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SECTION OF PUBLIC HEALTH AND PREVENTIVE MEDICINE СЕКЦІЯ ПРОФІЛАКТИЧНОЇ МЕДИЦИНИ ТА ГРОМАДСЬКОГО ЗДОРОВ'Я

NUTRITIONAL DENSITY, HYGIENE AND QUALITY INFLUENCE ON PHYSICAL AND MENTAL HEALTH OF A POPULATION

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Relevance: your food choices each day affect your health — how you feel today, tomorrow, and in the future. Good nutrition is an important part of leading a healthy lifestyle. Combined with physical activity, your diet can help you to reach and maintain a healthy weight, reduce your risk of chronic diseases (like heart disease and cancer), and promote your overall health. Food you eat can either be the safest and most powerful form of medicine or the slowest form of poison.

Aim: the aim of work was to conduct a hygienic assessment of nutritional density, hygiene and quality influence on physical and mental health of a population.

Materials and methods: the research invited all age groups, from different socio-economical background working/studying in different sectors and living in different parts of 'INDIA' with wide range of climatic conditions exposure to participate and fill an online questionnaire (<https://docs.google>) consisting of 28 questions to assess their food habits, availability, hygiene, alterations, cooking methods and their overall health, immunity and recovery status.

The major number of participants participated from metro cities of India where finding quality foods is even more challenging due to larger gap in demand and supply. They were either permanent residence or migrated to those areas for better opportunities in education and job-sectors.

Statistical processing of results was performed using MS Excel.

Results: according to obtained results, satisfaction by food quality was mostly low and food adulterations were rated as high. Also, government authorities' responsiveness of against food adulterations were of low rate of satisfaction. It was established that most of respondents (81%) preferred to buy groceries in local vendors and grocery stores, because of easy accessibility. Gas stove was rated as the primary mean used for cooking by 76% of respondents, people prefer vegetable oils. More than half of respondents (54 %) rating local restaurant's and food vendor's food hygiene between 7 to 10 points (where 10 is maximum).

Around 88% use tap/treated water for groceries washing. It is related to significantly lower hospitalisation due to G.I.T. illnesses than other main disease of this region ($p \leq 0.05$), 70% of population never being in hospital, 18% had only one visit in past 6 months.

Around 70% of respondents prefer healthy eating with meals 3 times/day and only 30% have multiple snacking in day. That is why only in 8% of researched population have chronic disease.

Conclusions: due to high adulteration of food products and lack of awareness and vigilante towards their food and its sources the researched population might stand at risk of chronic illnesses in the long run. The nutritional density of the researched population is not satisfactory due to low grade food products and high adulteration.

Keywords: health, nutrition, hygiene, adulteration.

HYGIENIC ASSESSMENT OF ARTIFICIAL TRANS FATS CONTENT IN THE FOOD OF BOGOMOLETS NATIONAL MEDICAL UNIVERSITY STUDENTS

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Relevance: the average global intake of trans fats was estimated at 1,4% of total energy in 2010, with a range of 0,2 to 6,5% of total energy intake in different countries (0,13 to 4,3 grams/ a day for a 2,000-calorie diet).

Excessive consumption of trans-fatty acids contributes to the occurrence of such disorders in the body and diseases as cancer, atherosclerosis, coronary heart disease, obesity, diabetes, and can also cause pathological changes in the work of the body's immune and reproductive systems and increase the risk of Alzheimer's disease. Approximately 540,000 deaths occur each year due to the consumption of industrially produced trans fats.

Aim: hygienic assessment of the presence of artificial trans fats in the diet of medical university students.

Materials and methods: 50 university students (age category 19-24) took part in this survey. Information about nutrition (diet, list of consumed meals, their weight (quantitative) and product (qualitative)

composition) was collected for the period from 16.01.23 to 23.01.23, with further statistical processing of the received data.

