A Guide to Early Treatment of COVID-19

It is critical to recognize that infection with SARS-CoV-2, the virus that causes COVID-19, progresses through a number of stages and phases. Treatment is therefore highly stage-specific. COVID-19 is a clinical diagnosis; a confirmed antigen or PCR test is not required. Treatment should be initiated immediately after the onset of flu-like symptoms. The multiple therapies and drugs in this protocol have different mechanisms of action and work synergistically during various phases of the disease.

Ivermectin:
0.4 to 0.6 mg/kg – one dose daily for at least 5 days or until symptoms resolve.
If symptoms persist longer than 7 days, consult a healthcare provider. See Table 1 for help with calculating correct dose. Due to a possible interaction between quercetin and ivermectin, these drugs should be staggered throughout the day (see Table 2). For COVID treatment, ivermectin is best taken with a meal or just following a meal, for greater absorption.

Hydroxychloroquine (HCQ):
200 mg twice a day for 5 to 10 days.
Best taken with zinc. HCQ may be taken in place of, or together with, ivermectin. While ivermectin should be avoided in pregnancy, the FDA considers HCQ safe in pregnancy. Given the pathway used by the Omicron variant to gain cell entry, HCQ may be the preferred drug for this variant.

Zinc:
75-100 mg daily.
Take with HCQ. Zinc supplements come in various forms (e.g., zinc sulfate, zinc citrate and zinc gluconate).

Mouthwash:
3 times a day.
Gargle three times a day (do not swallow) with an antiseptic-antimicrobial mouthwash containing chlorhexidine, cetylpyridinium chloride (e.g., Scope™, Act™, Crest™) or 1% povidone-iodine.

Nasal spray with 1% povidone-iodine:
2-3 times a day.
Do not use for more than 5 days in pregnancy. If 1% product is not available, dilute the more widely available 10% solution (see box) and apply 4-5 drops to each nostril every 4 hours.

Aspirin:
325 mg daily (unless contraindicated).

Melatonin:
5-10 mg before bedtime (causes drowsiness).
Slow- or extended-release formulations preferred.

Nigella sativa:
If using seeds, take 80 mg/kg once a day (or 400 to 500 mg of encapsulated oil twice a day).

Honey:
1 g/kg one to two times a day.

Kefir and/or Bifidobacterium Probiotics.

Vitamin C:
500-1000 mg twice a day.

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500-1000 mg twice a day.

HOW TO MAKE 1% POVIDONE-IODINE CONCENTRATED SOLUTION

- Pour 1 ½ tablespoons (25 ml) of 10% povidone-iodine solution into a 250 ml nasal irrigation bottle.
- Fill bottle to top with distilled, sterile, or previously boiled water.
- To use: tilt head back, apply 4-5 drops to each nostril. Keep head tilted for a few minutes, then let drain.

About this protocol
The information in this document is our recommended approach to COVID-19 based on the best (and most recent) literature.

It is provided as guidance to healthcare providers worldwide on the early treatment of COVID-19. Patients should always consult with their provider before starting any medical treatment.

New medications may be added and/or changes made to doses of existing medications as further evidence emerges. Please check our website at flccc.net to be sure you are using the latest version of this protocol.

For more information on nutritional therapeutics and how they can help with COVID-19, visit genius/COVID_nutrition

For additional information on early treatment, the rationale behind these medications, and other optional treatments, see ‘A Guide to Early Treatment of COVID-19’.

Early treatment is critical and the most important factor in managing this disease.

For updates and more information on our treatment protocols please see: flccc.net
FIRST LINE THERAPIES (continued from page 1)

- **Home pulse oximeter**
  Monitoring of oxygen saturation is recommended in symptomatic patients, due to asymptomatic hypoxia. Take multiple readings over the course of the day and regard any downward trend as ominous. Baseline or ambulatory desaturation under 94% should prompt consultation with primary or telehealth provider, or evaluation in an emergency room. (See box for further guidance.)

  - Only accept values associated with a strong pulse signal
  - Observe readings for 30–60 seconds to identify the most common value
  - Warm up extremities prior to taking a measurement
  - Use the middle or ring finger
  - Remove nail polish from the finger on which measurements are made

SECOND LINE THERAPIES

*Add to first line therapies above if: 1) more than 5 days of symptoms; 2) poor response to first line agents; 3) significant comorbidities."

