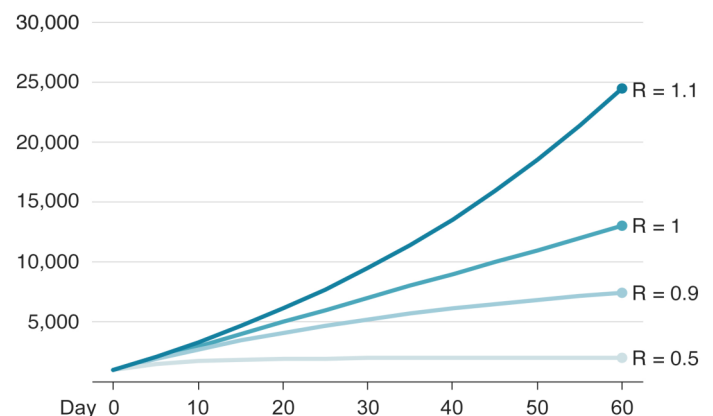
Location is also important: a densely populated city is likely to have a higher R than a sparsely populated rural area like Lincolnshire. CV19 is a new pathogen, scientists at the start of the outbreak were scrambling to calculate its R_0 , or “R nought”: the virus’s transmission among a population that has no immunity. Studies on early cases in China indicated it was between 2 and 2.5; more recent estimates have placed it as high as 6.6.

Why do we need an R of less than 1? An R figure that is even slightly over 1 can lead quickly to a large number of cases thanks to exponential growth. The whole point of the exercise is to keep R below 1 then eventually the pandemic will burn itself out. The main problem is the R is not easily measurable directly and there are different methods of calculating R which may give different answers. At the time of writing R is between 0.7 and 0.9 in late May 2020.

