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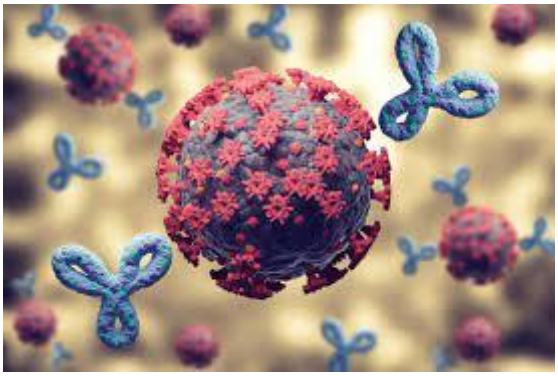
Omicron COVID-19 Variant



Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus. Most people infected with the virus will experience mild to moderate respiratory illness and recover without requiring special treatment. However, some will become seriously ill and require medical attention. Older people and those with underlying medical conditions like cardiovascular disease, diabetes, chronic respiratory disease, or cancer are more likely to develop serious illness. Anyone can get sick with COVID-19 and become seriously ill or die at any age .

All viruses, including SARS-CoV-2, the virus that causes COVID-19, change over time. Most changes have little to no impact on the virus' properties. On 26 November 2021, WHO designated the variant B.1.1.529 a variant of concern, named Omicron. Omicron has several mutations that may have an impact on how it behaves, for example, on how easily it spreads, the severity of illness it causes, or the performance of the available vaccines. Here is a summary of what is currently known.

As of 6 January 2022, the Omicron variant had been identified in 149 countries, but it's likely that it's present in other countries as well. People with Omicron can have the full spectrum of disease, everything from asymptomatic infection, mild infection, people needing hospitalization, and people have died from Omicron. Reports suggest that Omicron is less severe compared to Delta variant.

Symptoms:

Symptoms may appear 2-14 days after exposure to the virus. Anyone can have mild to severe symptoms. **Common symptoms include**:

- Fatigue
- Muscle or body aches
- Headache
- Sore throat
- Cough
- Congestion or runny nose
- Fever or chills
- Shortness of breath
- Difficulty breathing
- New loss of taste or smell
- Nausea or vomiting
- Diarrhea

It is important to mention that, although omicron might be causing less severe symptoms, its ability to spread much faster than previous COVID-19 variants will result in more cases which mean more hospitalizations, and if a health care system is overburdened, people will die because they won't get the appropriate care that they need. In addition, this virus can affect vulnerable populations. And we know people with underlying conditions, people of advanced age, if they are infected with any variant of SARS-CoV-2, including Omicron, they are at an increased risk of developing severe disease.

Seek emergency medical care immediately when you experience:

- Trouble breathing (shortness of breath or difficulty breathing)
- Persistent pain or pressure in the chest
- Change in mental status such as new confusion or feeling sleepier than usual
- Inability to wake or stay awake
- Pale, gray, or blue-colored skin, lips, or nail beds, depending on skin tone

Isolation and Quarantine Period: According to Centers of Diseases Control and Prevention (CDC), people with COVID-19 should isolate for 5 days and if they are asymptomatic or their symptoms are resolving (without fever for 24 hours), follow that by 5 days of wearing a mask when around others to minimize the risk of infecting people they encounter. The change is motivated by science demonstrating that the majority of SARS-CoV-2 transmission occurs early in the course of illness, generally in the 1-2 days prior to onset of symptoms and the 2-3 days after.

Important tip: Because some of the symptoms of flu and COVID-19 are similar, it may be hard to tell the difference between them based on symptoms alone, and testing may be needed to help confirm a diagnosis. If you experience any symptoms, do not put yourself and everyone you know at risk, it is essential to isolate immediately.

Sources: *World Health Organization, https://www.who.int/*
Centers of Diseases Control and Prevention, https://www.cdc.gov/

Common Q & A

1- What is the Rapid Test for COVID-19?

Currently, the diagnosis of COVID-19 is done by Polymerase Chain Reaction (PCR) and Antigen-detection Rapid Diagnostic Tests (Ag-RDT). Rapid antigen tests detect viral proteins (known as antigens). Samples are collected from the nose and/or throat with a swab. These tests are cheaper than PCR and offer results more quickly, although they are generally less accurate (≥80% sensitivity and ≥97 specificity as compared to a nuclide acid amplification test reference assay). These tests perform best when there is more virus circulating in the community and when sampled from an individual during the time they are most infectious. It is essential that samples are collected by trained personnel.

