

**11. Konferencija »Splitska inicijativa«**

**11.Conference “ Splitska inicijativa”**

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**Knjiga sažetaka/ Book of summaries**

**Banja Luka, 21.3. - 22.3. 2024**

**Urednici: Biljana Đukić, Aleksander Stepanović**

## **11. Konferencija »Splitska inicijativa«**

**Knjiga sažetaka**

**Urednici: Biljana Đukić, Aleksandar Stepanović**

**Izdala: Katedra za družinsko medicino, Medicinska fakulteta, Univerza v Ljubljani**

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<b>Četvrtak 21.03. 2024</b>			
15.00 - 15.30	Uloga edukacije kliničke prehrane za holističko liječenje bolesnika u ambulanti obiteljske medicine	Uvodno predavanje	Milena Kovač Blaž
15.30 - 16.30	Aktivnosti Splitske inicijative I	Referati	
	Prevalencija faktora rizika za kardiovaskularne bolesti kod odraslog stanovništva Banjaluke		Verica Petrović
	Uticaj metaboličkog sindroma na kardiovaskularni rizik pacijenata u porodičnoj medicini		Olivera Batić Mujanović
	Ishrana i stil života		Matilda Vojnović
16.30 - 17.00	Kafe pauza		
17.00 - 18.00	Aktivnosti Splitske inicijative II	Referati	
	Nedovoljno uzimanje voća i povrća u hrani. Šta to znači?		Ljubin Šukrić
	Pristup bolesniku sa seksualnim problemom u ordinaciji obiteljske medicine		Nina Bašić- Marković
	Procjena bola u donjem dijelu leđa kod zdravstvenih radnika		Suzana Savić
20.00	Svečana večera		
<b>Petak 22.03. 2024</b>			
09.00 - 09.30	Uloga tima porodične medicine u dijagnostikovanju i liječenju gojaznih osoba	Uvodno predavanje	Kosana Stanetić
09.30 - 10.50	Aktivnosti Splitske inicijative III	Referati	
	Promicanje zdravlja i prevencija bolesti u općoj praksi		Katarina Stavrić
	Alkoholizam Prevenција i liječenje iz ugla porodičnog ljekara		Srdan Radojković
	COVID-somnija kod zdravstvenih profesionalaca: fikcija ili realnost?		Larisa Gavran
	Zdrav život u kurikulumu i edukaciji Katedre za porodičnu medicinu Medicinskog fakulteta u Sarajevu		Nataša Trifunović
10.50 - 11.20	Kafe pauza		

11.20 - 12.30	Aktivnosti Splitske inicijative IV		
	Osnivanje Instituta za opću/obiteljsku medicinu na Sveučilištu Johannes Kepler u Linzu	Referati	Erika Zelko
	Prelazak na obrazovanje na daljinu tijekom COVID-19. Rezultati studije Splitske inicijative		Aleksander Stepanović
	Prijedlog studije o stavovima ljekara u odnosu do zajednice i uz to vezane motivacije za zdrav stil života	Radionica	Biljana Đukić
12.30 – 13.00	Planovi za budućnost	Okrugli stol	Svi učesnici
13.00 - 14.00	Zaključci	Plenarno	<b>Gordana Tešanović</b>
14.00	Zatvaranje konferencije		

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# Uloga edukacije kliničke prehrane za holističko liječenje bolesnika u ambulanti obiteljske medicine

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**Abstrakt:** Klinička prehrana je medicinska struka koja se bavi prevencijom, dijagnostikom i liječenjem prehrambenih i metaboličkih stanja koja nastaju kao posljedica nedostatka ili viška energije i/ili pojedinih hranljivih tvari. Zbog metaboličkih promjena koje prate akutna i kronična stanja, ona se često razvijaju istovremeno s njima. Stručna polazišta kliničke prehrane temelje se na nalazima znanstvenih istraživanja koja ispituju patofiziološke veze između nutritivnog unosa i poremećaja prehrane kod pojedinca. Dijagnostički proces odvija se kroz proces nutritivnog liječenja. Nutritivna podpora pojedinca stoga predstavlja ključnu razliku između struke kliničke i preventivne prehrane. Granica između dvaju područja ljudske prehrane nije oštra, pa i u kliničkom liječenju bolesnika možemo djelomično koristiti stručnost obaju područja prehrane. Adekvatna integracija znanja kliničke i preventivne prehrane u zdravstveni tretman pojedinca stoga zahtijeva barem osnovno poznavanje obaju područja prehrane.

Budući da su suvremeni koncepti kliničke prehrane relativno novi te da medicinski tretman pojedinaca dugo niz godina temelji na stručnim polazištima preventivne prehrane, primjena znanja o kliničkoj prehrani u kliničkoj praksi na primarnoj razini zdravstvene zaštite nalazi na niz problema. Stoga je edukacija obiteljske medicine u ovom području neophodna. Edukacija je prilagođena kako provođenju kliničkog nutritivnog liječenja pojedinaca i preventivne kliničke prehrane, tako i nutritivnog liječenja i odgovarajućih prehrambenih mjera za ranjive skupine bolesnika s akutnim zdravstvenim stanjima, bolesnika s kroničnim bolestima, starijih osoba i dr.

**Ključne riječi:** klinička prehrana, obiteljska medicina, klinička medicinska edukacija

**Cilj:** Svrha edukacijskog programa je da liječnik stekne dodatna znanja iz kliničke prehrane:

- Uloga kliničke prehrane u liječenju bolesnika na primarnoj razini: preventivna, kurativna
- Razumijevanje procesa nutritivne tretmana i podpore kao dijela liječničkog pregleda
- Prepoznavanje poremećaja hranjenja: dijagnostički proces, dileme – kada pacijent ima više poremećaja hranjenja ( malnutricija, sarkopenija, gojaznost,,) i kako jih razlikovati
- Primjena medicinske prehrane u kliničkoj praksi - ovisno o stupnju nutritivnog rizika i dijagnozi poremećaja hranjenja
- Vrste i načini primjene medicinske prehrane u ambulanti obiteljske medicine
- Vođenje i nadzor nutritivne terapije

**Metode:** Liječenje prehrambenih stanja pacijenata u ambulanti obiteljskog liječnika očito je timski rad, stoga su članovi tima (DMS, dijetetičar, kineziolog, psiholog) uključeni u edukaciju odgovarajućim, prilagođenim programom.

Edukacija se odvija u obliku modula i organizirana je na način da učinkovito omogući provođenje mjera kliničke prehrane na primarnoj razini zdravstvene zaštite. Osmišljeni su na način da aktivnost kliničke prehrane postane i redoviti dio nutritivne edukacije medicinskih djelatnika koji sudjeluju u liječenju bolesnika u ambulanti obiteljske medicine.

### **Reference:**

Cederholm T, Barazzoni R, Austin P, Ballmer P, Biolo G, Bischoff SC, et al. ESPEN guidelines on definitions and terminology of clinical nutrition. Clin Nutr Edinb Scotl. 2017 Feb;36(1):49–64.

Kovač Blaž M. Clinical pathway in primary care health care. Med Raz gl. 2017; 56 Suppl 1: 53–60.

## **Clinical nutrition education –part of holistic patient management in the family medicine practice**

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**Abstract:** Clinical nutrition is the medical discipline concerned with the prevention, diagnosis and management of nutritional and metabolic conditions that develop as a result of a deficiency or excess of energy and/or specific nutrients. Due to the metabolic changes they are often associated with patients acute and chronic conditions.

Clinical nutrition is based on the findings of scientific research that examines the pathophysiological links between dietary intakes and nutritional disorders in individuals. The diagnostic process is carried out through a nutritional treatment process. The nutritional management of the individual thus presents a key difference between the disciplines of clinical and preventive nutrition.

The line between the two fields of human nutrition is not sharp, so the clinical management of patients can partly benefit from the knowledge of both fields of human nutrition. Thus, the appropriate integration of clinical and preventive nutrition knowledge in the management of individuals requires at least a basic knowledge of both areas of human nutrition.

