

Efficiency of Mixture of Olives Oil and Figs as an Antiviral Agent: a Review and Perspective

Tamer A. Addissouky^{1,5}, Fayed Attia Koutb Megahed^{2,3}, Ayman E. Elagroudy⁴ and Ibrahim El Tantawy El Sayed⁵

¹MLS MOH, Egypt. PhD, MLS, ASCP, USA

²Stem Cell Research Center, Research Center for Reproductive Medicine, Guangdong Provincial Key Laboratory of Infectious Diseases and Molecular Immunopathology, Shantou University Medical College, Shantou 515041, China

³Department of Nucleic Acid Researches, Genetic Engineering and Biotechnology Research Institute, General Authority, City of Scientific Researches and Technological Applications, Alexandria 21934, Egypt

⁴Department of Medical Biochemistry, Medicine Faculty, Mansoura University, Mansoura, Egypt

⁵Department of Biochemistry, Science Faculty, Menoufia University, Menoufia, Egypt

Corresponding author: Tamer A. Addissouky, *MLS MOH, Egypt. *PhD, MLS, ASCP, USA.

*Department of Biochemistry, Science Faculty, Menoufia University, Menoufia, Egypt.

Abstract

By far, Severe acute respiratory syndrome coronaviruses (SARS-COV) have major roles in a growing economic, social and mortality burden as the main causative pathogen of diseases such as Middle East respiratory syndrome (MERS), avian infectious bronchitis virus (IBV) and coronavirus disease 2019 (COVID-19). By now, Due to unspecific antivirus drugs or vaccines are available or approved by official foundations, detecting natural medicine is urgently required as an effective treatment on COV-19. In this article, relevant published research papers are deeply reviewed and current applications of natural compound such as a mixture of olive oil and figs to treat infected patients by coronavirus-19. Traditional medicine was widely used in China exactly by March, 2020. It was noted that the most natural medicine have effective impact on treating the patient who were infected with COVID-19. Mixture of Olives oil and figs are not a recent thing and you perhaps be surprised to know that this mixture can protect you against this devastating virus. So, have a look at the following points to know why it is the best medicine for the Coronavirus:

Keywords: SARS-CoV-2, Traditional Medicine, pneumonia, natural compounds, antiviral agents

Abbreviations:

IBV: infectious bronchitis virus

COVID-19: coronavirus disease 2019

MERS: Middle East respiratory syndrome

SARS-COV: Severe acute respiratory syndrome coronaviruses

IARC: International Agency for Research on Cancer

DEN: diethylnitrosamine

Olive oil is a part of the Middle East area diet

The Middle East area diet is related with a low incidence of chronic degenerative disease and higher life expectancy. Olive oil's good effect on health can be attributed to its fatty acids contents, specifically the unsaturated fatty acids, like oleic acid, and also to its richness in minor bioactive compounds such as phenolic acids and flavonoids¹. Indeed, numerous numbers of scientists have highlighted protection of cardiovascular diseases, anti-atherogenic, anti-diabetic, and anti-cancer effect of olive oil components². The unsaponifiable EVOO fraction represents 0.5% to 1% of EVOO and is made up of a wide number of polyphenols like oleuropein, tyrosol, and hydroxytyrosol³. These polyphenols are currently in the minor fraction of EVOO and have highly significant biological effect⁴. Several in vitro studies on olive oil showed that the anti-allergic activity⁵, the antioxidant activity against LDL oxidation, the chemo-preventive⁶, and cytotoxic activities of virgin olive oil are influenced by various types of olive⁷. There are some scientists have reported by their research that the EVOO has anti-inflammatory effect, but all of these research studies used only EVOO without describing the variety or blend used⁸.

The major benefits of olives, figs, and date palm fruits

Nitrosamines are compounds which include mixture of amines and nitrates or nitrites. The International Agency for Research on Cancer (IARC) concluded that diethyl-nitrosamine (DEN) was carcinogenic in all animal species and is considered a probable human carcinogen⁹. Administration of DEN to animals has been reported that it can lead to Hepatocellular carcinoma and other organs. Probably, there are some effect sides of exposure of laboratory, copolymer, lubricant, and pesticide workers to the carcinogenic effects of DEN. Many people are exposed to unknown amounts of DEN present in conserved foods, beverages, smoke, tobacco, herbicides, pesticides, and industrial pollution¹⁰.

The main benefit of the diet of the Middle East is the high level of natural antioxidants derived from vegetables and fruits such as olives, figs, and date palm fruit that contain antioxidant vitamins, minerals, and have high polyphenol content¹¹. Besides, mixed-plant extracts showed several types of polyphenols and resulted in greater stability and bioaccessibility of antioxidants in comparison of single-plant extracts¹².