- **Nitazoxanide**: 500 mg twice a day for 5 days.
- **Curcumin (turmeric)**: 500 mg twice a day.
  Curcumin has low solubility in water and is poorly absorbed by the body; consequently, it is traditionally taken with full fat milk and black pepper, which enhance its absorption.
- **Quercetin (or a mixed flavonoid supplement)**: 250 mg twice a day.
  Due to a possible interaction between quercetin and ivermectin, these drugs should not be taken simultaneously (i.e., should be staggered at different times of day.) As supplemental quercetin has poor solubility and low oral absorption, lecithin-based and nanoparticle formulations are preferred.
- **Vitamin D3**: For patients with acute COVID-19 infection, calcifediol as dosed in Table 3 is suggested.
- **B complex vitamins**.
- **Fluvoxamine**: 25-50 mg twice a day.
  Can substitute fluoxetine (Prozac; 20-40mg daily) if fluvoxamine not available.
- **N-acetyl cysteine (NAC)**: 600-1200 mg orally twice a day.
- **Omega-3 fatty acids**: 4 g daily.
  Vascepa (Ethylo eicosapentaenoic acid); Lovaza (EPA/DHA); or alternative DHA/EPA. Vascepa and Lovaza tablets must be swallowed and cannot be crushed, dissolved, or chewed.

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**About ivermectin**

Ivermectin is a well-known, FDA-approved drug that has been used successfully around the world for more than four decades. One of the safest drugs known, it is on the WHO’s list of essential medicines, has been given over 3.7 billion times, and won the Nobel Prize for its global and historic impacts in eradicating endemic parasitic infections in many parts of the world.

To review the totality of supporting evidence for ivermectin in COVID-19, visit geni.us/IVMinCOVID.

Ivermectin is a remarkably safe drug with minimal adverse reactions (almost all minor), however its safety in pregnancy has not been definitively established. Talk to your doctor about use in pregnancy, particularly in the first trimester.

Potential drug-drug interactions should be reviewed before prescribing ivermectin (see ‘A Guide to Early Treatment of COVID-19’ for more information).

Ivermectin has been demonstrated to be highly effective against the Omicron variant at a dose of 0.3 to 0.4 mg/kg, when taken early.

Higher doses (0.6 mg/kg) may be required: in regions with more aggressive variants; if treatment starts on or after 5 days of symptoms; in patients in advanced stage of the disease or who have extensive risk factors (i.e., older age, obesity, diabetes, etc.)

→ continue on page 3
Table 1. How to calculate ivermectin dose (continued from page 2)

Note that ivermectin is available in different strengths (e.g., 3, 6, or 12 mg) and forms (e.g., tablets, drops). Tablets can be halved for more accurate dosing. Doses below are calculated for the upper end of the weight ranges listed.

<table>
<thead>
<tr>
<th>How much do I weigh?</th>
<th>The protocol says 0.4 mg/kg; how much should I take?</th>
<th>The protocol says 0.6 mg/kg; how much should I take?</th>
</tr>
</thead>
<tbody>
<tr>
<td>70–90 lb 32–40 kg</td>
<td>16mg</td>
<td>24 mg</td>
</tr>
<tr>
<td>91–110 lb 41–50 kg</td>
<td>20 mg</td>
<td>30 mg</td>
</tr>
<tr>
<td>111–130 lb 51–59 kg</td>
<td>24 mg</td>
<td>36 mg</td>
</tr>
<tr>
<td>131–150 lb 60–68 kg</td>
<td>27 mg</td>
<td>40.5 mg</td>
</tr>
<tr>
<td>151–170 lb 69–77 kg</td>
<td>30 mg</td>
<td>45 mg</td>
</tr>
<tr>
<td>171–190 lb 78–86 kg</td>
<td>32 mg</td>
<td>48 mg</td>
</tr>
<tr>
<td>191–210 lb 87–95 kg</td>
<td>36 mg</td>
<td>54 mg</td>
</tr>
<tr>
<td>211–230 lb 96–104 kg</td>
<td>40 mg</td>
<td>60 mg</td>
</tr>
<tr>
<td>231–250 lb 105–113 kg</td>
<td>44 mg</td>
<td>66 mg</td>
</tr>
<tr>
<td>251–270 lb 114–122 kg</td>
<td>48 mg</td>
<td>72 mg</td>
</tr>
<tr>
<td>271–290 lb 123–131 kg</td>
<td>52 mg</td>
<td>78 mg</td>
</tr>
<tr>
<td>291–310 lb 132–140 kg</td>
<td>56 mg</td>
<td>84 mg</td>
</tr>
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</table>

Table 2. Proposed medication schedule for first line treatments

<table>
<thead>
<tr>
<th>What to take when</th>
<th>Breakfast</th>
<th>Lunch</th>
<th>Dinner</th>
<th>Bedtime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ivermectin</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Hydroxychloroquine</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Zinc</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Mouthwash</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Nasal spray</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Melatonin</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Aspirin</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Nigella sativa</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Kefir</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Honey</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Vitamin C</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>
Table 3. A Single-Dose Regimen of Calcifediol to Rapidly Raise Serum 25(OH)D above 50 ng/mL (continued from page 3)

