

STAY HOME | SAVE LIVES | PROTECT THE NHS

# COVID-19

## A PRACTICAL GUIDE FOR THE MUSLIM COMMUNITY



[www.muslimdoctors.org](http://www.muslimdoctors.org)



[info@muslimdoctors.org](mailto:info@muslimdoctors.org)



[@muslimdoctors.org](https://twitter.com/muslimdoctors.org)



[//muslimdoctorsassociation](https://www.facebook.com/muslimdoctorsassociation)



[: muslimdoctorsassociation](https://www.instagram.com/muslimdoctorsassociation)

# CONTENTS

1. The Basics .....2-7
2. Preparation .....8-12
3. Managing Covid-19 .....13-17
4. Other medical conditions .....18-25
5. References & further reading.....26-29

**“ KEY MESSAGE:**  
*Muslim communities are being disproportionately impacted by Covid-19 and a range of practical steps can help mitigate this risk ”*

Covid-19 is a global pandemic affecting more than 100 countries across the world. In the UK more than 20,000 people have died in hospital, with many more in the community. Black And Minority Ethnic (BAME) communities are at a higher risk of serious illness and death. The Muslim community is at particular risk, with causes being multi-factorial ranging from structural, social, economic, cultural, faith, linguistic, behavioural, physiological and genetic factors thought to be implicated.

The measures in this guide are a framework to understand how you can keep yourself, family, the vulnerable and wider community safe.

May Allah reward you for looking after your community as well as your elders.

# SECTION 1

## THE BASICS

In order to reduce the transmission of Covid-19, a range of personal and public health interventions are necessary to implement.

In this section we cover

- Hand hygiene
- Social distancing
- Shielding
- Self-isolation
- Face masks

## 1. HAND HYGIENE

- Wash your hands for 20 seconds (x2 rounds of Happy Birthday song)
- Watch and learn this technique to make sure you are washing your hands properly: <https://www.youtube.com/watch?v=JC7JnSkeyLM>
- Do this after every time you touch any surface when you're out or use alcohol gel
- Do it as soon as you come home and wipe down any door handles you touched on your way in with alcohol gel
- And of course, don't touch your face without washing your hands.

## 2. SOCIAL DISTANCING- BAME COMMUNITIES

- We are seeing BAME communities affected more by Covid-19 and the causes are likely multifactorial
- The increased presence of multigenerational households in BAME communities is likely to play a part
- A high number of BAME people work in the NHS and also as keyworkers mean that social distancing is simply not possible for them as their jobs mean they will be around people
- The measures below are a framework and a guide

### 3. SOCIAL DISTANCING- GENERAL PRINCIPLES

- The aim of social distancing is to break chains of transmission of the infection.
- There is a fine balance between being careful and driving yourself mad, so just do what you can!
- Much of it can become routine and seem second nature after a while
- The guidelines are clear: stay at home
- The infection can spread even when you don't have symptoms
- Knowing that older people are more likely to be adversely affected with infection, the priority is to keep them safe
- If you live in a multigenerational household, ideally everyone should stay indoors at much as possible
- Try to work from home if you can and minimise all your social contact as much as possible
- The 2 metre rule (or more if you can manage it) is essential every time you leave the house to protect not only yourself, but everyone in your household
- Knowing that elders are most at risk, ideally everyone should be staying at home as much as possible within a multigenerational household. However, if this is not possible (for example because of your job) we need to acknowledge the risk associated with a household member frequently having contact with others outside the home, and we need to take steps to mitigate it.
- Consider if elders/parents even stay in another household (e.g with a sibling) where everyone is fully self isolating, if it's not possible in your own, for example if you have to go to work?
- Of course, this is often not possible nor desirable and our efforts need to be considered and measured