Olive Oil is the Ultimate Solution for Corona Virus

Rich In Monounsaturated Fats: Olive oil is totally natural extracted from the fruit of the olives tree and it contains on saturated fat (14%), polyunsaturated fat (11%) such as omega-3 fatty acids and omega 6. Along with these, it has oleic acid (73%) which is otherwise known as

monounsaturated fat. Research has reported that olive oil can improve the power of immunity which can assist us in getting rid of complications and symptoms of covid-19 such as dyspnea, cough, fever and much more ¹³.

Contain numerous amounts of antioxidants: Olive Oil doesn't have only a rich source of antioxidants but also it has vitamins E and K which have vital roles for our body. Well, if we talk about antioxidants, it can keep the cholesterol level in our blood under control. Moreover, it mitigates the chance of having chronic diseases and as a result, we will not get easily affected by the Corona Virus ¹⁴.

Anti-Inflammatory agent: Research has reported that many individuals who suffer from obesity and diabetes have a high probability to be affected by the Coronavirus and so, in such a scenario, olive oil is the ultimate solution as it is rich in anti-inflammatory properties. Scientists have reported that these properties can not only treat our bodies from inflammation but also have the capability to eliminate the proteins and genes that generate inflammation. So, if you are suffering from type-2 diabetes and obesity, launch using olive oil as early as possible ¹⁵.

Fight Alzheimer's disease: If you have Alzheimer's disease, your body might become vulnerable and then will be highly exposure to getting affected by the coronavirus. Well, such disease happens because of beta-amyloid plaques and studies have resulted that olive oil includes a crucial components that can defeat this plaque effectively ¹⁶.

ESS60 Carbon 60 in Olive Oil as anti Coronavirus agent

While it is too early to tell if C60 can be used to treat coronavirus, the fact remains that the compound has proven to be highly effective at addressing one of the most pernicious diseases that humanity has ever encountered: HIV. For a long time, there was no known cure for HIV, and many patients living with the condition had to deal with a significantly reduced quality of life. In addition, they also had to face the possibility of developing fatal AIDS.

Not only does carbon 60 reduce the infections caused by HIV, but it also directly inhibits the reproduction of the virus. Viruses normally cause disease in the human body by taking over the cells of the body and replicating until it overwhelms the immune system. Typically a young and healthy person has an immune system that can overcome most common viruses such as the common cold and influenza ¹⁷.

Olive oil as natural bioactive agent

Olive polyphenols, a relatively recent entry in the field of natural bioactive for the management of inflammation-based conditions of chronic nature, have proven to be effective in interfering with the mobilization of NFK β . This complex, which enters the nucleus is responsible for the expression of over 150 genes, including those encoding cytokines [such as tumor necrosis factor-alpha (TNF-a), interleukin (IL)-1, IL-6 and IL-17] chemokines and adhesion molecules ¹⁸. Furthermore in a double-blind placebo application of olive polyphenols to the treatment of

Osteoarthritis and rheumatoid arthritis revealed that OP caused a statistically significant. every year in the world, the olive oil industry produces over 5 billion barrels of olive pomace. This olive pomace is an invaluable source of olive phenols that can be extracted cost-effectively and with relative easiness to be used as a non-toxic adjunct solution for the prevention and treatment of COVID-19 induced cytokine storm syndrome ¹⁹.

Conclusion

To conclude we can say that by now you have surely understood why Olive Oil is the best remedy for Corona Virus. Now that C60 is observed to have virucidal (virus-killing) properties, it has gone beyond the stage of research studies and has been patented as a treatment for HIV and respiratory virus such as COVID-19. Mixture of olives oil and figs fruits has vital effects on treating viral disease particularly coronavirus disease. In addition, mixture of olives oil and figs has many benefits to protect persons from Geriatrics diseases such as diabetic and heart diseases. This mixture should be recommended as a main diet during treating viral diseases patients.

References:

- 1- Bermudez B., Lopez S., Ortega A., Varela L.M., Pacheco Y.M., Abia R., Muriana F.J.G. (2011). Oleic acid in olive oil: from a metabolic framework toward a clinical perspective. *Curr. Pharm. Des.* 17(8), pp831–843
- 2- Guasch-Ferré M., Hu F.B., Martínez-González M.A., Fitó M., Bulló M., Estruch R., Ros E., Corella D., Recondo J., Gómez-Gracia E. (2014). Olive oil intake and risk of cardiovascular disease and mortality in the PREDIMED Study. *BMC Med.* 12, pp78
- 3- Tuck K.L., Hayball P.J. (2002). Major phenolic compounds in olive oil: metabolism and health effects. *J. Nutr. Biochem.* 13(11), pp636–644.
- 4- Cicerale S., Lucas L.J., Keast R.S.J. (2012). Antimicrobial, antioxidant and anti-inflammatory phenolic activities in extra virgin olive oil. *Curr. Opin. Biotechnol.* 23(2), pp129–135.
- 5- Yamada P., Zarrouk M., Kawasaki K., Isoda H. (2008). Inhibitory effect of various Tunisian olive oils on chemical mediator release and cytokine production by basophilic cells. *J. Ethnopharmacol.* 116(2), pp279–287.
- 6- Fabiani R., Sepporta M.V., Mazza T., Rosignoli P., Fuccelli R., De Bartolomeo A., Crescimanno M., Taticchi A., Esposito S., Servili M. (2011). Influence of cultivar and concentration of selected phenolic constituents on the in vitro chemopreventive potential of olive oil extracts. *J. Agric. Food Chem.* 59(15), pp8167–8174.
- 7- Lozano-Sánchez J., Segura-Carretero A., Menendez J.A., Oliveras-Ferraro C., Cerretani L., Fernández-Gutiérrez A. (2010). Prediction of extra virgin olive oil varieties through their phenolic profile. Potential cytotoxic activity against human breast cancer cells. *J. Agric. Food Chem.* 58(18), pp9942–9955
- 8- Rosillo M.Á., Alcaraz M.J., Sánchez-Hidalgo M., Fernández-Bolaños J.G., Alarcón-de-la-Lastra C., Ferrándiz M.L. (2014). Anti-inflammatory and joint protective effects of extra-virgin olive-oil polyphenol extract in experimental arthritis. *J. Nutr. Biochem.* 25(12), pp1275–1281.

- 9- IARC. 1987. Overall evaluations of carcinogenicity. IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. International Agency for Research on Cancer, Lyon, France
- 10- Verna L, Whysner J, and Williams G. 1996. N-nitrosodiethylamine mechanistic data and risk assessment: bioactivation, DNA-adduct formation, mutagenicity, and tumor initiation. *Pharmacology & Therapeutics*, 71: 57–81.
- 11- Solomon A, Golubowicz S, Yablowicz Z, Bergman M, Grossman S, Altman A, et al. 2010. Protection of fibroblasts (NIH-3T3) against oxidative damage by cyanidin-3-rhamnoglucoside isolated from fig fruits (*Ficus carica* L.). *Journal of Agricultural and Food Chemistry*, 58(11): 6660–6665.
- 12- Bashandy MA, Abd-el-aal A, Ibrahim DF, and El-sharkawy MA. 2016. Protective effects of date palm extract as natural antioxidants on hepatotoxicity induced by *Cerastes cerastes* venom in albino rats. *International Journal of Advanced Research*, 4: 647–665
- 13- Schwingshackl L, Hoffmann G. Monounsaturated fatty acids, olive oil and health status: a systematic review and meta-analysis of cohort studies. *Lipids Health Dis*. 2014;13:154. Published 2014 Oct 1. doi:10.1186/1476-511X-13-154
- 14- Lanza B, Ninfali P. Antioxidants in Extra Virgin Olive Oil and Table Olives: Connections between Agriculture and Processing for Health Choices. *Antioxidants (Basel)*. 2020;9(1):41. Published 2020 Jan 2. doi:10.3390/antiox9010041
- 15- Lucas L, Russell A, Keast R. Molecular mechanisms of inflammation. Anti-inflammatory benefits of virgin olive oil and the phenolic compound oleocanthal. *Curr Pharm Des*. 2011;17(8):754-768. doi:10.2174/138161211795428911
- 16- Stefania Rigacci (2015), Olive Oil Phenols as Promising Multi-targeting Agents Against Alzheimer's Disease, *Adv Exp Med Biol*. 2015;863:1-20. doi: 10.1007/978-3-319-18365-7_1.
- 17- Shoji M, Takahashi E, Hatakeyama D, et al. Anti-influenza activity of c60 fullerene derivatives [published correction appears in *PLoS One*. 2013;8(11). doi:10.1371/annotation/3e6e3fb0-e52f-4a6d-8ea2-34de4147b64f]. *PLoS One*. 2013;8(6):e66337. Published 2013 Jun 13. doi:10.1371/journal.pone.0066337
- 18- Qiurong Ruan, Kun Yang, Wenxia Wang, Lingyu Jiang, Jianxin Song , Clinical predictors of mortality due to COVID-19 based on an analysis of data of 150 patients from Wuhan, China, PMID: 32125452 PMCID: PMC7080116 DOI: 10.1007/s00134-020-05991-x
- 19- Matthew J Killeen Mark Linder Paolo Pontoniere Roberto Crea, NF- κ B signaling and chronic inflammatory diseases: Exploring the potential of natural products to drive new therapeutic opportunities, November 2013 *Drug discovery today* 19(4) DOI: 10.1016/j.drudis.2013.11.002