Since modern concepts of clinical nutrition are relatively new and for many years the health care of individuals has been based on the professional principles of preventive nutrition, the application of clinical nutrition knowledge to clinical practice at the primary care level faces many challenges.

This is why family medicine education in this area is essential. Education is oriented towards the implementation of clinical nutrition management of individuals, as well as preventive clinical nutrition, nutritional management and appropriate nutritional interventions for vulnerable groups of patients with acute medical conditions, patients with chronic diseases, the elderly and others.

**Aim:** The aim of the training programme is to provide the physician with additional knowledge in clinical nutrition:

- Understanding the process of nutritional management as part of medical examination
- Identification of nutritional disorders: diagnostic process, dilemmas - when a patient has multiple nutritional disorders
- Use of medical nutrition in clinical practice
- Types and uses of medical nutrition in the family medicine practice clinic

**Methods:** The management of nutritional disorders in the primary care office is a highly team-oriented work (nurses,, dietician, kinesiologist, psychologist) and therefore all members are involved in the training.

The training is organized in the form of Modules and is designed to the implementation of clinical nutrition interventions at the primary health care level. They are designed so that the clinical nutrition activity will also become a regular part of the nutrition education training of health professionals involved in patient management.

**Key words:** *clinical nutrition, family medicine, clinical medicine education*

### **References:**

Cederholm T, Barazzoni R, Austin P, Ballmer P, Biolo G, Bischoff SC, et al. ESPEN guidelines on definitions and terminology of clinical nutrition. Clin Nutr Edinb Scotl. 2017 Feb;36(1):49–64.

Kovač Blaž M. Clinical pathway in primary care health care. Med Raz gl. 2017; 56 Suppl 1: 53–60.

# Prevalencija faktora rizika za kardiovaskularne bolesti kod odraslog stanovništva Banja Luke

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## Apstrakt

Uvod. Sa stanovišta prevencije i kontrole hroničnih nezaraznih bolesti koje su danas najteži zdravstveni problem u svijetu, zdravstvene aktivnosti bi trebalo prvenstveno da budu usmjerene na otklanjanje uzroka bolesti i faktora koji utiču na njihovu pojavu i širenje. Faktori koji utiču na razvoj ovih bolesti grupisani su u genetske, biološke, stil života i faktore spoljne sredine. Svjetska zdravstvena organizacija ukazuje da su maligne bolesti, kardiovaskularne bolesti, diabetes mellitus i hronične respiratorne bolesti najučestalije kako na globalnom tako i na regionalnim nivoima i da predstavljaju najveću prijetnju zdravlju i blagostanju. Uz nepromjenjive konstitucione faktore (starija životna dob, muški pol, nasljeđe), ključnu ulogu imaju promjenljivi faktori kao što su hiperlipidemija, povišeni krvni pritisak, gojaznost, pušenje i šećerna bolest. Promjenljivi faktori rizika u današnjoj, modernoj medicini su identifikovani i podložni su promjeni, stoga je cilj da djelujemo na što veći broj ovih faktora kako bi usporili proces aterogeneze, a samim time i odgodili ili spriječili kliničku pojavu oboljenja među kojima su i KBS.

Cilj istraživanja je bio da se utvrdi zastupljenost faktora rizika za kardiovaskularne bolesti u odrasloj populaciji grada Banje Luke.

Metodologija: Istraživanje je prospektivno, provedeno u Službi porodične medicine u Domu zdravlja Banja Luka u periodu od 01.10.2023. do 31.12.2023. Kod odraslih građana Banje Luke starijih od 18 godina praćeno je prisustvo sledećih faktora rizika: krvni pritisak, gojaznost, pušački status, glikemija i ukupni holesterol u krvi na tašte. Prisustvo faktora rizika vršeno je prema Stručnom uputstvu izdatom 2002. godine od strane Ministarstva zdravlja i socijalne zaštite Republike Srpske. Za potrebe preventivnih aktivnosti u Domu zdravlja Banja Luka dizajniran je poseban računarski program u koji su unošeni podaci za svako lice koje je uključeno u program prevencije. Iz tog programa uzimani su potrebni podaci za potrebe ovog istraživanja. Krvni pritisak mjereno je svim odraslim osobama dobi 18 do 70 godina, oba pola koji nemaju postavljenu dijagnozu hipertenzije. Sve osobe su pitane za pušački status. Svima

je mjerena visina, težina i obim struka i na osnovu tih podataka određivano prisustvo centralne gojaznosti i stepen uhranjenosti prema BMI. Određivanje glikemije i ukupnog holesterola rađeno je na tešte, nakon najmanje 12 sati ne uzimanja hrane.

Rezultati. Istraživanje je obuhvatilo 8955 građana koji su ispunjavali kriterijume za uključnje, od toga 3629 (42,5%) muškaraca i 5326 (57,5%) žena. Prosječna starost ispitanika iznosila je 49,36 godina. Povišene vrijednosti krvnog pritiska imalo je 20,1% ispitanika. Od ukupnog broja ispitanika kojima su određivani faktori rizika, njih 24,8 % su bili pušači. Povišene vrijednosti BMI imalo je 64,3%, a povećan obim struka 61,5% ispitanika. Povišene vrijednosti šećera u krvi imalo je 25,4%, a povišene vrijednosti holesterola 51,6% ispitanika. Dakle, više od polovine ispitanika imalo je povišene vrijednosti BMI ( $\geq 30$  kg/m<sup>2</sup>) i/ili povećan obim struka (abdominalnu gojaznost), što je značajno veća prevalecija u odnosu na podatke istraživanja iz 2002. i 2010. godine, koja su provedena na odrasloj populaciji građana Republike Srpske.

Zaključak: Pokazalo se da je kod građana Banje Luke, obuhvaćenih ovim istraživanjem, vodeći faktor rizika bila gojaznost. Drugi po zastupljenosti faktor rizika za KVB je bio povišen holesterol.

***Ključne riječi:*** *prevencija, kardiovaskularne bolesti, faktori rizika*

# **Prevalence of risk factors for cardiovascular diseases in the adult population of Banja Luka**

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## **Abstrakt**

Introduction. From the point of view of prevention and control of chronic non-communicable diseases, which are today the most serious health problem in the world, health activities should primarily be aimed at eliminating the causes of diseases and factors that influence their occurrence and spread. Factors that influence the development of these diseases are grouped into genetic, biological, lifestyle and environmental factors. The World Health Organization indicates that malignant diseases, cardiovascular diseases, diabetes mellitus and chronic respiratory diseases are the most common at both global and regional levels and represent the greatest threat to health and well-being. Along with immutable constitutional factors (older age, male sex, heredity), variable factors such as hyperlipidemia, elevated blood pressure, obesity, smoking and diabetes play a key role. Changeable risk factors in today's modern medicine have been identified and are subject to change, therefore the goal is to act on as many of these factors as possible in order to slow down the atherogenesis process, and thus delay or prevent the clinical appearance of diseases, including CHD.

The aim of the research was to determine the prevalence of risk factors for cardiovascular diseases in the adult population of the city of Banja Luka.

Methodology: The research is prospective, conducted in the Family Medicine Service at the Banja Luka Health Center in the period from October 1, 2023. until Decembre 31, 2023. In the adult citizens of Banja Luka over 18 years of age, the presence of the following risk factors was monitored: blood pressure, obesity, smoking status, glycemia and fasting total cholesterol. Detection of the presence of risk factors was performed according to the Professional Instruction issued in 2002 by the Ministry of Health and Social Protection of the Republic of Srpska. For the purposes of preventive activities in the Health Center Banja Luka, a special computer program was designed in which data was entered for each person included in the prevention program. The necessary data for the needs of this research were taken from that program. Blood pressure was measured in all adults aged 18 to 70, both sexes, who were not diagnosed with hypertension. All persons were asked about their smoking status. Height, weight and waist circumference were measured for all of them, and based on these data, the presence of central obesity and the degree of nutrition according to BMI were determined. Determination



of glycemia and total cholesterol was done on an empty stomach, after at least 12 hours of not eating.