Why everyone should be social distancing

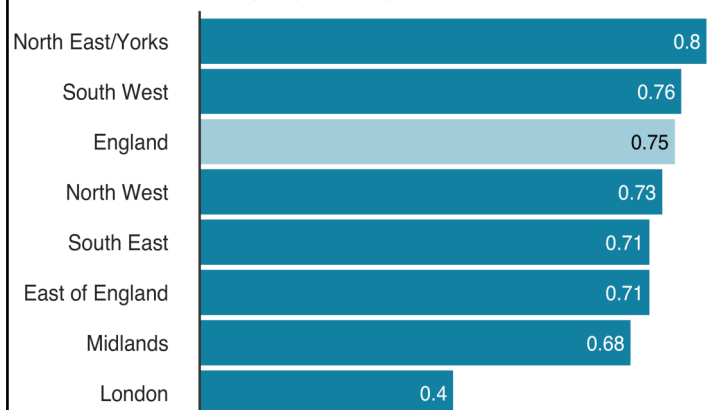


How 1,000 cases would increase under different infection rates



Coronavirus study finds varying R values in English regions

Estimated number of people one person with Covid-19 will infect



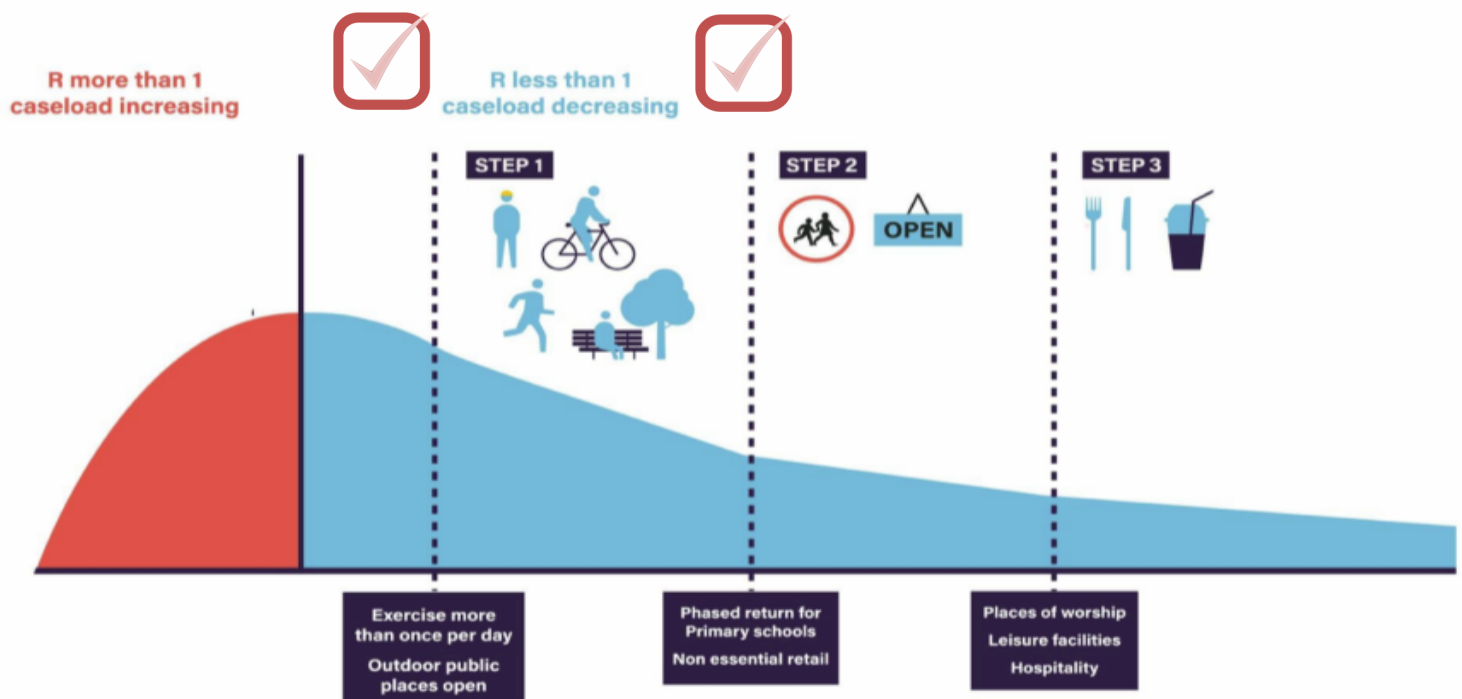
COVID Alert Levels

Level	Description	Action
5	As level 4 and there is a material risk of healthcare services being overwhelmed	Social distancing measures increase from today's level
4	A COVID-19 epidemic is in general circulation; transmission is high or rising exponentially	Current social distancing measures and restrictions
3	A COVID-19 epidemic is in general circulation	Gradual relaxing of restrictions and social distancing measures
2	COVID-19 is present in the UK, but the number of cases and transmission is low	No or minimal social distancing measures; enhanced testing, tracing, monitoring and screening
1	COVID-19 is not known to be present in the UK	Routine international monitoring








In order that the lockdown may be eased PM Boris Johnson came up the following criteria






1. Making sure NHS can cope.
2. A 'sustained and consistent' fall in death rate.
3. Infection rate decreases to 'manageable levels'.
4. Supply of tests and PPE meets future demand.
5. Adjustments don't risk a second peak.

Steps of adjustment to current social distancing measures



Some of the rules about what you can do have changed – this is why we are asking everyone to Stay Alert

-  **As long as you stay 2 metres away from people outside your household, from today you are allowed to do the following:**
-  spend time outdoors - for example sitting and enjoying the fresh air, picnicking, or sunbathing
 -  meet one other person from a different household outdoors
 -  exercise outdoors as often as you wish
 -  use outdoor sports courts or facilities, such as tennis or basketball courts, or golf courses - with members of your household OR one other person outside your household
 -  go to a garden centre
 -  Estate agents' offices can open; Viewings - both virtual and in person - are permitted

-  **As with before, you cannot:**
-  visit friends and family in their homes
 -  exercise in an indoor sports court, gym or leisure centre, or go swimming in a public pool
 -  use an outdoor gym or playground
 -  visit a private or ticketed attraction
 - meet more than one person outside your household, except for a few specific exceptions set out in law (for work, funerals, house moves, supporting the vulnerable, in emergencies and to fulfil legal obligations)

If you or someone from your household is showing coronavirus symptoms, you must self isolate. This is critical to staying safe and saving lives.

