Functional food complementary

to fight against COVID-19

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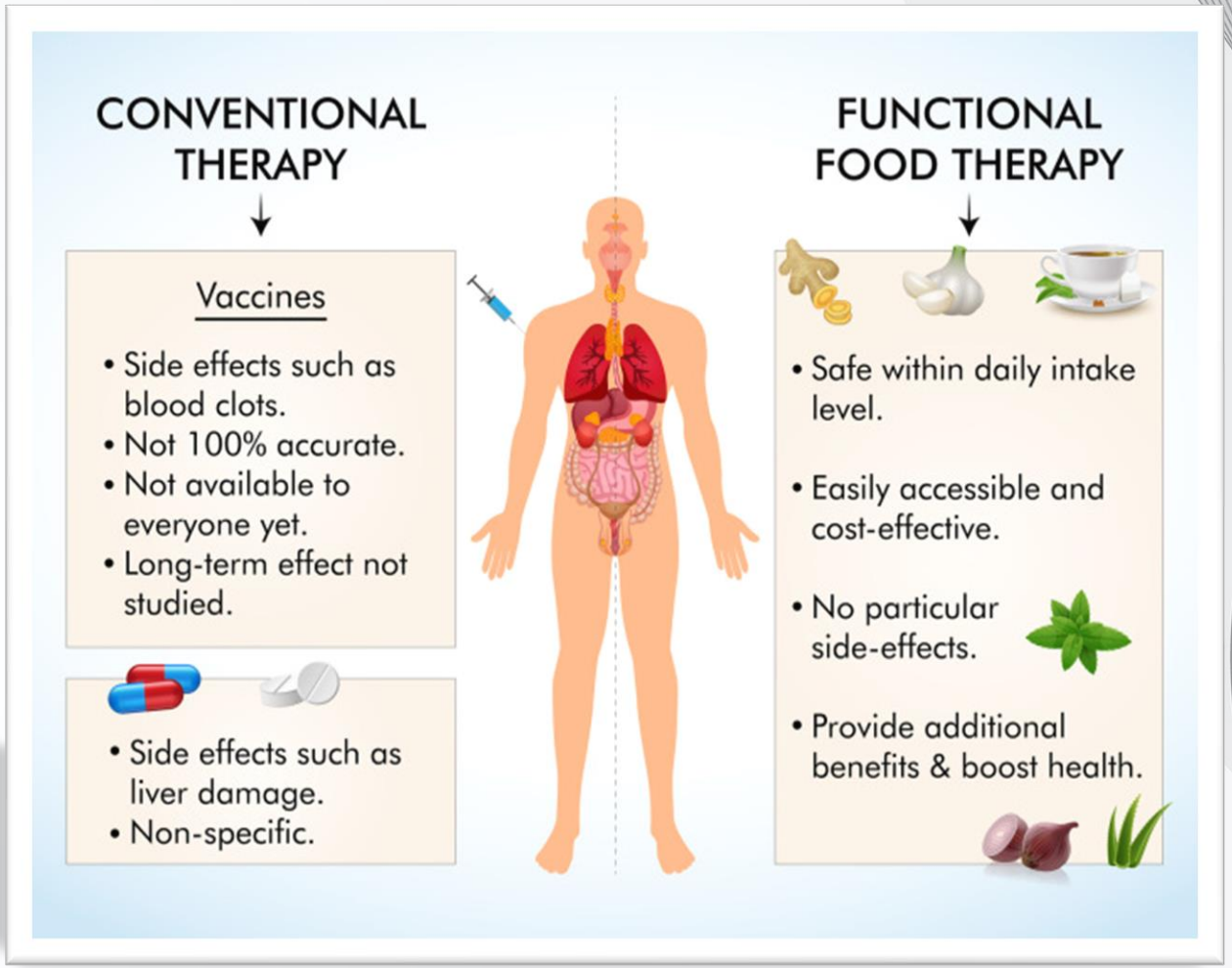
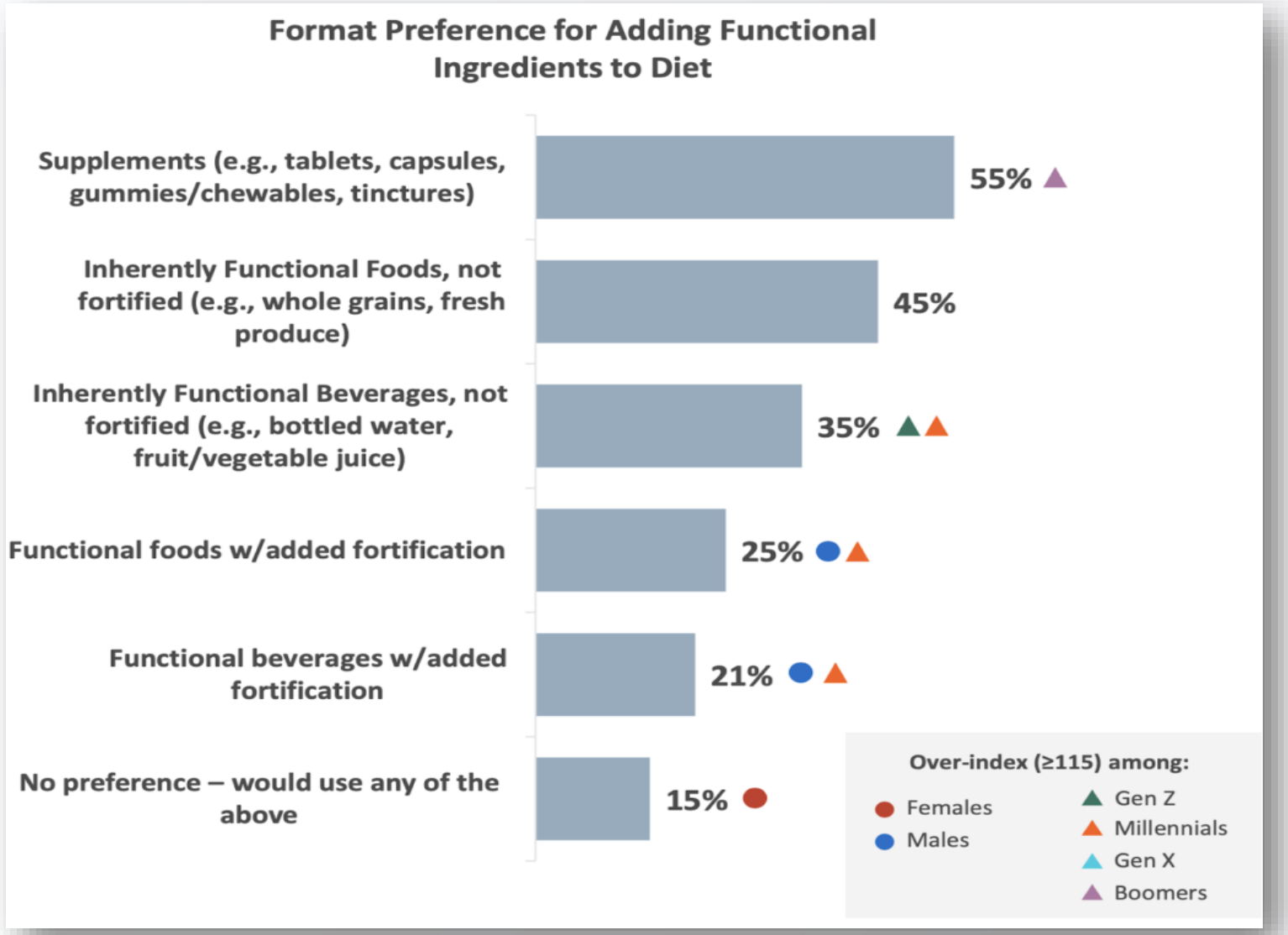
Functional Food

