



Supplement

Nutri Virtual Symposium 2020 Nutrition Battling on Pandemic COVID-19: How to Survive

This supplement is a selection of paper presented at the Nutri Virtual Symposium 2020 on 5,12,19 and 26 September 2020.

Supplementary Paper:

Speaker presentation :

- Ethics and nutrition safety in patient care during COVID-19 pandemic
 - How to beat COVID-19: Know your enemy well
 - Optimizing nutrition throughout the COVID-19 trajectory: From admission, to ICU, to discharge
 - COVID-19 treatment during and after recovery: What to expect
 - The benefit of the vitamin D intake in terms of sarcopenia of senior citizens in Japan during the COVID-19 pandemic
 - Water types and their functional role: Perception, myth and fact
 - Food technology to process plant-based food (soy protein isolate formula)
 - Sport challenge activity in the midst of COVID-19 pandemic
- Many more*

Oral presentation :

- Fluid consumption, hydration status, and its associated factors: a cross sectional study among medical students in Palembang, Indonesia
 - Association of short stature with cognitive assessment in primary school children in Kampung Melayu, Jakarta, Indonesia
 - The association of breastfeeding duration and language development survey score in children
- Many more*

World Nutrition Journal Editorial Office

Wisma Nugraha Building, Suite 501, 5th Floor

Jl. Raden Saleh No. 6 Jakarta Pusat

Website : www.worldnutrijournal.org

Phone: +622131905330 Email : worldnutritionjournal@gmail.com

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ABSTRACT

How to maintain home nutrition therapy after recovery from COVID-19

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Luciana B Sutanto¹

¹Indonesian Nutrition Association, Jakarta, Indonesia

Going back home as a COVID-19 survivor is a grateful and delightful time. But, process of recovering to the normal condition is also very important. Survivor patients must receive good nutrition, quality sleep, and not less important is physical activity.

Survivor patients need enough calories and protein to replace their body weight and protein lost during hospitalized. Especially for COVID-19 patients who were admitted to the ICU often longer than ordinary pneumonia cases, up to 2-3 weeks, followed by severe weight lost. Some nutrition problem that could be found i.e. poor appetite, fatigue, or feeling full quickly. By eating small frequent meals, 4-6 times/day or every couple of hours, it is possible to increase nutrition intake. Oral Nutritional Supplements (ONS) 2-3 times a day has beneficial for individuals who are unable to reach their nutritional needs with oral diet alone. Multivitamin supplements may be considered if calorie intake is less than 50%. Drinking 8-10 glasses of liquid per day, includes water, milk, juice, and ONS, will prevent dehydration and maintain a good metabolism. It is recommended to speak to a clinical nutrition advisor/dietitian and a physiotherapist in the first week after discharge from hospital.

Keywords: COVID-19, recovery, home nutrition therapy

Corresponding author:

Dr. dr. Luciana B Sutanto, MS, SpGK

Indonesian Nutrition Association, Jakarta, Indonesia

E-mail address: lesutanto@yahoo.com

How to maintain home nutrition therapy after recovery from COVID-19

Luciana Sutanto

Abstrak

Kembali ke rumah sebagai penyintas COVID-19 adalah saat yang paling disyukuri dan membahagiakan. Namun proses pemulihan ke kondisi normal merupakan hal yang sangat penting. Pasien yang sembuh harus mendapat nutrisi yang baik, tidur yang berkualitas, dan yang tidak kalah pentingnya adalah aktivitas fisik yang memadai.

Untuk penyembuhan di rumah, pasien membutuhkan asupan kalori dan protein yang cukup untuk mengembalikan berat badan dan protein yang hilang selama dirawat di rumah sakit. Selain itu, pasien COVID-19 yang dirawat di ICU seringkali lebih lama dari kasus pneumonia biasa, hingga 2-3 minggu, yang diikuti dengan penurunan berat badan yang parah. Beberapa masalah gizi yang bisa ditemui yaitu nafsu makan yang buruk, kelelahan, atau cepat merasa kenyang. Dengan jadwal makan yang sering dengan porsi kecil, yaitu 4-6 kali / hari atau setiap beberapa jam dapat meningkatkan asupan nutrisi. Suplemen Nutrisi Oral (ONS) yang Diberikan 2-3 kali sehari bermanfaat bagi individu yang tidak dapat mencapai kebutuhan nutrisinya hanya dengan diet oral. Suplemen multivitamin dapat dipertimbangkan jika asupan kalori kurang dari 50%. Minum 8-10 gelas cairan per hari, termasuk air, susu, jus, dan ONS, akan mencegah dehidrasi dan menjaga metabolisme yang baik. Dianjurkan untuk berbicara dengan penasihat nutrisi klinis / ahli diet dan fisioterapis pada minggu pertama setelah keluar dari rumah sakit.