You should also continue to wash your hands more often, for 20 seconds, and follow the guidance on hygiene.

Step

This week

1

From Monday 11 May

- Social distancing measures continue
- Work from home if you can
- Avoid public transport if possible

From Wednesday 13 May

- Some industries, such as construction and engineering, encouraged to return to work if safety measures are in place
- Take unlimited amounts of outdoor exercise
- Drive to do exercise if you want
- Exercise/play sport with one person you don't live with
- Enjoy parks without having to exercise



2

1 June at the earliest

- Phased reopening of shops
- Schools could begin phased reopening
 - Process will begin with Reception, Year 1 and Year 6
 - Secondary school students with exams next year may get some time with teachers before summer holidays



3

4 July at the earliest

- Reopening of some of the hospitality industry
- Reopening of public places



More on Covid 19 Infection Control

Lockdown can only go so far to control CV19. While the major epidemic is over in China, these are still isolated clusters of cases occurring. This is likely to happen for some time after lockdown has eased for some years in the UK. The next stage will involve testing and tracking of cases. This is something that already happens say in cases of food poisoning to trace the source. However, the sheer number of cases means many CV19 tracker are being trained.

Testing. There are two basic types of test for CV19. The first type is to see if a patient has the infection, and the second type is looking for antibodies to see if someone has had the infection. Although at first limited tests were available, there has been a massive rollout and currently tests are being offered to anyone with



symptoms. At present it is considered that the laboratory tests are the most accurate. There are pregnancy test style testing kits in development which will eventually be available. Early development samples of the home test kits have been found to have a large portion of inaccurate results. So, the Government rejected them and pushed for further development. Also, there were a considerable number of fake tests appearing on the internet, eBay and Amazon have blocked postings of these fake test kits.

Tracings. About 25,000 CV19 'detectives' are being trained to track and trace cases. This has worked in other countries.

What will happen ? Anyone who develops symptoms of coronavirus - a persistent cough, fever or a sudden loss of taste or sense of smell - has to isolate for seven days and the rest of their household for 14 days. This is in keeping with rules already in place. But from now on, everyone with symptoms should ask for a test online or phone to arrange a test by calling 119. If the test comes back negative, everyone in the household can go back to normal. But if the test comes back positive, the contact tracing team or local public health teams will get in touch - via text, email or phone call - to discuss whom the person has come into close contact with and places they have visited. Any of those contacts deemed at risk of catching the virus will be emailed or texted with instructions to go into isolation for 14 days, whether they are sick or not. They will be tested only if they develop symptoms. The rest of their household does not have to isolate unless someone becomes ill. People would have to self-isolate on more than one occasion if told to do so by the NHS. Those who have already had the virus must also self-isolate, as it is not known whether they can still transmit it.

What is the difference between the tests?

Swab test (diagnostic test)

Have I got it?



How long do results take?

Days

Blood test (antibodies test)

Have I had it?



Seconds

What is required?

Swab from nose or throat

Blood sample

What happens next?

Laboratory runs a polymerase chain reaction (PCR) test

Solution added to test device

How does it work?