Nutrients + Phytochemical substances → Health Benefit



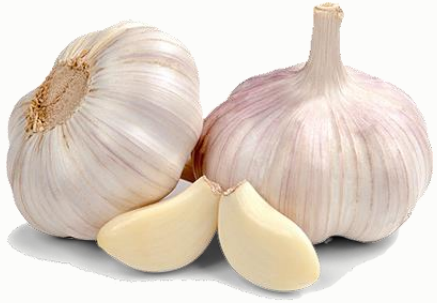
Ref: *Beni-Suef Univ J Basic Appl Sci*, 2022

Consumption of Functional Food Affected by COVID-19



Source: Functional Food & Beverage 2020 Report

Immunity: Allium Sativa (Garlic)



- Immunomodulatory, antimicrobial, antiviral, anti-inflammatory, antimutagenic, antitumor properties.
- Garlic supplement helped lower risk of getting a cold by 63% but no affect to recovery time. (Cochrane Database Syst Rev, 2014)
- Consumption of 2.56 grams aged garlic extract a day during cold and flu season helped reduce severity of symptoms. (J Nutr, 2016)
- Product types: allicin-containing garlic capsule (enteric coated may improve absorption), aged garlic extract, 45-60 mins in oven of 2-5 grams of fresh garlic, garlic oil
- Dose: equivalent to 2-5 grams/day of fresh garlic or 4-12 grams/day of allicin or 2-5 grams of allicin (Thai FDA)
- Precaution: patients taking blood thinning agents, pregnant and breastfeeding women and children (high dose & long-term consumption)

Immunity: Houttuynia cordata (Fish mint)