## 4. SOCIAL DISTANCING- CARE WORKERS

- This advice is if you are a key worker and to prevent transmission of infection to their household members
- If you live in a household where you are unable to work from home (multigenerational or otherwise), consider doing the following to reduce spread of infection in the house:
  - As soon as you get home, change out of your clothes
  - and shower before interacting with anyone (doctors have been known to get undressed on the front porch before setting foot into the house!)
  - Wash your clothes at 60 degrees (cotton clothes will be better for this reason)
  - Disinfect any door handles you touch on the way in
  - Thorough hand hygiene
  - Try to minimise your time in shared spaces with any at risk person (e.g an elder) or try to keep a distance
  - If you share a bathroom with an elder/at risk person, wipe down the toilet seat and door handles with disinfectant – this is because we know the virus is shed in the stool as well
  - Minimise physical contact with anyone at risk e.g hugging/kissing. Children are considered low risk so the same precautions may not be necessary but there is emerging data on infection in children. At the very least try to make sure you have showered and changed clothes after coming home before interacting with your children.
  - You may consider trying to keep some distance between your child and an at-risk person within the household e.g a grandparent, in case your child carries infection from you to them. It is very difficult with children particularly if they're too young to understand so use your judgement and do what you can
  - If you develop any viral symptoms (see below), take extra care to isolate within the household and consider wearing a face mask in shared/communal areas. Keep the windows open when you go to the bathroom or kitchen and disinfect afterwards. A person is most infective when they have symptoms so aim to reduce contact with anyone at risk at this time.

## 5. LIVING WITH SHIELDING HOUSEHOLD MEMBERS

- The shielding group is the extremely vulnerable risk category group
- Patients in the shielding group should have received a letter from NHS England or their GP to inform them and advise them of support
- There are very clear, strict isolation guidelines online for these people and their households.
- If you are a carer for someone who is shielding, and you cannot work from home, speak to your employer or get advice about whether you could be eligible for furlough: <https://www.gov.uk/guidance/claim-for-wage-costs-through-the-coronavirus-job-retention-scheme>

## 6. ISOLATION GUIDELINES- TIMING

- UK guidance states a symptomatic person should isolate for 7 days from the onset of symptoms or 48 hours until the fever subsides
- The World Health Organisation says to isolate for 14 days from onset of symptoms
- Evidence suggests a person can shed the virus for even 3 weeks after infection but it is not known how long a person is infectious for during this period
- Most people are most infectious 1-2 days (sometimes longer) before symptoms begin and for the first week of illness
- We know that people can often deteriorate in the second week of symptoms
- Use your judgement and if circumstances allow, isolate for longer than 7 days if you can

## 7. ISOLATION GUIDELINES- SYMPTOMS

- The guidance states to isolate if you or someone in your household develops new continuous cough or a fever as these are the most common presentations of Covid-19
- There is massive variation in how Covid-19 can present
- Often tiredness and muscle aches are the first symptoms
- Other symptoms include a loss of smell or taste, perhaps a sore throat or even diarrhoea
- 
- In these uncertain times, we can use our judgement and be more strict with our isolation criteria. This will save more lives

## 8. FACEMASKS

- There is emerging evidence in favour of a face mask or face-covering when going outside the house
- Your face mask does not make you invincible; make sure you don't ignore more important precautions
- Stay indoors, keep washing your hands and if you have to go outside, keep at least 2m apart
- If you are social distancing, you should rarely be wearing a mask anyway.
- To prevent incorrect use and contamination:
  - i. Do not handle the front of the mask
  - ii. Do not let it dangle around your neck
  - iii. Wash your hands before and after handling the mask
  - iv. The risk of contamination is more of a concern in healthcare workers whose close contact with patients carries more risk of infection.
  - v. If you are socially distancing when outside, you will reduce the chance of contaminating your mask

## SECTION 2 PREPARATION

The full impact of Covid-19 will extend beyond the disease itself, and there will be wider health implications due to reduced services and rationing of care. The following recommendations may help mitigate this.

In this section we cover

- Preparing a care plan
- Supplements
- Equipment at home
- Skills to learn and practice

# 1. PREPARING A CARE PLAN

**This is important and can be done from home online – there is a further part to be done in conjunction with your GP via telephone so you can get started now and call your GP to complete the rest of it..**

- Go to <https://www.coordinatemycare.co.uk/mycmc/> and follow the simple steps online.
- Do this for everyone in your household
- Unlike your hospital or GP notes, this record is shared across the NHS so paramedics, 111, hospitals as well as your GP practice
- You can record information about yourself, your health, your wellbeing and personal preferences
- This can be vital, particularly in urgent situations when it is often difficult to communicate these details
- If you do this, it will help everyone know who you are, what conditions you have, and how you want (and don't want) to be treated
- This is especially important in the current climate when relatives may not be able to visit their loved ones in hospital
- You may be hearing about care plans and end of life planning and ventilators and do not resuscitate orders
- These are emotive and complex conversations and there is detail available online on how these steps and decisions are made
- Your medical team will always take into account your and your family's wishes and will always act in our best interests