Looks for coronavirus genetic material

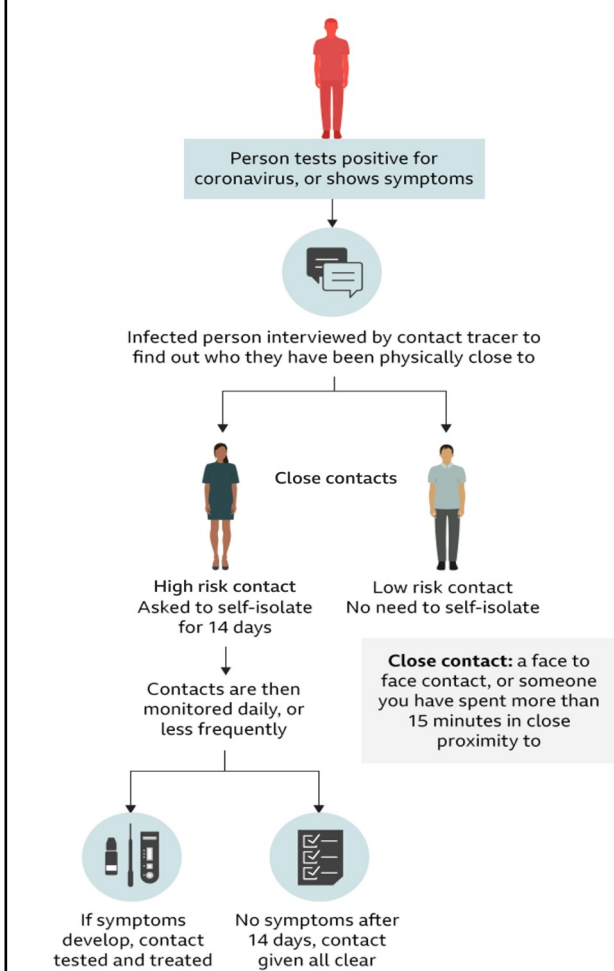
Detects antibodies created by body to fight virus

What does a positive result mean?

Patient has the virus

Patient has had the virus in the past

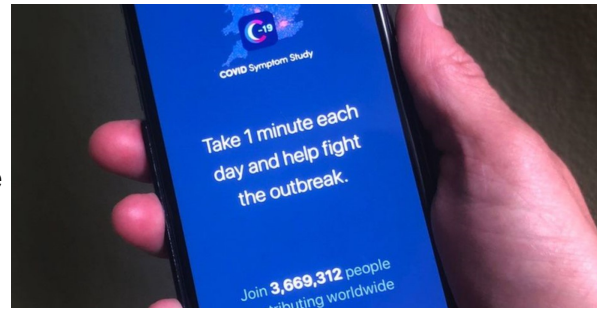
How manual contact tracing works



What is a close contact?

Only people who have been "close" to an infected person will be contacted by tracers. Close contacts are:

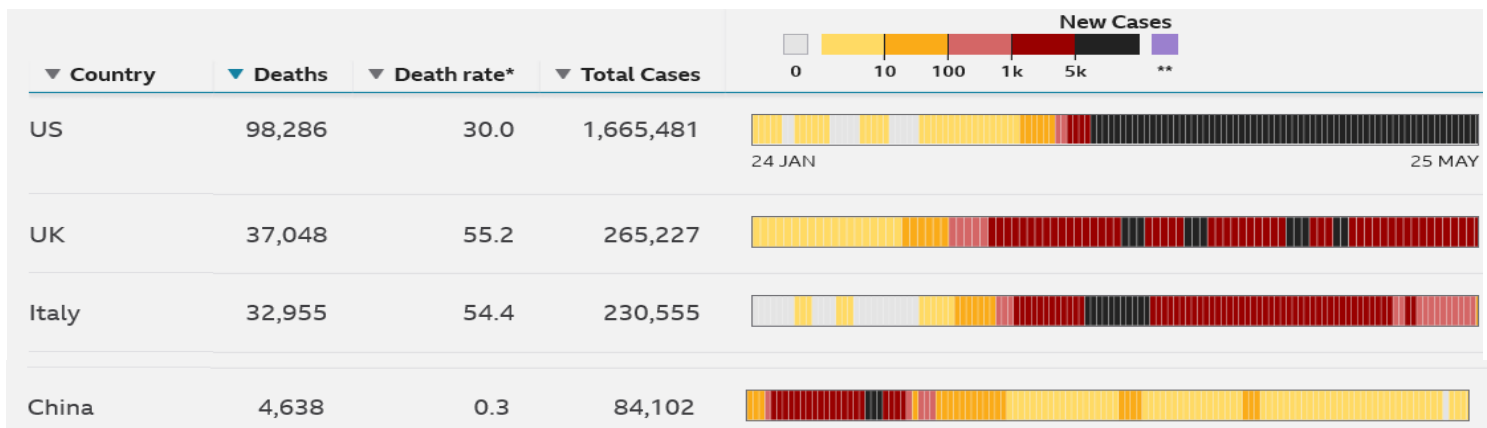
- People you spend 15 minutes or more with at a distance of less than 2m
- People you have direct contact with - such as sexual partners, household members or people with whom you have had face-to-face conversations at a distance of less than 1m
- The contact must have taken place between two days before and up to seven days after symptoms appeared.