For more information see WHO guidance September 2020, https://www.who.int/publications/i/item/antigen-detection-in-the-diagnosis-of-sars-cov-2infection-using-rapid-immunoassays.

WHO training samples collection materials can be found here: https://extranet.who.int/goarn/sars-cov-2-antigen-rapid-diagnostic-test-training-package

2- Are antibiotics effective in treatment of COVID-19?

Antibiotics do not work against viruses; they only work on bacterial infections. COVID-19 is caused by a virus, so antibiotics do not work. Antibiotics should not be used as a means of prevention or treatment of COVID-19.

Physicians will sometimes use antibiotics to prevent or treat secondary bacterial infections which can be a complication of COVID-19 in severely ill patients. They should only be used as directed by a physician to treat a bacterial infection.

3- How to monitor oxygen at home and What are the red flags?

Remember that all care at home should be done under clinical supervision, which means the decision for when you decide to do home care or you decide to be hospitalized really should be done under the supervision of a health care provider, according to the national protocols for COVID-19 care pathways.

The pulse oximeter can be used at home. Pulse oximeter is a simple device. It's a fingertip device that can just be a small device put on your index finger.

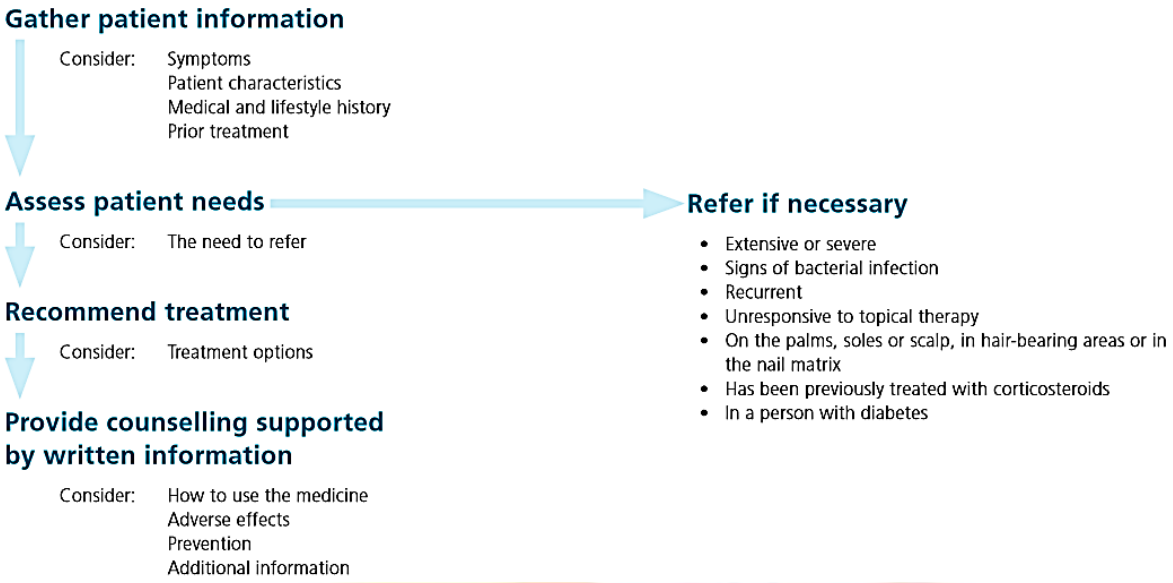
If your number is 90 to 94, then you have to make sure that you call your doctor and you tell them, this is my number, this is how I'm feeling. What should I do? So, you can get some advice on what to do next .

Sources: *World Health Organization, https://www.who.int/*
Centers of Diseases Control and Prevention, https://www.cdc.gov/

Tinea

Tinea, or 'ringworm', is a common superficial skin infection caused by dermatophytes that infect the keratin layer of the epidermis, nail plate or hair shaft. The infection most often affects warm, moist areas of skin, commonly occurring between the toes and around the groin. Most cases of tinea can be effectively treated with medicines available from a pharmacist.