## 2. SUPPLEMENTS

**The advice in this section is based on recommendations and anecdotal reports from doctors' personal and professional experience. Supplements are not a substitute for a healthy diet and lifestyle or public health interventions such as hand hygiene and social distancing.**

- Supplements are not a substitute for a healthy diet and lifestyle or public health interventions such as hand hygiene and social distancing
- If you have any medical conditions or take any regular medications, you should seek medical advice before starting any new treatment

- **Vitamin D**

- i. We should all be taking Vitamin D in the UK
- ii. NICE (National Institute for Health and Care Excellence) recommends 400IU per day for prevention of Vitamin D deficiency
- iii. Scientists are exploring a link between adverse Covid-19 outcomes in BAME populations and Vitamin D but it is too early to tell if it is causal.
- iv. Most dark skinned people have low Vitamin D so may benefit from at least 1000IU per day

- **Vitamin C (1000IU)**

- i. Based on data that (intravenous) Vitamin C is used in Covid-19 treatment
- ii. Do not take high dose vitamin C if you have blood disorders like thalassemia, G6PD deficiency, sickle cell disease, and hemochromatosis

- **Zinc**

- i. There is data that zinc is used in Covid 19 treatment for inpatients.
- ii. In studies (outside of Covid19), it has been shown to have some anti-viral effects
- iii. Seek medical advice if you are on blood thinners

## 3. EQUIPMENT AT HOME

**GPs are working remotely and are trying to minimise the need for people to come to the surgery. Having certain equipment is very useful as it will help your GP assess you better over the phone if you become unwell (with Covid-19 or otherwise).**

- **Thermometer**

- Digital thermometers are recommended- digital ear thermometers are the easier to use than oral (under the tongue)
- These can be bought from pharmacies and supermarkets
- Forehead strip and glass thermometers are not recommended
- Make sure you sanitise/ change the ear piece between use

- **Blood pressure monitor**

- Digital blood pressure monitors are recommended
- These can be bought from pharmacies and supermarkets

- **Pulse oximeter**

- Pulse oximeters are very important when assessing someone with Covid-19.
- This is because we increasingly see people can be relatively well for the first week of infection and then deteriorate into week 2, often without much warning.
- In Covid19 is oxygen levels can be very low in someone who might not look too bad or may not even feel short of breath.
- We can use this equipment to detect someone who is likely to become very unwell, before they do.
- Pulse oximeters are increasingly hard to get hold of but it is still possible
- Samsung phones can measure oxygen levels as well, although this is not validated to do so in a medical setting.

### **Forming a community network**

- As some equipment may be increasingly difficult to obtain think about forming a community network
- Know who has what already (e.g a relative with a BP machine, virtually anyone with a child will have a thermometer)
- Have a system where someone can safely collect and deliver the equipment
- You could drop it through someone's letterbox and sanitise it when you get it back
- Afterwards, wear gloves to wipe it down with an alcohol wipe after use and let it dry before touching it again.

## 3. SKILLS TO LEARN AND PRACTICE

**Being aware of certain skills will be useful if you become unwell with Covid-19 or otherwise.**

- **Measuring pulse**
- If you get sick (from Covid-19 or otherwise), it's quite possible the GP will ask you to measure your pulse.
- Have a go beforehand so you can be confident
- Watch this video: <https://www.medicalnewstoday.com/articles/258118#finding>
  
- **Measuring breathing rate**
- As above!
- Watch here: <https://www.medicalnewstoday.com/articles/324409#causes-of-high-respiration>
  
- **Measuring oxygen saturation**
- Pulse oximeters are very important when assessing someone with Covid-19.
- See previous page for information
  
- **Teaching FaceTime/video calls**
- 
- If possible, see if you can teach how to do this, on any level on whatever device is available to them.
- Hospitals generally do not allow visitors at the moment so being able to use a device in this way can help make things easier if they are admitted to hospital for Covid-19 or indeed anything else.
- Some wards in certain hospitals have bought/been donated iPads in response to visitor restrictions, but availability is variable. Of course, staff will try to help patients stay in touch with their loved ones but resources can be limited.
- Being able to use technology can be empowering, particularly if there are any language barriers.