The results: The survey included 8955 citizens who met the inclusion criteria, of which 3629 (42.5%) were men and 5326 (57.5%) were women. The average age of the respondents was 49.36 years. 20.1% of respondents had elevated blood pressure values. Of the total number of respondents whose risk factors were determined, 24.8% were smokers. 64.3% had elevated BMI values, and 61.5% had an increased waist circumference. 25.4% had elevated blood sugar values, and 51.6% had elevated cholesterol values. Thus, more than half of the respondents had elevated BMI values ( $\geq 30$  kg/m<sup>2</sup>) and/or increased waist circumference (abdominal obesity), which is a significantly higher prevalence compared to research data from 2002 and 2010, which were conducted on the adult population of citizens of the Republic of Srpska.

Conclusion: It was shown that among the citizens of Banja Luka, included in this research, the leading risk factor was obesity. The second most common risk factor for CVD was elevated cholesterol.

**Key words:** *prevention, cardiovascular diseases, risk factors*

# Uticaj metaboličkog sindroma na kardiovaskularni rizik pacijenata u porodičnoj medicini

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## Sažetak

**Uvod:** Metabolički sindrom (MetS) je skup pet visokorizičnih faktora koji vode razvoju kardiovaskularnih bolesti (KVB) i diabetes mellitusa tip 2 (DM).

**Ciljevi:** Ciljevi ovog istraživanja su bili evaluirati rizične faktore za MetS i procijeniti uticaj MetS-a na kardiovaskularni rizik pacijenta bez KVB i DM u odnosu na spol i dob.

**Metodologija:** Ova studija poprečnog presjeka uključila je 100 slučajno odabranih pacijenata sa dijagnozom MetS-a prema definiciji Internacionalne federacije za dijabetes, dobi 35-80 godina, koji dolaze u Edukativni centar porodične medicine Tuzla. MetS je definisan sa centralnom gojaznošću (obim struka  $\geq 94$  cm u muškaraca i  $\geq 80$  cm u žena) ili indeksom tjelesne mase  $> 30$  kg/m<sup>2</sup>, plus bilo koja dva od sljedeća četiri faktora: povišeni trigliceridi  $\geq 1.7$  mmol/L, nizak nivo HDL-holesterola ( $< 1.03$  mmol/L za muškarce i  $< 1.29$  mmol/L za žene), povišen krvni pritisak  $\geq 130$  mmHg ili  $\geq 85$  mmHg i DM ili povišena glukoza natašte  $\geq 5.6$  mmol/L. Pacijenti sa KVB i DM su isključeni iz istraživanja. Evaluirali smo rizične faktore MetS-a i procijenili 10-godišnji rizik (fatalni ili nefatalni) za KV događaje korištenjem novih SCORE2 i SCORE2-OP rizičnih karti za visokorizične zemlje.

**Rezultati:** Značajno više žena nego muškaraca imalo je dijagnozu MetS-a (65% vs 35%;  $p < 0.001$ ). Prevalenca MetS-a rasla je sa starošću. Više od polovine pacijenata (57%) imalo je tri faktora MetS-a, 28% je imalo četiri faktora i 15% pacijenata imalo je sve faktore MetS-a. Najučestaliji faktor bio je nizak HDL-holesterol (81%), potom povišena glukoza natašte (80%), povišen nivo triglicerida (70%) i povišen krvni pritisak (57%). Prosječan KV rizik za sve pacijente sa MetS-om bio je vrlo visok (20.65%). Žene su imale viši prosječni KV rizik u poređenju sa muškarcima (21.77% vs 18.64%;  $p < 0.005$ ) bez signifikantne razlike. Sveukupno, 75.71% pacijenata imalo je vrlo visok KV rizik, značajno više žena nego muškaraca (51.42%

vs 24.28%;  $p < 0.001$ ). KV rizik povećavao se sa starošću nakon dobi od 60 godina. Vrlo visok rizik imalo je 34.28% pacijenata dobi  $\geq 71$  godina i 32.85% pacijenta dobi 61-70 godina.

**Zaključak:** Rana identifikacija svih osoba sa MetS-om je imperativ u porodičnoj medicini. Primarna intervencija porodičnog ljekara je krucijalna i uključuje promociju zdravog stila života, redovnu provjeru faktora MetS-a i procjenu KV rizika, kao i odgovarajući farmakološki tretman za kontrolu rizičnih faktora ako je potrebno.

**Ključne riječi:** *metabolički sindrom, kardiovaskularni rizik, porodična medicina*

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# The influence of metabolic syndrome on cardiovascular risk of patients in family medicine

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## Abstract

**Introduction:** Metabolic syndrome (MetS) is a cluster of five high-risk factors that lead to the development of cardiovascular diseases (CVD) and diabetes mellitus type 2 (DM).

**Aims:** The aims of this study were to evaluate risk factors of MetS and to estimate the influence of MetS on cardiovascular risk in patients without CVD and DM related to gender and age.

**Methods:** This cross-sectional study included 100 randomly selected patients with diagnosis of MetS according to the International Diabetes Federation, aged 35-80 years, who attended Family Medicine Teaching Center Tuzla. MetS is defined with central obesity (waist circumference  $\geq 94$  cm in male and  $\geq 80$  cm in female) or body mass index  $>30$  kg/m<sup>2</sup>, plus any two of the following four factors: raised triglyceride  $\geq 1.7$  mmol/L, low HDL-cholesterol level  $<1.03$  mmol/L for men and  $<1.29$  mmol/L for women, raised blood pressure  $\geq 130$  mmHg or  $\geq 85$  mmHg and DM or raised fasting plasma glucose  $\geq 5.6$  mmol/L. Patients with CVD and DM were excluded. We evaluated risk factors of MetS and estimated 10-year risk of (fatal and non-fatal) CV events using the new SCORE2 and SCORE2-OP risk charts for high-risk countries.

**Results:** Significantly more women than men had diagnosis of MetS (65% vs 35%;  $p < 0.001$ ). The prevalence of MetS increased with age. More than half of patients (57%) had three factors of MetS; 28% had four factors, and 15% of patients had all factors of MetS. The most frequent factor was low HDL-cholesterol (81%), followed by raised fasting glucose (80%), raised triglyceride level (70%) and raised blood pressure (57%). The mean CV risk for all patients with MetS was very high (20.65%). Women had a higher mean CV risk compared to men (21.77% vs 18.64%;  $p < 0.005$ ) with no significant difference. Overall, 75.71% of patients had very high CV risk, significantly more women than men (51.42% vs 24.28%;  $p < 0.001$ ). CV risk

increased with age starting over at age 60. Very high risk had 34.28% patients aged  $\geq 71$  year and 32.85% patients aged 61-70 year.

**Conclusion:** Early identification of all persons with MetS is imperative in family medicine. The primary intervention of family physician is crucial and includes promotion of healthy lifestyle, regular checking of MetS factors and CV risk assessment, as well as appropriate pharmacological treatment to control risk factors, if necessary.

**Key words:** *metabolic syndrome, cardiovascular risk, family medicine*

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## Ishrana i stil života

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**Uvod:** Lifestyle medicine (LM) je holistički pristup zdravstvenoj zaštiti usmeren na rešavanje i prevenciju hroničnih bolesti putem pozitivnih promena u životnim navikama. Ključne komponente uključuju zdravu ishranu, redovnu fizičku aktivnost, upravljanje stresom, dobar san, izbegavanje štetnih supstanci, održavanje jakih društvenih veza i podršku promeni ponašanja. Ovaj pristup naglašava važnost promenljivih faktora životnog stila u prevenciji bolesti poput srčanih oboljenja, dijabetesa i kancera. Važno je razumeti da lifestyle medicine treba dopunjavati, a ne zamenjivati tradicionalnu medicinsku negu, uz konsultaciju sa zdravstvenim stručnjacima za personalizovane savete.

**Metodologija:** Pretraga aktuelne literature od naučnih članaka preko intrenet stranica kao i WHO smernica o zdravim stilovima života, mogućnosti integracije u svakodnevni život pojedinca te podizanje svesti o prevenciji.