What happens if I dispute being a close contact.?

It is a person's "civic duty" to follow the instructions of the NHS Test and Trace team. This will be voluntary at first because we trust everyone to do the right thing. But we can quickly make it mandatory if that is what it takes.

What Next ? (Below are parts of a table from the BBC website)



If you look at the China strip, you will see a record how the new cases started and how they exponentially grew. Due to 100% lockdown it took a couple of months before the new cases went into single figures. Only an authoritarian state like China could have achieved this. However, there continues to be sporadic cases, according to the Chinese, from people returning home to China and bringing in new cases. Obviously, the answer is quarantine. The data shows ongoing new cases despite the presidents claims. The Italian data shows the results of their lockdown, where the UK cases are still significantly ongoing. Even when the case numbers drop to single figures, it is highly likely that for some time — possibly more than a year there will still be sporadic cases as in the case of China. It is highly likely that there will be local lockdowns, where clusters are identified.

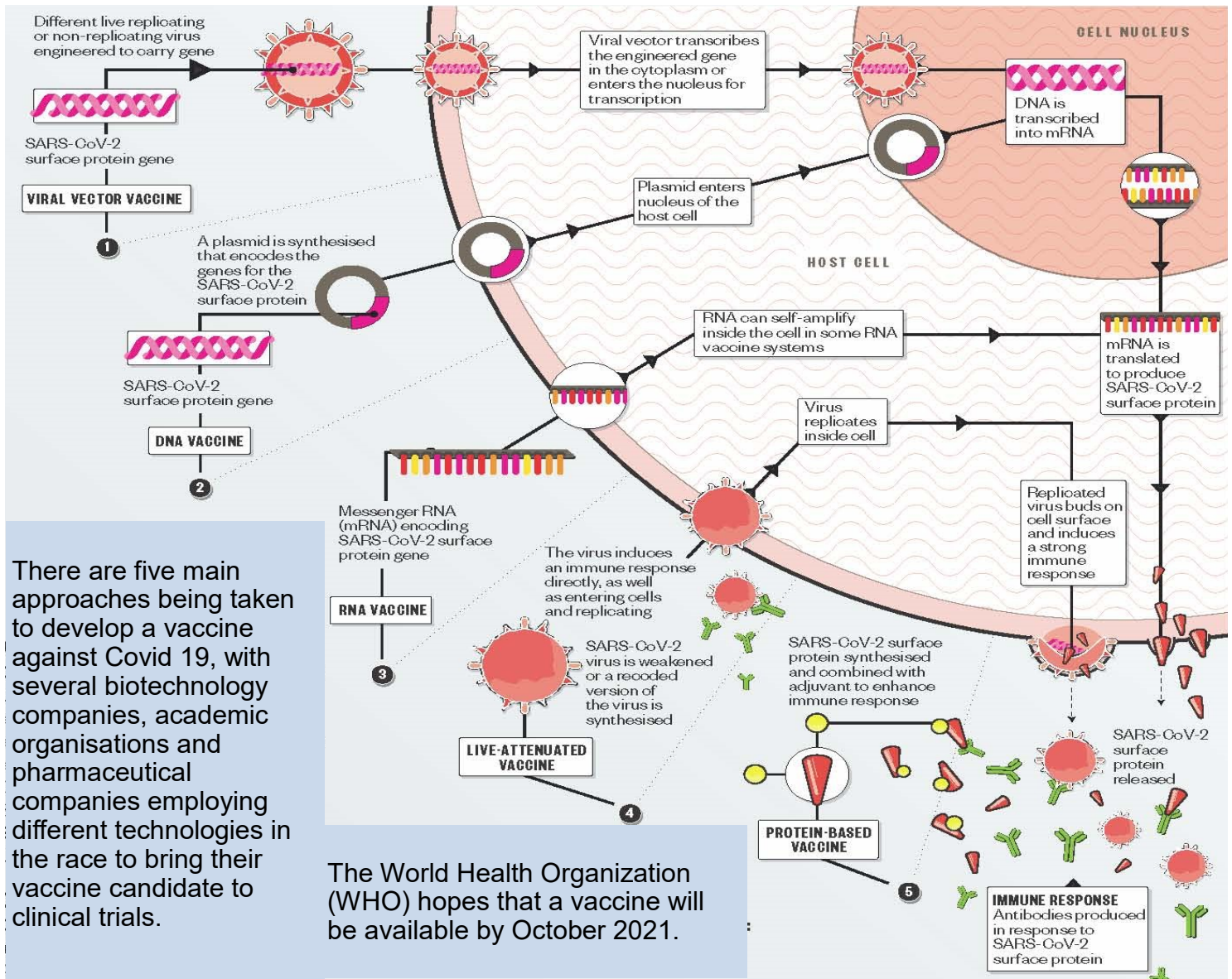
From Monday 1st June. The Government has decided that its tests (protecting the NHS, consistent falls in death rates, consistent falls in the infection rates, solving operational problems, and avoiding a second peak) for lifting lockdown restrictions have been met