## SECTION 3

# IF YOU GET COVID-19

Covid-19 can present in multiple ways. The majority of people affected will have mild disease but those who are older and/or have underlying health problems are at a higher risk of complications.

In this section we cover

- Managing symptoms
- Packing a hospital bag
- Monitoring symptoms
- Managing in an emergency

# 1. MANAGING SYMPTOMS

**The commonest symptoms are fever and new persistent cough but there are other symptoms too such as shortness of breath, fatigue, body pain, headache, loss of smell or taste, headache, dizziness, and in rare cases abdominal symptoms (diarrhoea and vomiting)**

- DRINK A LOT OF WATER: keeping your kidneys hydrated is very important. Aim for at least 2L (unless you have been previously advised
- to have a fluid restricted diet).
- Take paracetamol for fever. Avoid ibuprofen.
- If you are diabetic and have a blood sugar machine at home, check your blood sugars more frequently. Seek medical attention promptly if blood sugars are rising or difficult to control, as sometimes this can be a sign of worsening illness.
- Sleep on your front. This is frequently done in intensive care units to better improve oxygenation in the lungs and people have reported symptom benefit even in mild disease. However, only do this if you're generally fit and mobile – don't persist with it if it's hard to get in and out of this position. It is also not advisable in pregnancy.
- If you feel well enough, try to sit up rather than spend most of your time lying down. This helps the air to circulate around your lungs better.
- Breathing exercises – aim to regularly take slow, deep breaths from the depths of your belly (most of us tend to breathe shallowly from our chests if we don't pay attention to it). Don't get dizzy or lightheaded doing it, so just remembering to do a couple of deep breaths every hour will help make sure air gets around your lungs properly. If it makes you cough or feel worse, then don't persist with it.
- Isolate as much as possible from everyone in your household – see government guidelines on this.
- Assume you and everyone in your household is infected with Covid-19. You must not leave your house in accordance with government guidelines.

## 2. HOSPITAL BAG

**Prepare a hospital bag like a pregnant lady would! Insha'Allah, it won't be needed. However often, when people do get sick, it happens quickly and there isn't much time to prepare. Given that visiting is restricted, being prepared can help minimise stress.**

- Toiletries
- Slippers
- Pyjamas/comfortable clothes/jumper/underwear/socks - though you would wear a hospital gown, it's good to have your own things
- 
- Mobile phone + charger + headphones
- iPad + charger
- Quran/book of duas/prayer beads/prayer mat
- A few photos of loved ones
- Snacks
- Books
- Download apps/podcasts/TV shows/audio of Quran. If this is for your parents/elder, make sure they are able to use this
- Write a list of everything you've put inside the bag with next of kin contact details and leave it towards the top of the bag.
- Tell the person who is going to hospital that the list is inside. That way they or a healthcare worker tending to them will know what's inside and can assist them with it.

## 3. MONITORING SYMPTOMS

**Mild symptoms of Covid-19 are managed at home as for any viral illness.**

- **Using a pulse oximeter**
- If you have access to a pulse oximeter – use it – even if your symptoms are mild.
- This is because we know that sometimes a person can have very low oxygen levels but not seem to be showing any signs of this e.g. they may not be breathless.
- Follow the instructions and place it on your finger tip, so that the screen is facing upwards.
- Leave it for a few minutes and let the numbers settle. One number will be your pulse rate and the other your oxygen saturation percentage.
- **If the oxygen saturation percentage is below 96%**
- Try putting it on a different finger and leave it on for a few minutes longer, as sometimes it can take a while to creep up.
- Try a few more times but if it is persistently not going above this level, then speak to a doctor.
- The doctor will be able to evaluate this further with the clinical context and advise if this is significant.