Tatalaksana nutrisi di penyintas COVID-19 di rumah

Data dari World Health Organization (WHO) 10 September 2020 menunjukkan kasus total penderita COVID-19, dengan kasus sembuh lebih dari 50%. (Tabel 1)

Tabel 1. Kasus pasien COVID-19, sembuh dan meninggal

	Jumlah kasus	Sembuh	Meninggal
Dunia	28,050,208	20,117,592	908,434
Indonesia	207,203	147,510	8,456
Jepang	72,726	64,100	1,393
Iran	393,425	339,111	22,669
Malaysia	9,583	9,143	128

Kesembuhan bagi penyintas COVID-19 bukan hanya keluar dari rumah sakit, tetapi diharapkan penyembuhannya dapat kembali ke kondisi normal. Untuk mendapatkan kualitas hidup yang baik,

pasien harus mendapat nutrisi yang baik, tidur yang berkualitas, dan yang tidak kalah pentingnya adalah aktivitas fisik yang memadai.

Pasien COVID-19 dengan pneumonia seringkali dirawat lebih lama di ICU dibandingkan kasus pneumonia biasa, yaitu hingga 2-3 minggu, yang disertai dengan penurunan berat badan yang berat. Besarnya penurunan berat badan dapat diekstrapolasikan dari pasien ICU yang dirawat karena pembedahan dan sakit kritis yaitu selama 20 hari kehilangan massa bebas lemak mencapai lebih dari 20 kg, yang setara dengan 1 kg perhari. Dampak yang timbul pada kehilangan massa bebas lemak berbeda tergantung besarnya. (Gambar 1)



Gambar 1. Komplikasi yang terjadi pada kehilangan massa protein

Penyintas COVID-19 perlu nutrisi yang adekuat, istirahat cukup, aktifitas fisik dan olah raga sesuai keadaan tubuh, serta manajemen stress yang baik, untuk mendukung pemulihannya. Rekomendasi ASPEN 2020:

- Makanlah makanan berprotein setiap kali makan.
- Makanlah roti gandum, pasta, nasi, atau sereal setiap kali makan.
- Catat dan perhatikan apa yang Anda makan setiap kali makan
- Usahakan minum 8-10 gelas cairan per hari.

Jika didapati masalah penurunan nafsu makan, rasa lelah, dan cepat kenyang, yang dilakukan yaitu:

- Makan dengan porsi kecil, frekuensi 4-6x sehari atau makan setiap 2 jam.
- Awali dengan makan makanan tinggi protein setiap kali makan.
- Makan makanan Tinggi kalori dan protein, misalnya keju, makanan tinggi lemak, yogurt Greek, mentega kacang, keju krim, atau sup krim dengan susu *full* krim
- Tambahkan bubur daging dan saus pada daging, daging unggas, dan lauk-pauk.
- Minum *milkshake*, minuman pengganti berprotein, diantara jadwal makan.
- Jika asupan tidak mencapai 50%, pemberian suplemen multivitamin dapat dipertimbangkan.

Jika terdapat keluhan perubahan indra pengecap, yang dilakukan yaitu:

- Makan dimulai dengan rasa yang hambar, kemudian ditambah perasa.
- Dimulai dengan makanan dengan suhu dingin, karena makanan dengan suhu panas.
- Makanan bisa ditambah gula, garam, dan perisa.
- Jika mulut kering, dapat makan permen asam, permen mint, atau permen karet sebelum dan sesudah makan.
- Sikat gigi secara teratur.

Pada masa penyembuhan, kalori dianjurkan diberikan 150% lebih besar berdasarkan kalorimetri indirek atau 35 kKal/kg berat badan/hari. Protein diberikan 2-2,5 gram/kKal/kg berat badan/hari. Lebih diutamakan pemberian nutrisi enteral, suplemen nutrisi oral (SNO), atau suplemen protein. Jika pasien berisiko asupan makan tidak mencapai target, dianjurkan memberikan SNO. Monitoring dilakukan untuk memantau asupan oral dan nutrisi suplemen oral, serta tes fungsi otot, dan juga komposisi tubuh.