**Diskusija:** Epidemija nezaraznih bolesti (NCD) globalno utiče na milione ljudi, donoseći ozbiljne zdravstvene posledice i pretvarajući se u pretnju zdravstvenim sistemima. Bolesti srca, moždani udar, rak, dijabetes i hronične bolesti pluća čine većinu smrtnih slučajeva širom sveta, pri čemu su ključni faktori rizika promenljivi aspekti životnog stila.

Evropska komisija ističe da strategije promocije zdravlja i prevencije bolesti mogu značajno smanjiti NCD do 70%. U ovom kontekstu, kontrola faktora rizika postaje imperativ, a medicina životnog stila (LM) se ističe kao pristup usmeren na prevenciju, edukaciju i lečenje poremećaja uzrokovanih životnim stilom. LM je zasnovana na šest ključnih faktora- ishrana, fizička aktivnost, san, upravljanje stresom, izbegavanje rizičnih supstanci i pozitivna društvena povezanost. Studije ukazuju na efikasnost LM medicinskih intervencija na životni stil i njenu upotrebu zasnovanu na dokazima u lečenju hroničnih bolesti poput dijabetesa, metaboličkog sindroma i kardiovaskularnih bolesti. Posebna pažnja se posvećuje ishrani, ključnom faktoru

modifikacije životnog stila. Pravilna ishrana ne samo da smanjuje rizik od NCD-a već i produžava životni vek kroz različite mehanizme, uključujući uticaj na imunološki sistem i crevni mikrobiom. Ne treba nikako zaboraviti ni starije osobe, kod kojih ishrana igra važnu ulogu, utičući na fizičko zdravlje, nezavisnost, kao i društveni, kulturni i psihološki kvalitet života. Dobra ishrana kod starijih osoba sprečava podhranjenost, podržava mentalno zdravlje, sprečava invaliditet, podržava fizičku funkciju i smanjuje rizik od hroničnih bolesti. U svetu tehnoloških inovacija, gadgeti postaju nezaobilazni deo svakodnevnog života, nudeći inovativne načine za poboljšanje opšteg blagostanja. Međutim, i pored rizika i saveta o primeni zdravog načina života, rezultati ukazuju na izuzetno nisku prevalenciju zdravih stilova života u odrasloj populaciji SAD, što zahteva dodatne napore lekara i zdravstvenog osoblja u edukaciji i intervencijama. Važno je napomenuti da je lifestyle medicine dopunski pristup i ne bi trebala zameniti tradicionalnu medicinsku negu kad je to potrebno. Izazovi u promociji zdravog načina životaje da iako postoje jasne koristi od promocije zdravog načina života, suočavamo se sa izazovima u podizanju svesti i motivisanju ljudi da promene svoje navike.

**Ključne riječi:** *lifestyle medicine, nutrition, non-communicable diseases,*

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## Nutrition and lifestyle

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**Introduction:** Lifestyle medicine (LM) is a holistic approach to health care aimed at addressing and preventing chronic diseases through positive changes in lifestyle habits. Key components include healthy eating, regular physical activity, stress management, good sleep, avoiding harmful substances, maintaining strong social ties, and supporting behavioral change. This approach highlights the importance of changing lifestyle factors in the prevention of diseases such as heart disease, diabetes and cancer. It is important to understand that lifestyle medicine should be supplemented, not replaced by traditional medical care, in consultation with health professionals for personalized advice.

**Methodology:** Search of current literature from scientific articles through internet pages as well as WHO guidelines on healthy lifestyles, the possibility of integration into the everyday life of an individual and raising awareness of prevention.

**Discussion:** Noncommunicable disease epidemic (NCD) is affecting millions of people globally, bringing serious health consequences and turning into a threat to health systems. Heart disease, stroke, cancer, diabetes and chronic lung disease account for the majority of deaths worldwide, with lifestyle aspects being key risk factors. The European Commission points out that health promotion and disease prevention strategies can significantly reduce the burden of NCD by up to 70%. In this context, risk factor control is becoming imperative, and lifestyle medicine (LM) stands out as an approach aimed at preventing, educating and treating lifestyle-related disorders. LM relies on six pillars - nutrition, physical activity, sleep, stress management, avoidance of risky substances and positive social connection. Studies point to the effectiveness of lifestyle medical interventions in managing chronic conditions such as diabetes, metabolic syndrome and cardiovascular disease. Special attention is paid to nutrition, a key



factor in lifestyle modification. Proper nutrition not only reduces the risk of NCD but also prolongs life expectancy through a variety of mechanisms, including the impact on the immune system and the gut microbiome. We should not forget the elderly, in whom nutrition plays an important role in, affecting physical health, independence, as well as social, cultural and psychological quality of life. Good nutrition in the elderly prevents undernutrition, supports mental health, prevents disability, supports physical function and reduces the risk of chronic diseases. In the world of technological innovation, gadgets are becoming an indispensable part of everyday life, offering innovative ways to improve overall well-being. However, despite the risks and advice on applying a healthy lifestyle, the results indicate an extremely low prevalence of healthy lifestyles in the adult population of the U.S.A., which requires additional efforts of doctors and health care staff in education and interventions. It is important to note that lifestyle medicine is a supplementary approach and should not replace traditional medical care when necessary. The challenges in promoting a healthy lifestyle is that while there are clear benefits to promoting healthy lifestyles, we face challenges in raising awareness and motivating people to change their habits.

**Key words:** *lifestyle medicine, nutrition, non-communicable diseases*

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## **Nedovoljno uzimanje voća i povrća u hrani. Šta to znači?**

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**Uvod:** Voće i povrće predstavljaju važnu komponentu pravilne ishrane i igraju značajnu ulogu u prevenciji masovnih nezaraznih bolesti.

**Cilj:** da prikazemo značaj unosa voća i povrća u ishrani I uloga opštih i porodičnih doktora za rano otkrivanje, prevenciju različitih faktora za nastanak hroničnih nezaraznih oboljenja (HNO), kao i edukaciju stanovništva, osobito dece, za stvaranje pravilnih životnih stilova.

**Sadržaj:** potrošnja voća i povrća veoma je različita, kreće se od manje od 100 gr. dnevno u manje razvijenim zemljama do oko 450 gr. u Zapadnoj Evropi. Voće i povrće pored žitarica, čine najvažniji izvor dijetnih vlakana, koji imaju protektivnu ulogu, zajedno sa antioksidansima (određeni vitamini, minerali i dr. materijama) i fitocijanatima. Dijetna vlakna spadaju u grupu nesvarljivih polisaharida. Dokazano je da dijetna vlakna utiču na modifikaciju glikemiskog odgovora, odnosno na smanjenje postprandijalnog glikemiskog i insulinskog odgovora. Svjetska zdravstvena organizacija (WHO) i Svjetska poljoprivredna organizacija (FAO), preporučuju 400 gr. ili pet porcija voća i povrća dnevno za prevenciju HNO poput KVO, malignih oboljenja, diabetes melitus tip 2 i gojaznost. Unatoč sve većem broju dokaza koji ukazuju na zaštitni učinak voća i povrća, njihov unos je još uvijek nedovoljan u zemljama sa niskim i srednjim nacionalnim dohodkom. Istraživanja u zemljama Evropske Unije su pokazala da bi se u tim zemljama godišnje mogla smanjiti smrtnost od koronarne bolesti za 23,000 godišnje, ako bi se povećao unos voća i povrća u hrani.

**Zaključak:** Preventivne i promotivne aktivnosti neophodno je provoditi na individualnom i populacionom nivou kako bi se stvorio pozitivan ambijent za povećanu potrošnju voća i povrća.

Vodiči za pravilnu ishranu namenjeni doktorima u ambulantama opšte/porodične medicine, korišteni su za rano otkrivanje i prevenciju rizičnih faktora za nastanak HNO kao i pravilnih životnih stilova ishrane.