## 4. MANAGING IN AN EMERGENCY

**If you are not managing with your symptoms, you must get medical advice via your GP/111/999.**

**If you or a family member is experiencing worsening breathlessness and you are awaiting medical advice/an ambulance, these measures may help:**

- Keep the room cool
- A cool flannel on the face
- Opening the doors/windows. Try to sit facing a window.
- NICE recommends the following breathing techniques
  - i. Controlled breathing techniques
    - These include positioning, pursed-lip breathing, breathing exercises and coordinated breathing training
  - ii. Pursed-lip breathing,
    - People inhale through their nose for several seconds with their mouth closed, then exhale slowly through pursed lips for 4 to 6 seconds. This can help to relieve the perception of breathlessness during exercise or when it is triggered
  - iii. Relaxing shoulders
    - Relaxing and dropping the shoulders reduces the 'hunched' posture that comes with anxiety
  - iv. Sitting upright
    - Sitting upright increases peak ventilation and reduces airway obstruction
  - v. Leaning forward with arms
    - Bracing a chair or knees and the upper body supported has been shown to improve ventilatory capacity

## SECTION 4

# OTHER MEDICAL ADVICE FOR COVID-19 AND BEYOND

Covid-19 can present in multiple ways. The majority of people affected will have mild disease but those who are older and/or have underlying health problems are at a higher risk of complications.

In this section we cover

- Managing symptoms
- Packing a hospital bag
- Monitoring symptoms
- Managing in an emergency

## 1. IF YOUR CHILD IS UNWELL

- Seek medical advice like you always used to.
- It is a very confusing time, but we know that sick children have been coming to hospital far too late.
- Speak to your GP or access emergency services like you would have done before.
- If you are worried and not happy with the advice given by your GP or 111, particularly if your child has not been physically seen, then take them to A+E – like you would have before.
- Most hospitals have separate ‘clean’ and ‘dirty’ sites with separate A+E entrances so that Covid-19 patients are kept away to reduce contamination risk.

## 2. GET YOUR CHILD VACCINATED AS USUAL

- GP surgeries continue to provide this essential service and please don't delay unless you or someone in your household has symptoms.
- If there's one thing this pandemic has shown us, it's the importance of vaccines!

### 3. IF YOU ARE PREGNANT

- Pregnant women can be generally reassured their risk is low from Covid-19 (although they are still classified as a vulnerable group)
- Emerging evidence suggests that transmission from a woman to her baby during pregnancy or birth is probable.
- It is important to emphasise that in all reported cases of newborn babies developing coronavirus very soon after birth the baby was well.
- Many Early Pregnancy Assessment Units are offering remote services and doing minimal scanning if at all. These are the services to assess issues in early pregnancy like miscarriages.
- Antenatal care is generally being done remotely
- Most units currently allow one birthing partner to attend a woman's labour as long as they are well.
- Many areas no longer offer home births due to staffing shortages
- Birthing partners cannot stay on the postnatal wards after the baby is born
- We are advising patients to buy blood pressure machines, urine dipstick strips and tape measures as most antenatal care is being done remotely. Discuss this with your midwife.
- There may be wider implications of social distancing and isolation on a new mother in the postpartum period.
- Of course, we do not know what the situation will be like in 9 months time!

## 4. CONTRACEPTION

- This is of course a personal choice and women should be empowered to make informed decisions in this regard.
- The NHS Choices website has more information and the Family Planning Association has a summary table which is helpful and can be accessed via:
  - [www.fpa.org.uk/sites/default/files/your-guide-to-contraception.pdf](http://www.fpa.org.uk/sites/default/files/your-guide-to-contraception.pdf)
- Hormonal contraception is considered most effective and can be started by your GP over the phone. Having an up to date weight and blood pressure is helpful for this.
- These free online services are available which work in conjunction with the NHS to provide sexual health services and contraception: [www.shl.uk](http://www.shl.uk) and [www.sh24.org.uk](http://www.sh24.org.uk).
- Please also find advice for women seeking contraception, abortion and other sexual and reproductive healthcare during the COVID-19 pandemic from the Faculty of Sexual and Reproductive Healthcare here:  
: <https://www.fsrh.org/how-to-access-contraception-coronavirus/>

## 5. DOMESTIC ABUSE

- We know the lockdown is especially unkind to those with difficult domestic circumstances.
- Domestic abuse is a real risk.
- Stay in touch with those at risk, be there and check in regularly.
- Offer support and advice to get help as needed.  
<https://www.gov.uk/guidance/domestic-abuse-how-to-get-help#seek-helpe!>

## 6. GP SERVICES

- GPs are working remotely and will bring you in for review if it is needed, so please call if you need them.
- Referrals are still happening to hospital for suspected cancer and other urgent care.
- GPs are getting advice from secondary care specialists about many things, so help is still available.