Definisi SNO adalah minuman, semisolid atau bubuk yang mengandung nutrisi makro dan mikro. Jenis SNO yaitu jus, *milkshake*, bubuk tinggi kalori, sup, yang mengandung konsentrasi tinggi volume rendah, semisolid/untuk disfagia, dan tinggi protein.

Tabel 2. Jenis dan kandungan suplemen nutrisi oral (SNO)

Jenis SNO	Kandungan
Jus	Volume sekitar 200-220 mL, densitas energi 1,25-1,5kKal/mL. Tidak mengandung lemak.
<i>Milkshake</i>	Volume sekitar 125-220 mL, densitas energi 1-2,4kKal/mL. Dapat mengandung serat.
Bubuk tinggi kalori	Volume mencapai 125-350 mL, densitas energi 1-2,4kKal/mL. Mengandung susu <i>full</i> krim
Sup	Volume mencapai 200-330 mL, densitas energi 1-1,5kKal/mL. Dapat berbentuk bubuk atau sup.
Semisolid/untuk disfagia	Rentang sediaan dari sangat kental (tahap 1 dan 2) hingga model puding lembut (tahap 3), dengan densitas energi ~1,4-2,5kKal/mL.
Tinggi protein	Rentang sediaan: jeli, <i>shots</i> , <i>milkshake</i> , mengandung 11-20g protein dalam volume 30-220mL
konsentrasi tinggi volume rendah (<i>shots</i>)	Produk mengandung lemak dan protein yang dikonsumsi dalam jumlah sedikit (<i>shots</i>), sediaan biasanya 30-40mL dikonsumsi 3-4 kali sehari.

Pada pemberian SNO perlu dilakukan pemantauan untuk memastikan bahwa SNO masih tepat diberikan pada kondisi pasien terakhir. Pemberian SNO dihentikan jika asupan makan telah mencapai target kebutuhan nutrisi, berat badan telah mencapai target, indeks massa tubuh telah berada pada rentang berat badan normal, kondisi klinis pasien berubah misalnya telah pulih dari gangguan menelan, pasien tidak dapat menerima SNO yang diresepkan karena bosan dengan rasanya.

Pada penyintas COVID-19, perlu dilakukan pemantauan asupan untuk mengenali jika terjadi malnutrisi dan memberikan tatalaksana yang tepat. Pencatatan asupan makan dapat dilakukan yaitu apakah makanan habis semua (100%), 75%, 50%, 25% atau 0.

Agar penyintas COVID-19 mendapatkan asupan nutrisi yang baik, semua pasien yang keluar dari rumah sakit karena COVID-19 harus mendapat saran nutrisi dari konsultan nutrisi/diet dan fisioterapis pada minggu pertama. Jika ada masalah nutrisi, dapat berkonsultasi dengan dokter, ahli gizi, atau tim keperawatan rumah sakit.

Kepustakaan:

1. WHO 2020. <https://covid19.who.int/>, diakses pada 10 September 2020 pukul 10.27.
2. Wischmeyer PE, San-Millan I. Winning the war against ICU-acquired weakness: New innovations in nutrition and exercise physiology. *Critical Care* 2015, 19 (suppl 3):S6.
3. Martindale R, Patel JJ, Taylor B, Warren M, McClave SA. Nutrition Therapy in the Patient with COVID-19 Disease Requiring ICU Care. <https://www.sccm.org/COVID19RapidResources/Resources/Nutrition-Therapy-in-the-Patient-with-COVID-19-Dis>. diakses pada 10 September 2020 pukul 10.30.
4. Argilés JM, Campos N, Lopez-Pedrosa JM, Rueda R, Rodriguez-Mañas L. Skeletal Muscle Regulates Metabolism via Interorgan Crosstalk: Roles in Health and Disease. *JAMDA* 17 (2016) 789-796.
5. Canadian Nutrition Society. https://nutritioncareincanada.ca/sites/default/uploads/files/COVID-19/Food_is_Medicine_2_Covid-19_and_Hospitalization_English.pdf, diakses pada 10 September 2020 pukul 12.00
6. van Zanten ARH, De Waele E, Wischmeyer PE. Nutrition therapy and critical illness: practical guidance for the ICU, post-ICU, and long-term convalescence phases. *Critical Care* (2019) 23:368 <https://doi.org/10.1186/s13054-019-2657-5>.
7. BAPEN: the British Association for Parenteral and Enteral Nutrition. Oral Nutritional Supplements (ONS). <https://www.bapen.org.uk/nutrition-support/nutrition-by-mouth/oral-nutritional-supplements>, diakses pada 10 September 2020 pukul 14.00.