***Ključne reči:*** voće i povrće, ishrana, prevencija, porodični doktor, HNO

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## **Insufficient consumption of fruits and vegetables in food.**

### **What does this mean?**

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**Introduction:** Fruits and vegetables are an important component of proper nutrition and play an important role in the prevention of chronic non-communicable disease (HND). **Objective:** To show the importance of the intake of fruits and vegetables in the diet and the role of the family doctor for early detection and prevention of various factors for the development of HND as well as educating the population, especially children, to create proper life styles. **Content:** The consumption of fruits and vegetables is very different and ranges from less than 100 grams per day in less developed countries to about 450 grams, along in Western Europe. Fruits and vegetables, along with cereals, are the most important source of dietary fiber, which has a protective role, together with antioxidants (certain vitamins, minerals and other substances) and phytochemicals. Dietary fiber belongs to the group of indigestible polysaccharides. It has been proven that dietary fiber affects the modification of the glycemic response. The World Health Organization (WHO) and World Agricultural Organization (FAO) recommend 400 grams or five portions of fruits and vegetables daily for the prevention of chronic diseases such as cardiovascular diseases (CVD), malignant diseases, type 2 diabetes and obesity. Despite the growing

number of evidences that indicate the protective effect of fruits and vegetables, their intake is still inadequate in countries with low middle national income. research in the countries of the European Union has show that in those countries, mortality from coronary diseases could be reduced by 23.000 per year if the intake of fruits and vegetables in food were increased. **Conclusion:** preventive and promotional activities must be carried out at the individual and population level, as would create a positive environment for increased consumption of fruits and vegetables. Guides for proper nutrition intended for doctors in family medicine clinics, were used early detection and prevention of risk factors for the occurrence of HND as well as proper lifestyles of nutrition.

**Keywords:** *fruits and vegetables, nutrition, prevention, family doctor, HND*

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# Seksualno zdravlje i kronične bolesti

## Pristup bolesniku sa seksualnim problemom u ordinaciji obiteljske medicine

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**Teorijska osnova:** Seksualni problemi imaju negativan utjecaj na kvalitetu života, psihološko blagostanje i zadovoljstvo vezom, a u svakodnevnom radu liječnika značajna je povezanost i s kroničnim bolestima. Područje utjecaja seksualnog zdravlja često je zanemareno u edukaciji.

**Metodologija:** Pregledane su baze podataka UpToDate i PubMed korištenjem ključnih riječi seksualno zdravlje (engl. *sexual health*), seksualna disfunkcija (engl. *sexual dysfunction*), primarna zaštita (engl. *primary care*), komunikacija (engl. *communication*) i kronične bolesti (engl. *chronic disease*). Uključni kriteriji bili su dostupnost cjelovitih preglednih članaka na engleskom jeziku objavljenih u razdoblju od 2019. do 2024. godine. Navedene kriterije zadovoljilo je 48 članaka.

**Rezultati:** Tijekom života oko 25% muškaraca te 35% žena ima neki oblik seksualne disfunkcije. U literaturi se navodi da svega 10-20% tih bolesnika zatraži pomoć liječnika, a najučestalije teme vezane su uz spolno prenosive bolesti i kontracepciju. Liječnici upitaju o seksualnom funkcioniranju bolesnika s nekom kroničnom bolesti u svega 4% slučajeva. Seksualne disfunkcije prisutne su u 70% oboljelih od šećerne bolesti tip 2, u 56% oboljelih od kardiovaskularnih bolesti te 30% oboljelih od neuroloških bolesti. Ne treba zanemariti ni

kroničnu opstruktivnu bolest pluća, kroničnu bubrežnu bolest, inkontinenciju, onkološke oboljenja kao ni razne ozljede.

**Diskusija:** Seksualno zdravlje nije samo odsutnost seksualne disfunkcije ili invaliditeta, već i prisutnost fizičkog, emocionalnog, mentalnog i društvenog blagostanja povezano sa seksualnošću. Kronične bolesti imaju utjecaj na seksualno zdravlje u smislu ograničavanja mogućnosti ili aktivnosti, ali i njihovo liječenje ponekad kao nuspojavu ima seksualnu disfunkciju. U tom slučaju bolesnik vrlo često sam odustaje od propisane terapije. Navode se različiti uzroci zbog kojih liječnici izbjegavaju pitati bolesnike o seksualnosti, kao što su strah liječnika da će izazvati neugodu kod bolesnika, nedostatak vremena ili edukacije, netočna uvjerenja i osobni stavovi liječnika poput osjećaja da to nije njegova odgovornost te da će bolesnik sam postaviti pitanje ukoliko to želi. Dodatna edukacija u nastavnim planovima i programima o seksualnom zdravlju i povezanosti s kroničnim bolestima poboljšala bi skrb za kronične bolesnike.

**Ključne riječi:** seksualno zdravlje, komunikacija, kronične bolesti

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## Sexual health and chronic diseases

### Approach to a patient with a sexual problem in a family medicine office

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**Theoretical Background:** Sexual problems have a negative impact on quality of life, psychological well-being, and relationship satisfaction, and in the everyday work of physicians, there is significant association with chronic diseases. The area of sexual health impact is often neglected in education.

**Methodology:** Databases UpToDate and PubMed were reviewed using the keywords sexual health, sexual dysfunction, primary care, communication, and chronic diseases. Key criteria included availability of comprehensive review articles in English published between 2019 and 2024. Forty-eight articles met these criteria.

**Results:** Approximately 25% of men and 35% of women experience some form of sexual dysfunction in their lifetime. Literature indicates that only 10-20% of these patients seek medical help, with most common topics related to sexually transmitted diseases and contraception. Physicians inquire about patients' sexual functioning with a chronic illness in only 4% of cases. Sexual dysfunctions are present in 70% of patients with type 2 diabetes, 56% with cardiovascular diseases, and 30% with neurological diseases. Chronic obstructive pulmonary disease, chronic kidney disease, incontinence, oncological diseases, and various injuries should not be overlooked.



**Discussion:** Sexual health is not just the absence of sexual dysfunction or disability, but also the presence of physical, emotional, mental, and social well-being related to sexuality. Chronic diseases impact sexual health by limiting possibilities or activities, and their treatment sometimes causes sexual dysfunction as a side effect. In such cases, patients often discontinue prescribed therapy. Various reasons are cited for physicians avoiding discussions about sexuality with patients, such as fear of causing discomfort, lack of time or education, incorrect beliefs, and personal attitudes like feeling it is not their responsibility and that patients will raise the issue if they wish. Additional education in curricula about sexual health and its connection to chronic diseases would improve care for chronic patients.

**Keywords:** *sexual health, communication, chronic diseases*

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## Procjena bola u donjem dijelu leđa kod zdravstvenih radnika

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**Uvod:** Pojava bola u donjem dijelu leđa je, globano, u porastu. Tokom 2020. godine 619 miliona ljudi širom svijeta patilo je od bola u donjem dijelu leđa (skoro 10% svjetske populacije), a očekuje se da će taj broj rasti na 843 miliona do 2050. godine. Cilj istraživanja bio je utvrditi uticaj pola i godina radnog staža na bol u donjem dijelu leđa, kod zdravstvenih radnika.

**Materijal i metode:** Studija presjeka obuhvatila je 268 zdravstvena radnika oba pola. Istraživanje je provedeno u periodu od 01.04.2022. do 30.06.2022. kod zdravstvenih radnika u dva doma zdravlja (Banja Luka i Gradiška) i Zavoda za medicnu rada i sporta Republike Srpske. Analiziran je uticaj pola, starosti, godina radnog staža na prisutvo bola u donjem dijelu leđa, upotrebom *Roland-Moriss Disability Questionnaire-RMDQ*.