## 6. IN A MEDICAL EMERGENCY

- Call 999 – just as you would have done before.
- There is concern that people are not seeking medical help when they should be.
- As previously mentioned, care is being taken to reduce the spread of Covid19 in hospital, so please don't suffer alone.

## 8. BEREAVEMENT

- We are now facing the devastating reality of losing loved ones whilst having to socially isolate.
- Though it goes against our human instincts, please do not visit the homes of relatives or friends to console the bereaved or pay your respects – even if the person died from other causes (since they may still have carried the virus without symptoms).
- The current circumstances are undeniably cruel, but please do not let the loss of your loved one contribute to the further spread of this dreadful illness.
- Consider using video/audio calls instead if possible.
- In exceptional circumstances, the situation may require your physical presence within the home of the bereaved, for example the loss of a parent or sibling. In this deeply upsetting scenario, be aware that once you
- In this deeply upsetting scenario, be aware that once you make contact, you and your own household should consider yourself exposed. It is therefore recommend that you and everyone in your own household should self isolate for 14 days thereafter, regardless of whether you have symptoms. This is to avoid further spread of the virus.
- If you or anyone in your household develop symptoms of Covid-19, you should reset the clock and restart the isolation timings as per government guidelines. May Allah make this easy for you and may He
- reward you for your patience and sacrifice.
- Counselling services are available through CRUSE Bereavement support through mosques and local organisations.

## 9. MENTAL HEALTH

- Covid-19 is causing a parallel pandemic of mental health disorders due to a combination of fear and uncertainty, loss of routine, employment, income, and loved ones, being isolated or the strain on families being quarantined together for prolonged periods.
- Common conditions that have significantly increased are depression, stress and anxiety.
- GP surgeries and mental health services have reconfigured their service delivery model to support patients in crisis.
- It is important to continue taking any prescribed medication and to continue therapy sessions which have moved to a telephone-based system.
- There are a number of Muslim organisations offering counselling and psychological services, you can find details of counsellors on the Muslim Counsellor and Psychotherapist Network. at <https://www.mcapn.co.uk/>. Muslim Youth Helpline offer online chat/email and phone support on 0808 808 2008 available for Muslims of all ages. Inspired Minds also offer online support( <https://inspiredminds.org.uk/>)

## REFERENCES & FURTHER READING

The information in this guide draws upon references listed in this section. You can also find a list of resources for further reading

# 1. REFERENCES

- <https://www.gov.uk/government/publications/covid-19-stay-at-home-guidance/stay-at-home-guidance-for-households-with-possible-coronavirus-covid-19-infection>
- [https://www.who.int/publications-detail/considerations-for-quarantine-of-individuals-in-the-context-of-containment-for-coronavirus-disease-\(covid-19\)](https://www.who.int/publications-detail/considerations-for-quarantine-of-individuals-in-the-context-of-containment-for-coronavirus-disease-(covid-19))
- <https://www.gov.uk/guidance/claim-for-wage-costs-through-the-coronavirus-job-retention-scheme>
- <https://www.coordinatemycare.co.uk/mycmc/>
- <https://www.medicalnewstoday.com/articles/258118#finding>
- <https://www.medicalnewstoday.com/articles/324409#causes-of-high-respiration>
- [.https://www.youtube.com/watchv=HwLzAdriec0&feature=youtu.besssssss](https://www.youtube.com/watchv=HwLzAdriec0&feature=youtu.besssssss)
- <https://www.nice.org.uk/guidance/ng163/chapter/6-Managing-breathlessness>
- <https://www.gov.uk/guidance/domestic-abuse-how-to-get-help#seek-help>