- Immunomodulatory and antiviral effects
- Inhibitors of the SARS-CoV-2 RdRp enzyme (Saudi J Bio Sci, 2021)
- Increases CD4+, CD8+ T cells as well as secretion of IL-2, IL-10 cytokine in mouse splenic lymphocytes.(J. Ethnopharmacol, 2008)
- fermentation product increased neutrophils in 30 healthy volunteers after 8 weeks of consumption (Food Agric Immunol , 2022)
- *Houttuynia cordata*–based Chinese herbal formula improved symptoms of allergic rhinitis during the COVID-19 pandemic (J Chin Med Assoc, 2022)
- Product types: fresh leaves, extract, fermentation
- Dose: equivalent to quercetin 1 gram/day (Thai FDA)
- Precaution: patients taking blood thinning agents, pregnant and breastfeeding women and children (high dose & long-term consumption)

Anti-SAR-Co-V-2: Andrographis paniculate

(King of bitters)

- Improve immune function and anti-inflammatory effects.
- Relief of symptoms related to respiratory tract infection (should be taken within 72 hours)
- Consumption of andrographolide 11.2 mg/d (5 days a week) for 3 months could lower incidence of common cold for 2.1 times (Phytomedicine, 1997)
- Supplementation of standardized of andrographis extract SAPE (~200 mg of extract containg diterpene lactones (>33%) with andrographolide (>30.0% w/w)) improved function of immune cells and cytokines (J Ayurveda Integr Med, 2021)
- Product types: fresh leaf, dry powder, standardized powder or standardized extract
- Dose: equivalent to andrographolide 11.2-60 mg/d
- Precaution: pregnant and breastfeeding women (high dose & long-term consumption)

Anti-SAR-Co-V-2: Boesenbergia rotunda (Finger root)

- Finger root extract and Panduratin A have inhibitory effect against SAR-Co-V-2 at both pre and post infection phase (Sci Rep, 2020)
- Current researches are conducting to explore the potential of fingerroot in COVID-19 management.
- Product types: fresh rhizome, dry powder, standardized powder or standardized extract
- Dose: equivalent to dry rhizome 3-5 grams (Thai FDA for indigestion)
- Precaution: pregnant and breastfeeding women (high dose & long-term consumption)

Lung & Respiratory function: Centella asiatica

(Gotu Kola)

- Antioxidant, anti-inflammatory activities, improve blood circulation and would healing
- Asiatic acids prevents lung scar due to inhibition of pulmonary inflammatory response (Int Immunopharmacol, 2016)
- Eight months of combination of Pycnogenol® and Centellicum® (PY-CE) consumption improve symptoms, oxidative stress and the Karnofsky Performance Scale Index that may help to prevent development of lung fibrosis. (*Minerva Med, 2022)*
- Product types: fresh leaf, dry powder, standardized powder or standardized extract
- Dose: 60-120 mg of extract standardized for asiaticoside, asiatic acid, and madecassic acid
- Precaution: pregnant and breastfeeding women (high dose & long-term consumption)

Lung & Respiratoryfunction: Phyllanthus emblica

(Amla)

- Antitussive, expectorant, ant spasmolytic, and anti-oxidant effects
- Amla tea lessen duration of stay in hospital, severity of symptoms y and C-reactive protein (CRP) levels in COVID-19 patients. (Complement Ther Med, 2022)
- Consumption of aqueous extract of amla 500 mg for 12 weeks help improve endothelia function of patients with endothelia function (BMC Complement Altern Med, 2019)
- Product types: fresh fruit, dry powder, standardized powder or standardized aqueous extract
- Dose: equivalent to 1 to 3 g of dry powder (may consumed in tea form)
- Precaution: pregnant and breastfeeding women (high dose & long-term consumption)

Improve blood circulation: Clitoria ternatea

(Butterfly pea)

- Anti-oxidant property, improvement of blood circulation and memory and eyesight enhancing effects
- Butterfly pea aqueous extract improve endothelia function in rats (SRIMEDJ, 2019) and increases plasma antioxidant capacity in healthy volunteers (BMC Complement Altern Med, 2018)
- Aqueous extract increase antioxidant status in overweight and obese men after consuming high fat meals. (Biology (Basel), 2021)
- Product types: fresh flower, dry flower, standardized powder or standardized aqueous extract
- Dose: equivalent to 1 to 3 g of dry flowers (may consumed in tea form)
- Precaution: patients taking blood thinning agents, pregnant and breastfeeding women (high dose & long-term consumption)

Improve blood circulation: Allium cepa L.

(onion)

- Increase blood flow and circulation, reduce vascular inflammation due to antioxidant property
- Supplementation of onion was beneficial to control dyslipidemia, including improving levels of HDL, LDL, and TC, but could not reduce TG level. (Food Sci Nutr, 2021)
- 50 milligrams of quercetin daily in the form of an onion powder reduces age-related cognitive decline, in healthy older adults.(J Clin Biochem Nutr, 2021)
- Product types: fresh bulb, freeze dry powder, standardized powder
- Dose: equivalent to 500–1,000 mg of quercetin per day
- Precaution: patients taking blood thinning agents, pregnant and breastfeeding women (high dose & long-term consumption)

THANK YOU