Treatment Approach of tinea is summarized below:



Symptoms:

The symptoms and region of the body affected by tinea are used to classify the type of infection and will help with deciding on a suitable recommendation. There are various types of tinea:

- ***Tinea pedis*, or 'athlete's foot'**: The most common fungal infection of the feet, it thrives in warm, moist conditions. Infection is transmitted through direct contact with an infected person or indirectly through exposure to a contaminated surface.

- ***Tinea corporis*, or 'ringworm' of the body**: This is characterised by one or more annular (ring-shaped) pink or red scaly lesions with a central clearing and a slightly elevated, reddened border. Itching is variable.

- ***Tinea cruris*, or 'jock itch' or 'ringworm of the leg'**: This usually presents in the groin and on the upper, inner thighs. Typically, scaly red patches spread outwards from the groin crease and develop a central clearing as the rash spreads. Itching is common. Can spread to the buttocks or lower thighs. Men are more commonly affected than women. The scrotum and penis are generally not affected, in contrast with candidal infections in this area.

- ***Tinea unguium, or onychomycosis***: A dermatophyte infection of the nails commonly affects the toenails. The nails thicken, become chalky, discoloured (brownish–yellow) and brittle, and eventually separate from the nail bed (onycholysis) and disintegrate.

- ***Tinea capitis*, or scalp 'ringworm'**: This occurs almost exclusively in children and is characterised by patches of alopecia and variable scaling and inflammation on the scalp. Hairs can become brittle and break close to the scalp.

- ***Tinea barbae*, or 'ringworm' infection in the beard area:** Infection with tinea barbae is most often caused by animal-associated species and should be suspected in anyone who

has had contact with cattle or other animals. It presents as one or more patches of inflammation and can may be studded with follicular pustules, resembling bacterial infection.

The presence of other medical conditions and other medications being taken will affect the advice provided. Among the risk factors for developing tinea are the following:

- Prolonged use of occlusive footwear
- A hot humid, tropical environment
- Hyperhidrosis (excessive perspiration)
- Activities such as swimming and communal bathing
- Contact with infected animals e.g. cats and cattle
- Disseases such as diabetes and HIV
- Medicines affecting the immune system—e.g. cyclosporin and azathioprine
- Occupation e.g. farm worker, lab worker or vet

Treatment:

There are two treatment options for treatment of tinea: topical and systemic.

Topical treatment: Most superficial cutaneous infections can be treated with topical agents. Nail infections are, however, difficult to cure with topical therapy because of poor penetration through the nail plate into the nail bed.

Topical corticosteroids should not be used as treatment alone: there is potential for fungal proliferation and exacerbation or masking of symptoms. A combination antifungal–corticosteroid can be used for severely inflamed infections. It should be substituted with a pure antifungal agent once symptoms are relieved, and its use should not exceed two weeks for tinea cruris and four weeks for tinea pedis or corporis.

A number of topical agents are used to treat tinea:

- **Imidazoles** ('azoles') bifonazole, clotrimazole, econazole, ketoconazole, miconazole. These have a wide spectrum of antifungal activity
- **Terbinafine** entails a shorter treatment course, potentially improving compliance and preventing recurrence
- **Benzoic acid and salicylic acid** (e.g. Whitfield's ointment)—less effective than the foregoing classes of agents.

Among the prescription-only agents for systemic treatment of tinea are the following:

- **Griseofulvin**. This has a narrow spectrum of activity. It is less effective than the systemic azoles and terbinafine and usually requires a longer treatment course.

- **Terbinafine**. This requires a shorter treatment duration and has better cure rates than griseofulvin,

- **Systemic azole antifungals**. These agents (e.g. fluconazole, ketoconazole, itraconazole) can be used for dermatophyte infections that have not responded to topical therapy.

Prevention: Tinea thrives in warm, moist environments. Self-care measures can help reduce the opportunity for the infection to flourish, as well as reduce the risk of spreading the infection to other parts of the body and to other people. A number of measures can be suggested:

- Maintain good hygiene and keep the skin and feet clean and dry.

- Wear loose-fitting cotton clothes.
- Wear clean cotton socks and shoes made of leather or breathable material.
- Avoid walking barefoot.
- Do not share clothes, hairbrushes or towels.
- If using communal showers at swimming centres, gyms, and so on, wear thongs, washable sandals or shoes.
- Children with tinea corporis should be excluded from schools and swimming pools until at least 24 hours after starting treatment.
- Antifungal powder can be used to maintain remission and prevent reinfection.