## 2. FURTHER READING-1

- Read SA, Obeid S, Ahlenstiel C, Ahlenstiel G. The role of zinc in antiviral immunity. *Advances in Nutrition*. 2019 Jul 1;10(4):696-710.
- Hemilä H, Fitzgerald JT, Petrus EJ, Prasad A. Zinc acetate lozenges may improve the recovery rate of common cold patients: an individual patient data meta-analysis. *InOpen forum infectious diseases 2017* (Vol. 4, No. 2, p. ofx059). US: Oxford University Press.
- Roth DE, Richard SA, Black RE. Zinc supplementation for the prevention of acute lower respiratory infection in children in developing countries: meta-analysis and meta-regression of randomized trials. *International journal of epidemiology*. 2010 Jun 1;39(3):795-808.
- Chien CT, Chang WT, Chen HW, Wang TD, Liou SY, Chen TJ, Chang YL, Lee YT, Hsu
- SM. Ascorbate supplement reduces oxidative stress in dyslipidemic patients undergoing apheresis. *Arteriosclerosis, thrombosis, and vascular biology*. 2004 Jun 1;24(6):1111-7.
- Hemila H, Louhiala P. Vitamin C for preventing and treating pneumonia. *Cochrane database of systematic reviews*. 2013(8).
- Wang Y, Lin H, Lin BW, Lin JD. Effects of different ascorbic acid doses on the mortality of critically ill patients: a meta-analysis. *Annals of intensive care*. 2019 Dec 1;9(1):58.
- Hemilä H, Chalker E. Vitamin C can shorten the length of stay in the ICU: a meta-analysis. *Nutrients*. 2019 Apr;11(4):708.
- Chara J, Goyal JP, Saxena D, Yadav P. Vitamin D for prevention of respiratory tract infections: A systematic review and meta-analysis. *Journal of pharmacology & pharmacotherapeutics*. 2012 Oct;3(4):300.

### 3. FURTHER READING-2

- Urashima M, Segawa T, Okazaki M, Kurihara M, Wada Y, Ida H. Randomized trial of vitamin D supplementation to prevent seasonal influenza A in schoolchildren. *The American journal of clinical nutrition*. 2010 May 1;91(5):1255-60.
- Gysin DV, Dao D, Gysin CM, Lytvyn L, Loeb M. Effect of vitamin D3 supplementation on respiratory tract infections in healthy individuals: a systematic review and meta-analysis of randomized controlled trials. *PloS one*. 2016;11(9).
- Martineau AR, Jolliffe DA, Hooper RL, Greenberg L, Aloia JF, Bergman P, Dubnov-Raz
- G, Esposito S, Ganmaa D, Ginde AA, Goodall EC. Vitamin D supplementation to prevent acute respiratory tract infections: systematic review and meta-analysis of individual participant data. *BMJ*. 2017 Feb 15;356:i6583.
- Arihiro S, Nakashima A, Matsuoka M, Suto S, Uchiyama K, Kato T, Mitobe J, Komoike N, Itagaki M, Miyakawa Y, Koido S. Randomized trial of vitamin D supplementation to prevent seasonal influenza and upper respiratory infection in patients with inflammatory bowel disease. *Inflammatory bowel diseases*. 2019 May 4;25(6):1088-95.
- Zhou J, Du J, Huang L, Wang Y, Shi Y, Lin H. Preventive effects of vitamin D on seasonal influenza A in infants: a multicenter, randomized, open, controlled clinical trial. *The Pediatric infectious disease journal*. 2018 Aug 1;37(8):749-54.
- Prasad AS, Beck FW, Bao B, Fitzgerald JT, Snell DC, Steinberg JD, Cardozo LJ. Zinc supplementation decreases incidence of infections in the elderly: effect of zinc on generation of cytokines and oxidative stress. *The American journal of clinical nutrition*. 2007 Mar 1;85(3):837-44.
- 
- Hunt C, Chakravorty NK, Annan G, Habibzadeh N, Schorah CJ. The clinical effects of vitamin C supplementation in elderly hospitalised patients with acute respiratory infections. *International journal for vitamin and nutrition research*. 1994 Mar 2;64(3):212-9.

STAY HOME | SAVE LIVES | PROTECT THE NHS



[www.muslimdoctors.org](http://www.muslimdoctors.org)



[info@muslimdoctors.org](mailto:info@muslimdoctors.org)



[@muslimdoctors.org](https://twitter.com/muslimdoctors.org)



[//muslimdoctorsassociation](https://www.facebook.com/muslimdoctorsassociation)



[: muslimdoctorsassociation](https://www.instagram.com/muslimdoctorsassociation)