<table>
<thead>
<tr>
<th>Body Weight (lbs)</th>
<th>Body Weight (kgs)</th>
<th>Calcifediol (mg)</th>
<th>Equivalent in IU</th>
<th>If Calcifediol is not available, a bolus of Vitamin D3</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–21</td>
<td>7–10</td>
<td>0.1</td>
<td>16,000</td>
<td>20,000</td>
</tr>
<tr>
<td>22–30</td>
<td>10–14</td>
<td>0.15</td>
<td>24,000</td>
<td>35,000</td>
</tr>
<tr>
<td>31–40</td>
<td>15–18</td>
<td>0.2</td>
<td>32,000</td>
<td>50,000</td>
</tr>
<tr>
<td>41–50</td>
<td>19–23</td>
<td>0.3</td>
<td>48,000</td>
<td>60,000</td>
</tr>
<tr>
<td>51–60</td>
<td>24–27</td>
<td>0.4</td>
<td>64,000</td>
<td>75,000</td>
</tr>
<tr>
<td>61–70</td>
<td>28–32</td>
<td>0.5</td>
<td>80,000</td>
<td>100,000</td>
</tr>
<tr>
<td>71–85</td>
<td>33–39</td>
<td>0.6</td>
<td>96,000</td>
<td>150,000</td>
</tr>
<tr>
<td>86–100</td>
<td>40–45</td>
<td>0.7</td>
<td>112,000</td>
<td>200,000</td>
</tr>
<tr>
<td>101–150</td>
<td>46–68</td>
<td>0.8</td>
<td>128,000</td>
<td>250,000</td>
</tr>
<tr>
<td>151–200</td>
<td>69–90</td>
<td>1.0</td>
<td>160,000</td>
<td>300,000</td>
</tr>
<tr>
<td>201–300</td>
<td>91–136</td>
<td>1.15</td>
<td>240,000</td>
<td>400,000</td>
</tr>
<tr>
<td>&gt;300</td>
<td>&gt;137</td>
<td>2.0</td>
<td>320,000</td>
<td>500,000</td>
</tr>
</tbody>
</table>

Source: SJ Wimalawansa (with permission)

**TREATMENT OF BA.4/BA.5 VARIANT**

The following protocol should be used where BA/4/BA.5 is the predominant circulating strain.

- **Hydroxychloroquine:** (200 mg twice daily or 400 mg daily for 5 days) AND **Ivermectin** (0.4-0.6 mg/kg once daily for 5 days taken with a fatty meal). Alternative to ivermectin: Nitazoxanide (500 mg three times a day for 5 days taken with a fatty meal).
- **Zinc:** (75-100 mg for 5 days).
- **Antiseptic/antimicrobial mouthwash:** (3 times daily).
- **Nasal spray with 1% povidone-iodine:** (2-3 times daily).
- **Melatonin:** (5-10 mg at night — slow-release formulation preferred).
- **Nigella sativa:** (seeds 80 mg/kg once a day or encapsulated oil 400-500 mg twice a day) taken with honey (1 g/kg one to two times a day).
- **Aspirin:** 325 mg daily unless contraindicated).
- **Home pulse oximetry**

High-risk patients (aged over 60, comorbidities, poorly ambulatory), delayed treatment, high D-dimer, recently vaccinated, or severe symptoms, should add:

- **Apixaban:** (5 mg daily for 15 days) OR **Rivaroxaban** (10 mg daily for 15 days).
- **Spironolactone:** (200 mg once daily for 7 days — avoid in patients with impaired renal function).

If symptoms have not markedly improved by day 3 of treatment, the following medications should be started. [NOTE: physicians should provide prescriptions for these medications at first visit.]

- **Prednisolone:** (60 mg daily for 5 days).
- **Oral antibiotic:** Doxycycline (100 mg twice daily for 5 days) (Doxycycline may act synergistically with ivermectin and may be the antibiotic of first choice) OR **Azithromycin** (Z-pack) (500 mg day 1, then 250 mg daily for 4 days) OR **Amoxicillin/Clavulanate** (Augmentin) (500 mg/125 mg tablet twice daily for 7 days).

Optional Treatments

Anti-androgen therapy: Multiple clinical studies support the notion that androgens exacerbate COVID-19, and that anti-androgen therapy improves clinical outcomes.

This therapy should be considered in seriously ill patients, those that are treated late in the course of their illness, and patients with serious comorbidities.

Spironolactone is the anti-androgen of choice (in both men and women). The optimal dose appears to be 100 mg twice a day.

**Famotidine:** 40 mg twice a day (reduce dose in patients with renal dysfunction).

**Dandelion (Taraxacum officinale):** The root, flower and leaves of dandelion contain an array of phytochemicals that have anti-inflammatory, antioxidant, hypolipidemic, antimicrobial and anticoagulant properties. Recommended dose is 4-10 g three times a day (20-30 mg/ml in hot water).

Should be avoided in patients with kidney failure, liver and biliary disease, bile duct obstruction, gallstones, cholangitis and active peptic ulcer.