**Rezultati:** U ispitivanom uzorku (n=268), većinu su činile osobe ženskog pola 221 (82,5%). Najzastupljenije starosna struktura je bila od 40-49 godina 87 (32,46%), dok je 172 (64,17%) ispitanika bilo sa radnim stažem do 20 godina. Bol u donjem dijelu leđa, do 6 nedelja, bio je prisutan kod 159 (59,33%) ispitanika. Između ispitanika muškog i ženskog pola ne postoji statistički značajna razlika ( $\chi^2 = 0,068$ ,  $p = 0,794$ ), prema RMDQ. Postoji visoko statistički značajna povezanost starosti ispitanika i RMDQ za izvršavanje sljedećih radnji: "Zbog bola u

leđima držim se za nešto pri ustajanju” ( $p = 0,004$ ), “Oblačim se sporije nego inače” ( $p = 0,006$ ), “Ne mogu da se savijem i klečim” ( $p = 0,000$ ), “ Teško mi je ustati sa stolice” ( $p = 0,003$ ), “Teško oblačim čarape” ( $p = 0,000$ ) i “Izbjegavam teške poslove” ( $p = 0,000$ ). Testirajući hod na kratko u odnosu na životnu dob ispitanika dobijena je statistički značajna razlika ( $p = 0,015$ ). Visoko statistički značajna razlika postoji u testiranju dužine radnog staža i RMDQ za izvršavanje sljedećih radnji: “Zbog bolova u leđima koristim rukohvat” ( $p = 0,001$ ), “Ne mogu da se savijem i klečim” ( $p = 0,000$ ) i “Teško oblačim čarape” ( $p = 0,001$ ). Statistički značajna razlika nađena je testirajući dužinu radnog staža i RMDQ za izvršavanje sljedećih radnji: “Hodam sporije zbog bola” ( $p = 0,030$ ), “Zbog bola u leđima angažujem druge ljude” ( $p = 0,044$ ), ”Oblačim se sporije nego inače” ( $p = 0,012$ ), “Ne mogu dugo da sjedim” ( $p = 0,038$ ) i “Teško mi je ustati sa stolice” ( $p = 0,031$ ).

**Zaključak:** Prisustvo bola u donjem dijelu leđa značajnije je kod starijih zdravstvenih radnika pri izvođenju zahtjevnijih i/ili specifičnijih pokreta savijanja. Neophodna je dodatna edukacija zdravstvenih radnika o primjeni zaštitnih položaja, ali i promociji provođenje redovnog vježbanja/rehabilitacije, u cilju prevencije pojave bola u donjem dijelu leđa u radnom okruženju. U cilju pomoći smanjenju izostanaka sa posla buduća rješenja bi trebala uključivati integraciju strategija za ublažavanje bol u donjem dijelu leđa na radnom mjestu i pristupa uslugama rehabilitacije. U odnosu na navedeno, Svjetska zdravstvena organizacija je 2017. godine pokrenula “Inicijativa rehabilitacije 2030”, koja ima za cilj jačanje usluga rehabilitacije širom svijeta,

***Ključne riječi: lumbalni bol, zdravstveni radnici, faktori rizika, upitnici, procjena onesposobljenosti***

## Assesment of low back pain among health workers

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**Introduction:** The global epidemic of low back pain is escalating. A staggering 619 million people worldwide suffered from low back pain in 2020 (nearly 10% of the world's population), and by 2050, that number is expected to reach 843 million. The aim of the study was the impact of gender of work experience on the incidence of lower back pain, among health workers.

**Methods:** A cross-sectional study included 268 subject of both genders. The study was conducted in the period between April 1 and June 30. 2022. on health workers in two health centers (Banja Luka and Gradiska) and the Institute for Medical Work and Sports of the Republic of Srpska. The impact of gender, age, years of work experience on the incidence of low back pain was analyzed, measured by the Roland-Morris Disability Questionnaire-RMDQ.

**Results:** In the examined sample (n=268), the majority were women 221 (82.5%). The most represented age structure was 40-49 years old, 87 (32.46%), while 172 (64.17%) subjects had a working experience of up to 20 years. The lower back pain, lasting up to 6 weeks, was presented in 159 (59,33%) subjects. There was no statistically significant difference between male and female subjects regarding the RMDQ ( $\chi^2 = 0.068$ ,  $p = 0.794$ ). There was a statistically significant positive correlation between the age of subjects and the RMDQ for performing the following actions: “Due to back pain, I hold onto something when standing up” ( $p = 0.004$ ), “I dress slower than usual” ( $p = 0.006$ ), “I cannot bend and kneel” ( $p = 0.000$ ), “It is difficult for me to get up from a chair” ( $p = 0.003$ ), “I have difficulty putting on socks” ( $p = 0.000$ ) and “I avoid heavy work” ( $p = 0.000$ ). When testing the short walk in relation to the age of the examinees, a statistically significant difference was found ( $p = 0.015$ ). A highly statistically significant difference exists in testing length of lasting work service and RMDQ for performing the following actions: “Due to back pain, I use a handrail” ( $p = 0.001$ ), “I can't bend and kneel” ( $p = 0.000$ ) and “Difficulty putting on socks” ( $p = 0.001$ ). A statistically significant difference was found testing the length of lasting work service and RMDQ for performing the following actions: “I walk slower because of pain” ( $p = 0.030$ ), “Because of back pain, I engage other

people” (p = 0.044), “I dress slower than usual” (p = 0.012), “I cannot sit for a long time” (p = 0.038) and “It is difficult for me to get up from a chair” (p = 0.031).

**Conclusion:** The low back pain is more significant in older health workers during more specific bending moves. Additional education of health workers on the application of protective positions, moves and exercise/ rehabilitation, is needed in order to prevent the development of low back pain in the work environment. Solutions should involve integration of strategies to mitigate low back pain in the workplace, along with access to rehabilitation services, which will help to minimize absenteeism. To this end, in 2017, World Health Organization launched “The Rehabilitation 2030 Initiative”, which aims to strengthen rehabilitation services worldwide.

**Key words:** *Low Back Pain, Health Personnel, Risk Factors, Questionnaires, Disability Evaluat*

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## Uloga porodičnog doktora u ranom otkrivanju pacijenata sa predijabetesom kod predgojaznih i gojaznih odraslih osoba

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**Cilj istraživanja:** ispitati prevalenciju predijabetesa kod odraslih predgojaznih i gojaznih pacijenata.

**Metode:** Provedena je studija presjeka u dva doma zdravlja u Republici Srpskoj (BiH) tokom 2022.godine. U istraživanje su uključeni predgojazni pacijenti sa BMI (*Body Mass Index* 25.0 kg/m<sup>2</sup> do 29.9 kg/m<sup>2</sup>) i gojazni pacijenti sa BMI od 30.0 kg/m<sup>2</sup> i više, stariji od 18 godina života, naizgled zdravi i bez ikakvih tegoba. Pacijenti su izabrani metodom slučajnog izbora iz registra pacijenata sa prisutnim faktorima rizika za hronične nezarazne bolesti. U istraživanje nisu uključeni pacijenti koji imaju dijagnozu dijabetes mellitus-a tip 2 (T2DM).

Za potrebe istraživanja kreiran je uputnik za prikupljanje podataka, koji je sadržavao informacije o sociodemografskom statusu. Svim pacijentima su urađena antropometrijska mjerenja (visina, težina, BMI, obim struka), te urađene laboratorijske analize.

**Rezultati:** Istraživanjem je obuhvaćeno 264 pacijenta. Muškog pola je bilo 90, a ženskog 174 pacijenta. Predgojaznih je bilo 132 i gojaznih 132 pacijenta. Srednja životna dob ispitanika je

bila [60.55 ± 13.34 SD ]. U ispitivanoj grupi pacijenata bilo je 74 pušača, 178 nepušača i 12 bivših pušača. Rezultati istraživanja su pokazali da je u ispitivanoj grupi pacijenata prevalencija predijabetesa kod gojaznih pacijenata iznosila 28.03%, a kod predgojaznih iznosi 21.21%. Dalja analiza je pokazala da ispitanici sa većim obimom struka, sa androidnim tipom gojaznosti, imaju veću šansu da obole od predijabetesa. Osobe ženskog pola, sa pozitivnom porodičnom anamnezom za obolijevanje od T2DM i starijeg životnog doba su u većem riziku za obolijevanje od predijabetesa.