Results: this survey found that out of 50 students, 27 (54%±0,192) consume products containing trans fats. The following groups of products containing trans fats prevailed in the diet (% of total amount):

- sweet foods and drinks 29,4±0,174;
- bakery products 24,1±0,185;
- fried meals 22,8±0,2;
- fast food (hamburgers, cheeseburgers, French fries.) 19,9±0,208;
- snacks (crisps, chips, crackers..) 3,8±0,447.

Conclusions: the study showed that the majority of respondent students pay minimal attention to their nutrition, do not eat regularly, and do not pay attention to the composition of the products they consume in their diet, considering the large amount of products containing trans fats, which may negatively affect their health in the future .

International expert groups and health authorities recommend, as an intermediate step of prevention, to limit the consumption of trans fats (especially industrially produced) to less than 1% of total energy intake, that is, less than 2,2 g/day for a 2,000-calorie diet. And as a reference approach - a complete ban on the use of trans fats during the industrial production of food products.

It is recommended to limit the consumption of fried red meat, sweet foods and drinks, to use natural, non-hydrogenated vegetable oils. When choosing products in supermarkets, it is necessary to look for the inscription "0 g of trans fats" on the labels of each product.

Keywords: trans fat, nutrition, students.

EFFECTIVENESS OF RAPID ANTIGEN TEST COMPARED WITH REAL-TIME RT-PCR FOR BULGARIANS TRAVELING ABROAD

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Relevance: screening testing and contact tracing plays a vital role in control of the COVID-19 pandemic. Given the increase in cases of SARS-CoV-2 infections worldwide, there is a need for a reliable rapid diagnostic approach in addition to existing gold standard real-time RT-PCR testing. Rapid antigen testing (RAT) for SARS-CoV-2 can be performed onsite in mass, is inexpensive compared to real-time RT-PCR, does not require specific and expensive equipment, and results are available within 15 to 30 min. Thus, chains of infection spread and their appropriate interruption could be implemented.

Aim: to compare RAT and RT-PCR testing methods and to outline which one is better for zones with high traffic of individuals (border/customs, airports, interregional bus, train stations) as well as with mass testing campaigns that all require rapid results.

Materials and methods: real-time RT-PCR tests were performed employing the GeneFinder™ COVID-19 Plus RealAmp Kit according to the instructions of the manufacturer. Shortly, the kit was designed to detect one or more of N, E and RdRP viral gene regions altogether with a human internal control sequence. Results were considered positive if at least one viral sequence was detected with a cycle threshold (Ct) value of not more than 37.

SARS-CoV-2 Antigen Tests are based on rapid lateral flow immunoassay methodology for qualitative detection of specific viral antigens that may be present in human nasopharyngeal samples. According to the manufacturer of one EU approved test (Xiamen Boson Biotech Co., Ltd.), the sensitivity of its tests is around 97% and the specificity is almost 100% (99,68%), and results are obtained within 30 min.

Results: the performance of the SARS-CoV-2 RAT was evaluated by comparison with the real-time RT-PCR system for detection of SARS-CoV-2 among travelers. This study evaluated a total of 3509 individual results obtained during January 2022. Among the results 2272 represented RAT and 1237 RT-PCR, respectively. Positive for SARS-CoV-2 antigen were 137 (6,03%) and for viral RNA 90 (7,28%).

Conclusions: the comparison of the two methodologies showed similar results implying both good positive and negative predictive rates. Moreover, in the setting of travellers such as zones with high traffic of individuals (border/customs, airports, interregional bus, train stations) as well as with mass testing campaigns that all require rapid results RAT may be viewed as superior in terms of easy performance and cost-efficiency. Thus, RAT as an approach to control the COVID-19 pandemic with limited resources may be especially beneficial.

Keywords: COVID-19, PCR, pandemic, SARS-CoV-2.

РІВЕНЬ САНІТАРНО-ПРОСВІТНИЦЬКОЇ РОБОТИ ЛІКАРІВ ЩОДО ТЮТЮНОПАЛІННЯ

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