- Schools will re-open for children in receptions, year one and year six. From 15 June, years 10 and 12 will start to receive some face-to-face teaching
- Some non-essential retail will open, with more to come on 15 June, depending on the infection rate
- Six people will be able to meet, so long as they remain social distancing rules (staying 2m from people from outside your household) and remain outside. People will be able to meet in private outdoor spaces. The public is advised to avoid mixing with multiple different households in quick succession to avoid quick transmission of the virus.

The rate of infection is still near to one (between 0.7 and 0.9), meaning lifting measures has to be done very carefully. People who are classed as extremely clinically vulnerable must remain shielded. However, if the absolute number of infections falls, some lifting of shielding may be possible.

Coronavirus Vaccine Development *Image with thanks to the PJ.*

The only effective way to control CV19 will be vaccination. Here are the strategies being used.



No.	Approach	Organisations working on vaccine:	Estimated date of first human trials
1	Viral vector vaccine.	Johnson & Johnson; Geovax Labs and BravoVax; University of Oxford and Advent Sri; Tonix Pharmaceuticals and Southern Research; Altimune; Greffex; Vaxart; OanSino Biologics; Zydus Oadila; Institute Pasteur	June 2020
2	DNA vaccine.	Inovio Pharmaceuticals with Beijing Advacoeine Biotechnology; Applied DNA Scienes, Takis Biotech and Evvixax; Zydus Oadila	April 2020
3	RNA vaccine.	OureVao; Modema and US National Institute of Allergy and Infectious Diseases; Stermirna Therapeutics, Tongji University and Chinese Center for Disease Control and Prevention; Imperial College London; Arcturus and Duke-NUS Medical School, Singapore; BioNTEoh and Pfizer	Maroh 2020
4	Live-attenuated vaccine:	Oodagenix with Serum Institute of India	August 2020
5	Protein-based vaccine	Novavax; Clover Biopharmaceutioals with GSK; Baylor College of Medicine, University of Texas Medical Branch, New York Blood Center and Fundan University, China; University of Saskatchewan, Canada; University of Queensland, Australia, GSK and Dynavax; Vaxart; Genereux; ExpreS2ion; Vaxil Bio; Sanofi Pasteur; iBio/00-Pharming; Genereux and EpiVax; Walter Reed Army Institute of Research and United States Army Medical Research Institute of infectious Diseases; EpiVax and University of Georgia	June 2020