**Diskusija/zaključak:** DECODE (engl. *Diabetes epidemiology: Collaborative analysis of diagnosis criteria in Europe*) studija, pokazala je da su osobe u stanju predijabetesa u visokom riziku za obolijevanje od T2DM i kardiovaskularnih bolesti. Gojaznost je jedan od najvažnijih faktora rizika za obolijevanje od predijabetesa, a pretpostavlja se da 50% gojaznih osoba >40 godina ima predijabetes. Procjenjuje se da je od predijabetesa oboljelo više od 400 miliona ljudi, a da će se ovaj broj povećati na 470 miliona u 2030 godini. U 2017.godini podaci CDC (*Centers of Disease Control and Prevention*) su utvrdili da 33.9% osoba u SAD ima predijabetes. Prevalencija je veća kod osoba starijih od 65 godina, što je slučaj i u našem istraživanju. S obzirom da se predijabetes značajno češće javlja kod predgojaznih i gojaznih osoba, porodični doktori bi trebali da obrate posebnu pažnju na ove pacijente, da im blagovremeno urade laboratorijske analize, te dijagnostikuju eventualno oboljenje. *Screening* kod pacijenata sa prekomjernom tjelesnom masom i gojaznih osoba je izuzetno važan, jer je bolest najčešće asimptomatska.

Savjetovanje pacijenata o neophodnosti smanjenja tjelesne težine putem pravilne ishrane i povećanja fizičke aktivnosti treba biti dio svakodnevnog rada porodičnog doktora. Ukazivanje na činjenicu da gojaznost nije samo estetski problem, već da je to faktor rizika za obolijevanje od masovnih nezaraznih bolesti, uključujući T2DM, kardiovaskularne, maligne i druge hronične bolesti je jedan od izuzetno važnih zadataka porodičnog doktora.

Dalja istraživanja o prevalenciji i prevenciji predijabetesa su potrebna.

**Ključne riječi:** *predijabetes, gojaznost, rano otkrivanje, porodični doktor*

## **The role of the family doctor in the early detection of patients with prediabetes in preobese and obese adults**

**The aim of the research:** to examine the prevalence of prediabetes in adult pre-obese and obese patients.

**Methods:** A cross-sectional study was conducted in two health centers in the Republic of Srpska (BiH) during 2022. Pre-obese patients with a BMI (Body Mass Index 25.0 kg/m<sup>2</sup> to 29.9 kg/m<sup>2</sup>) and obese patients with a BMI of 30.0 kg/m<sup>2</sup> and above, older than 18 years of age, apparently healthy and without any ailments, were included in the research. Patients were selected by random selection from the register of patients with risk factors for chronic non-communicable diseases. Patients diagnosed with diabetes mellitus type 2 (T2DM) were not included in the study.

For the purposes of the research, a data collection questionnaire was created, which contained information on sociodemographic data. Anthropometric measurements (height, weight, BMI, waist circumference) and laboratory analyzes were performed on all patients.

**Results:** The research included 264 patients. There were 90 male and 174 female patients. There were 132 preobese and 132 obese patients. The mean age of the subjects was [60.55 ± 13.34 SD]. In the examined group of patients there were 74 smokers, 178 non-smokers, 12 ex-smokers. The results of the research showed that in the examined group of patients, the prevalence of prediabetes in obese patients was 28.03%, and in pre-obese it was 21.21%. Further analysis showed that respondents with a larger waist circumference, with the android type of obesity, have a higher chance of suffering from prediabetes. Females, patients with a positive family history of T2DM and older age are at greater risk of prediabetes.

**Discussion/conclusion:** The DECODE study showed that people with prediabetes are at high risk of developing T2DM and cardiovascular diseases. Obesity is one of the most important risk factors for developing prediabetes, and it is assumed that 50% of obese people >40 years of age have prediabetes. It is estimated that more than 400 million people have suffered from prediabetes, and that this number will increase to 470 million in 2030. In 2017, data from the CDC (Centers of Disease Control and Prevention) determined that 33.9% of people in the US



have prediabetes. The prevalence is higher in people over 65 years old, which is also the case in our study. Given that prediabetes occurs significantly more often in pre-obese and obese people, family doctors should pay special attention to these patients, perform laboratory tests on them in a timely manner, and diagnose any possible disease. Screening in overweight and obese patients is extremely important, because the disease is usually asymptomatic.

Advising patients on the necessity of reducing body weight through proper nutrition and increasing physical activity should be part of the family doctor's daily work. Pointing out the fact that obesity is not only an aesthetic problem, but that it is a risk factor for contracting mass non-communicable diseases, including T2DM, cardiovascular, malignant and other chronic diseases, is one of the extremely important tasks of a family doctor.

Further research on the prevalence and prevention of prediabetes is needed.

**Key words:** *prediabetes, obesity, early detection, family doctor*

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## Promocija zdravlja i prevencija bolesti u ambulanti opće prakse

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Uvod: Liječnici opće prakse imaju vitalnu i ključnu ulogu u promociji zdravlja kroz pružanje zdravstvenih informacija i oportunističkih preventivnih intervencija za pacijente u ordinaciji liječnika opće prakse I u zajednici. Dobre komunikacijske vještine su imperativ kako bi se utjecalo na promjenu ponašanja i maksimizirala korist od programa prevencije bolesti. Sve te vještine dio su programa poslijediplomskog studija obiteljske medicine.

Rasprava: Reforme primarne zdravstvene zaštite u Makedoniji su prioritet vlade. To je prilika za razvoj integriranih međusektorskih timova za promocija zdravlja kako bi se riješile zdravstvene nejednakosti lokalnog stanovništva. Važan dio Protokola za najčešće kronične nezarazne bolesti koji su izrađeni u prethodnoj godini bila je promocija i prevencija nezaraznih bolesti. Iako su ti protokoli uvedeni prošle godine, njihova se implementacija suočava s brojnim preprekama. Te prepreke za promocija zdravlja i prevenciju bolesti u praksi liječnika opće prakse su:

- Vrijeme je prepreka aktivnostima promocija zdravlja u konzultacijama liječnika opće prakse.
- Potreba za edukaciju - većina liječnika opće prakse ne smatra da ima vještine pomoći pacijentima da naprave potrebne izmjene u svom načinu života
- Nedostatak multidisciplinarnog tima (aktivno uključivanje medicinskih i patронаžnih sestara)
- Liječnici opće prakse također vjeruju da diskusija o životnim stilu s pacijentima koji ne žele promijeniti svoje ponašanje može imati negativne učinke na odnos liječnik-pacijent
- Nedostatak timskog pristupa u prevenciji i promociji – aktivno uključivanje medicinskih sestara, patронаžnih sestara i ostalih članova tima.
- Nedostatak sustava zakazivanja preventivnih konzultacija.

Zaključak: Promocija zdravlja i prevencija bolesti treba da budu važan dio rada liječnika opće prakse. Unatoč stalnim poboljšanjima u preživljavanju od bolesti koje se mogu spriječiti, postoje značajne razlike. Razumijevanje uloge liječnika opće prakse, njihovih prepreka i potrebe razvoja šireg tima primarne zdravstvene zaštite u preventivnih aktivnostima u zajednici je važno u jačanju promocije i prevencije u općoj praksi i primarnoj zdravstvenoj zaštiti.

***Ključne riječi:*** opća praksa, promocija zdravlja, prevencija, barijere.

# Health promotion and disease prevention in general practice

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**Introduction:** GPs have a vital and central role in health promotion through provision of health information and opportunistic preventive interventions for patients attending the GP practice and in the wider community. Good communication skills are imperative to effect behavior change and maximize the benefit of ill-health prevention programmes. All those skills are part of the postgraduate family medicine curricula.