Source: *Australian Pharmaceutical Formulary and Handbook 22, p 542-545*

OTC Medicines Corner

The use of Povidone Iodine during COVID-19

It is important to control the COVID-19 viral load in the saliva and respiratory secretions. One of the most simple and cost-effective measures that can be adopted by the public and healthcare professionals to prevent cross-contamination and community transmission, is the implementation of effective oral and throat hygiene.

Recent evidence has confirmed that 0.5% povidone iodine (PVP-I) mouthrinse/gargle for 30 s can **reduce** COVID-19 virus **infectivity** to below detectable levels. PVP-I can even **interrupt** COVID-19 **attachment** to oral and nasopharyngeal tissues and lower the viral particles in the saliva and respiratory droplets. Thus, the use of PVP-I mouthrinse as a prophylactic measure has been advocated across the globe to reduce disease transmission.

Source: Chopra *et al. Can povidone iodine gargle/mouthrinse inactivate SARS-CoV-2 and decrease the risk of nosocomial and community transmission during the COVID-19 pandemic? An evidence-based update, Japanese Dental Science Review, volume 57, 2021, p39-45.*

Test Your Knowledge

1- **One commmon symptom of HIV**

(a) Chest pain
(b) Cough for more than 2 weeks
(c) Chronic diarrhea
(d) Blood in sputum.

2- **Symptoms of Kwashiorkor**

(a) Edema
(b) depigmentation of hair and hair loss
(c) hepatomegaly
(d) mental changes
(e) All of the above

3- **Symptoms of Tuberculosis**

(a) Loss of weight
(b) Weakness
(c) Loss of appetite
(d) All of the above

4- **In a clinical trial ,comparison of efficacy of a new drug with an existing drug is done in**

(a) phase I
(b) phase II
(c) phase III
(d) phase IV

Answers at page 8

Herbal Supplements with Risky Drug Interactions

The use of herbal supplements has a long history - dating back thousands of years. Examples of important medicines extracted from botanicals include reserpine, morphine, penicillin, and vinca alkaloid anti-cancer drugs.

Today, herbal supplements and nutraceuticals can be purchased over-the-counter (OTC) and may be labeled "all-natural". Herbal supplements are sold in many different forms - dried leaves for teas, powdered, as capsules or tablets, or in solution .But does "all-natural" mean they are always safe? Simply No. In the following lines, we are going to mention some examples of natural herbal supplements that may cause serious drug interactions and could result in sever risks if used without proper control:

1- Cranberry:

Cranberries are a fruit chock full of vitamin C, and some people drink cranberry juice to prevent urinary tract infections (UTI). Cranberry may exert an increased effect on blood thinners (anticoagulants) like warfarin and lead to bruising or bleeding.

2- Ginseng:

Long-term use of American ginseng may decrease the effectiveness of warfarin, a blood thinner, and increase the risk for a blood clot. In general, ginseng or ginseng-containing herbal tea should not be used with anticoagulants. Ginseng may also affect diabetic medications like insulin or oral hypoglycemics, leading to low blood sugar. It is also contraindicated in patients with hormonedependent conditions (may have oestrogenic effects), autoimmune diseases (may stimulate immune system), organ transplants, acute asthma, acute infections or fever.

3- Glucosamine:

Glucosamine is an amino-monosaccharide which is required for the synthesis of glycosaminoglycans (mucopolysaccharides), proteoglycans and glycolipids, which are components of many body tissues, including cartilage, tendons, ligaments and synovial fluid. It is commonly used conditions such as Osteoarthritis. Some studies suggest that glucosamine might induce resistance to anticancer medications such as etoposide, teniposide and doxorubicin by reducing the drugs' inhibition of topoisomerase II, an enzyme required for DNA replication in tumour cells. In addition, patients taking warfarin should be advised that glucosamine may cause an increase in INR, and they should inform their medical practitioner that they are taking glucosamine.

Sources: *Drugs.com ,by Leigh Ann Anderson, PharmD. Last updated on Oct 20, 2021.*
Australian Pharmaceutical Formulary and Handbook 22

Answers:

1. (c) **2. (e)** **3. (d)** **4. (c)**