North of Doncaster. *Personal humorous satire from Trevor Wainwright.*

Having set the Nativity and Epiphany in Yorkshire and Castleford and began work on The Castleford Gospel Book of Trev I began to wonder how I would write it based on things happening today, and the old question "What would He say?". Watching the news, I was inspired to write the following initially about the panic buyers and hoarders. On March 27th, the day I should have begun my 10th Texas Poetry Tour. I began working as a volunteer collecting prescriptions and delivering food parcels to those in self isolation, after a few days word got round and it was evident there was another group ruled by greed and so they were altered to include the second group. They have been read to great acclaim; I hope you enjoy them too. Stay safe.

1) This afternoon's lesson comes from the Castleford Gospel: Book of Trev:

And He said unto them "During times of crisis and emergency, do not be like the greedy, selfish panic buying hoarders who think only of themselves for they are lower than the snakes belly, but thee when thou does thy shopping take only what is needed for thee and thy family, this way there will be plenty for all, for the old, for the vulnerable, for the emergency service workers whose very nature of their job makes it impossible to shop at times reasonable to others, and they on realising this will feel valued and not forgotten. Be, also not like the scrounging, greedy freeloaders at the other end of the scale who try to rip off those helping them in claiming more than their share so they have more money to spend on booze and baccy. This way all those in need will be helped and receive a fair share of other people's charity. And there will be a great feeling of community spirit, and when the crisis is over thou will be able to look back with pride and say we pulled together and feel proud of ourselves and be justified in thinking with contempt on the greedy, selfish panic buying hoarders and scrounging freeloaders as nothing more than a set of..... and thou may chose thine own words to describe them. Here endeth the lesson

2) During a crisis when the country was in social isolation a man asked who is my neighbour. He said "An emergency worker had finished a 48 hour shift and called at the supermarket to by some food for her family so they may share a meal together. When she got there the shelves were stripped bare and those who had done it were stood at the checkouts with their excess of goods, she was not able to get anything walked out and began to weep."

Many having paid for their excess of goods passed her with their trolleys fully laden, put them in into the boots of their large cars and drove off. Shortly after a man carrying two carrier bags sufficient for his needs saw her and how upset she was. He was moved to help asking what was wrong to be told "I have just finished work after 48 hours and there is nothing to buy for my family."

Immediately the man opened is carrier bags and said, "take what you need". She was reluctant but he insisted saying "you serve us with your time and talents selflessly, I may need you one day, this is the least I can do". So, she gratefully took from him what she needed, thanked him and they parted". Asking, which was the emergency services workers neighbour, he got the reply, the one who gave of what he had. So, he said to the man, "go and do likewise for there is enough for all."

3) Then the King will say to those on his right, "Come, you who are blessed by my Father; take your inheritance, the kingdom prepared for you since the creation of the world. For in the time of crisis you made sure my needs were met and I was helped, and was not left alone but received a fair, share and did not feel forgotten" Then the righteous will answer him, "Lord, when did we do this to you" The King will reply, "'Truly I tell you, whatever you did for the elderly, the vulnerable, the emergency and key workers, by shopping wisely, not being greedy, selfish, panic buying and hoarding, not taking more than your share from the charities set up to help you and ripping them off so others would not get a fair share, in doing this to help them you helped me." Then he will say to those on his left, 'Depart from me, you who are cursed, into the eternal fire prepared for the devil and his angels. For you did nothing of the kind and my needs were not met and they will answer when did we not do this, when you did not consider the elderly, the vulnerable, the emergency and key workers, when you were greedy, panic bought were selfish and hoarded your goods, and tried to get more from those set up to help the needy so thou could spend thy money on booze, cigs and drugs, in not helping them not even once you did not help me. Then they will go away to eternal punishment, but the righteous to eternal life."