Areas of study with chronic bronchitis: A food hierarchy.

Jane Clougherty*

Department of Environmental and Occupational Health, Dornsife School of Public Health, Drexel University, Philadelphia, PA, USA

Introduction

Nutritional issues are an essential element of rehabilitation for people with Chronic Obstructive Pulmonary Disease (COPD). COPD patients frequently appear with malnutrition, sarcopenia, and osteoporosis, as well as an insufficient nutritional intake and a poor quality of life. Furthermore, nutrition has an important role in COPD patients *via* three mechanisms: control of carbon dioxide produced/oxygen consumed inflammation, and oxidative stress. A narrative review based on 99 eligible papers was conducted to assess existing data about optimum diet treatment for the management of COPD, and a food pyramid was then constructed in response.

The proposed food pyramid will be used to direct energy and dietary intake in order to prevent and cure nutritionally linked COPD problems, as well as to control progression and COPD-related symptoms Even with several limitations, the nutrition pyramid described in our narrative review is hypothetical the main limitation is that there are no randomised controlled trials in the literature that clearly show that improved nutrition, *via* the regulation of carbon dioxide produced/oxygen consumed, inflammation, and oxidative stress, improves symptoms and/or progression of COPD. Even though our nutritional pyramid is purely speculative, we believe it will help researchers focus on the often-overlooked putative links between body composition, nutrition, and COPD.

BMI and chronic bronchitis

Weight and body composition also influence COPD development. It should be noted that the majority of research look at Body Mass Index (BMI) rather than body composition. Several studies have found that low BMI is an independent risk factor for death in COPD patients, with a BMI inflection point of 21 Kg/m and a mortality increase below this number [1]. The prevalence of underweight people with COPD varies, ranging from 3% to 19% with a BMI of 18.5 kg/m and equivalent to 22% when a BMI of less than 21 kg/m is included. This prevalence rises in direct proportion to the severity of the condition.

The "obesity paradox" might thus be present in obstructive lung disorders, which is especially noticeable in people with significant bronchial obstruction. More than fat, being overweight should be emphasised, since certain research reveal that individuals with COPD have a decreased mortality risk when they are overweight. To corroborate this finding, Eisner and colleagues looked at the effect of Fat Mass (FM) on functional limitation: a higher FM was associated with a decrease in the walk test in six minutes (from 13 metres per 1 kg of fat mass increase in men to 11 metres in women) and a lower Short Physical Performance Battery (SPPB) summary performance score.

Dietary supplement or foods for specified medical purpose

This investigation was centred on the keywords "dietary supplement" AND "chronic obstructive pulmonary disease" AND "pulmonary rehabilitation"; four publications were retrieved: two systematic reviews and meta-analyses [2]; one prospective randomised and controlled trial; and one clinical study. It was thus decided to graphically represent what should be proper nutrition for the COPD patient, specifying the quality and amount of food, in order to counter the states of chronic inflammation and increased oxidative stress, as well as the management of carbon dioxide produced and oxygen consumed.

Dietary supplements

A flag at the top of the food pyramid for COPD dietary management draws attention to the fact that patients with COPD require particular dietary supplements: vitamin D, n-3 fatty acids, antioxidants (Vitamin C and E, selenium, zinc) [3]. D vitamin Several studies demonstrate that individuals with COPD [4].who have vitamin D (25-OH) levels less than 20 ng/mL (deficient) are at a higher risk of illness exacerbation, decreasing pulmonary function, and long-term loss in lung function. 89-94 In patients with severe insufficiency (blood Vitamin D levels 10 ng/mL) who underwent high-dose Vitamin D supplementation (100,000 IU per4 weeks), To conclude, it is necessary for all patients with COPD to monitor blood levels of Vitamin D and provide adequate supplementation, and patients should be reminded that since Vitamin D is a fat-soluble vitamin, supplementation should be carried out during a meal in which there are lipids consumed [5].

Conclusion

All these considerations and achievements have the great potential to improve evidence-based public health recommendations for a healthier eating pattern to adopt early in life as part of a healthy lifestyle in order to preserve lung function and prevent or improve COPD, in addition to

***Correspondence to:** Jane Clougherty, Department of Environmental and Occupational Health, Dornsife School of Public Health, Drexel University, Philadelphia, PA, USA, E-mail: jec373@drexel.edu

***Received**: 04-Aug-2022, Manuscript No. AAAFN-22-74662; **Editor assigned**: 06-Aug-2022, PreQC No. AAAFN-22-74662(PQ); **Reviewed**: 19-Aug-2022, QC No. AAAFN-22-74662; **Revised**: 24-Aug-2022, Manuscript No. AAAFN-22-74662(R); **Published:** 26-Aug-2022, DOI:10.35841/aaafn-5.4.118*

***Citation:** Clougherty J. Areas of study with chronic bronchitis: A food hierarchy. Arch Food Nutr. 2022;5(4):118*

encouraging smoking avoidance or cessation, and especially in smokers who are unable to quit smoking.

References

1. Phillips AZ, Rodriguez HP. US county "food swamp" severity and hospitalization rates among adults with diabetes: A nonlinear relationship. Soc Sci Med SOC SCI MED. 2020;249:112-858.
2. Nguyen HT, Collins PF, Pavey TG, et al. Nutritional status, dietary intake, and health-related quality of life in outpatients with COPD. Int J Chron Obstruct Pulmon Dis. 2019;14:215.
3. Bentley AR, Kritchevsky SB, Harris TB, et al. Dietary antioxidants and forced expiratory volume in 1 s decline: the Health, Aging and Body Composition study. Eur Respir J. 2012;39(4):979-84.
4. Ajami H, Mcheick H. Ontology-based model to support ubiquitous healthcare systems for COPD patients. Electronics. 2018;7(12):371.
5. Hong QY, Wu GM, Qian GS, et al. Prevention and management of lung cancer in China. Cancer. 2015;121(S17):3080-8.

Citation: *Clougherty J. Areas of study with chronic bronchitis: A food hierarchy. Arch Food Nutr. 2022;5(4):118*