**Discussion:** Reforms in primary care in Macedonia are priority of the government. This is an opportunity to develop integrated cross-sector health promotion teams to address local population health inequalities. Important part of the Protocols for most common chronic noncommunicable diseases that were developed in the previous year was promotion and prevention of NCD's. Although those protocols were introduced last year, their implementation faces many obstacles. Those obstacles for promoting health and preventing disease in GPs practice are:

- Time is a barrier to health promotion activities in the GP consultation.
- Need of education -most GPs do not feel that they have the skills to help patients to make the necessary modification to their lifestyle
- Lack of multidisciplinary team (active involvement of nurses and community nurses)
- GPs also believe that discussing lifestyle issues with patients who do not wish to change their behaviour can have adverse effects on the doctor–patient relationship
- Lack of team approach in prevention and promotion – active involvement of nurses, community nurses and other team members.
- Lack of appointment system for preventive consultations.

**Conclusion:** Health promotion and disease prevention should be important part of the GPs work. Despite continued improvements in survival from preventable diseases, significant disparities

exist. Understanding the role of the GP, their barriers and the need of develop wider primary healthcare team in health promotion activities in the community is also important in strengthening the promotion and prevention in general practice and primary care.

***Key words:*** *general practice, health promotion, prevention, barriers*

# Alkoholizam

## Prevenција i liječenje iz ugla porodičnog ljekara

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**Uvod:**Alkoholna pića predstavljaju najrasprostranjeniji i najpristupačniji stimulans na svijetu. Legalan u skoro svim zemljama svijeta izuzev Bliskog istoka za odgovarajuće starnosne granice predstavlja najčešće upotrebljivan napitak od 16 godina starosti pa nadalje. Prisutan u različitim formama, pri zloupotrebi je najčešće odgovoran za hronična oboljenja poput ciroze jetre i pankreasa, oštećenja bubrežne funkcije, razvoj depresije, saobraćajne nezgode, nanošenje lakih i teških tjelesnih povreda, nasilje u porodici, profesionalne greške i smrtne ishode u adultnoj populaciji.

**Cilj:**Unaprijediti svijest i informisanost, kakav uticaj ima zloupotreba i dugotrajna upotreba alkohola na zdravlje i kvalitet života u opštoj populaciji Banja Luke kod ispitivanih pacijenata, te prevenirati dalji razvoj hroničnih bolesti.

**Metodologija istraživanja:**U uzorku od 30 pacijenata, 21 muškarac i 9 žena uzrasta od 18 do 65 godina je ispitivano i praćeno putem laboratorijskih analiza, ultrazvučnim pregledom abdomena, upitnika koje je sačinio autor, zdravstveno stanje pacijenata, stepen tjelesnog oštećenja, psihološki status i kvalitet života ispitanika koji su se izjasnili da „nemaju problem sa alkoholom“. Istraživanje je bilo fokusirano na sociodemografske faktore (pol i dob) , porodični status, stepen obrazovanja, profesiju i da li su imali u istoriji bolesti ranije registrovanu anksioznost/depresiju. Da li je bilo alkoholizma u porodičnoj anamnezi i da li su ispitanici svjesni koliku količinu alkohola unose i kakav on ima efekat na njihovo zdravlje je razmatrano. Ispitivana je i mogućnost uticaja stresa kod odgovarajućih profesija ( doktori, policija, advokati...) na povećanu upotrebu alkohola i njegov efekat na zdravlje i kvalitet života pacijenata. Liječeni i registrovani alkoholičari nisu bili predmet istraživanja.

## Rezultati:

Od ispitivanih 30 pacijenta , 8 pacijenta od kojih je jedna žena nije imalo razvijenu svijest niti uvid kakav štetan uticaj ima alkohol na njihov život. 17 pacijenata od trideset je navelo da uzima alkohol na dnevnom nivou u svrhu psihološke relaksacije. Troje pacijenata je navelo da ima subjektivni osjećaj smanjene kontrole, digestivne smetnje i kliničke manifestacije kao posljedicu dugotrajne upotrebe. Dva pacijenta su po obavljenim analizama izrazili želju za profesionalnom pomoći psihijatra / psihologa od kojih je jedna bila žena. Kod svih muških pacijenata je bila registrovana steatoza praćena najčešće sa povećanim kalorijskim unosom nezdrave hrane i blažim povećanjem indexa tjelesne mase. Od uzroka pojačane upotrebe se navodila najčešće stresna radna / porodična sredina. Kod ispitivanih pacijentica je otkrivena anksioznost i životni problemi kao dominantan uzrok. Otkrivena je steatoza jetre ali je registrovana i veća spremnost na saradnju sa porodičnim ljekarom u odnosu na muški pol. Lipidni status i hepatogram je bio patoloških vrijednosti kod ispitanika oba pola.

**Zaključak:** Adekvatnom saradnjom sa pacijentima, pravilnom trijažom, razgovorom za vrijeme redovnih kontrolnih pregleda u ambulanti se može postaviti dijagnoza rane faze alkoholizna i pokrenuti inicijalni tretman prevencijom kroz edukaciju pacijenata o potencijalnim posljedicama zloupotrebe alkohola.

**Ključne riječi:** *pacijent, alkohol, stres, porodica, bolest*

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# Alcoholism

## Prevention and treatment from the angle of family doctor

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**Introduction:** Alcohol drinks present the most widespread and accessible stimulans in the world. Legal in most of the countries except Midle East, the lowest age limit known for use is 16 and above. Present in many forms, it is responsible when abused as the main cause of liver cirrhosis and pancreatitis, kidney faliure, development of depression, traffic accidents, violence in society and in family as well as professional mistakes and sudden deaths in adult population.

**Goal:** Spread awareness and information about the effect of alcohol on health and quality of life in general population of examined patients in Banja Luka and to prevent future chronic diseases.

**Methods:** The sample of 30 patients, 21 man and 9 women within the age of 18-65 were examined trough laboratory analyses, ultrasound examinations of abdomen, questionaries made by author to observe health status, progress of the diseases and quality of life of the patients who declared that they dont have a problem with alcohol abuse. Socio-demographic factors ( gender and age), marriage status, education, profession and history of mental diseases were observed. Also, history of alcoholism in the family, the amount of ingested aclohol and it's long term effects were also observed as well as the stres caused by profession as a possible cause (exp. doctors, law enforcment, lawyers..) of increased intake that affected the quality of life. Registrated and treated alcoholic patients were not examined in this paper.

**Results:** From 30 patiens, 8 patiens (one woman included ) were not aware of the damages that alcochol caused in their life. 17 patients of 30 examined declared that they use daily alochol to relaxe themselves. Three patients aknowledged that they have problem with alcochol, digestive tract symptoms and health issues because of the long term use. Two patients declared that they need professional psychiatric/therapist help and one of them was female.



With all examined male patients, steatosis, unhealthy diet and increased body mass index was discovered. As dominant causes of increased alcohol use they blamed stressful work and unhealthy family environment. With female patients dominant causes were anxiety and hard life. Steatosis of liver was present as well as a bigger will to cooperate with the family doctor opposite the male patients. Lipid profile and liver enzymes were of pathological values within both genders.

### **Conclusion:**

With proper approach, triage and cooperation during regular examinations of patients we can determine early diagnosis of alcohol abuse and we can initially treat as well as prevent future health issues by educating the patients about potential health consequences.

**Keywords:** patient, alcohol, stress, family

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## COVID-somnia kod zdravstvenih profesionalaca: fikcija ili realnost?

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**Uvod** Prema Američkoj akademiji za medicinu spavanja (eng. American Academy of Sleep Medicine-AASM) san je ključan za zdravlje. Spavanje je biološka nužnost, a nedovoljno sna i ne liječeni poremećaji spavanja štetni su za zdravlje, dobrobit i javnu sigurnost. Koliko je sna potrebno mijenja se sa starenjem. Tako Centar za kontrolu i prevenciju bolesti (eng. Centers for Disease Control and Prevention-CDC) za odrasle osobe od 18-60 godina starosti preporuča 7 i više sati spavanja noću kao zdravstveno potreban san.

Iako su učinci deprivacije sna na naše organe nejasni, nedavne epidemiološke studije su otkrile povezanost između deprivacije sna i hipertenzije, koronarne bolesti srca i dijabetes melitusa. Tijekom pandemije COVID-19, pogoršanje sna se naziva COVID-somnia. Ovaj globalni događaj, budući da je bio produktivno okruženje za razvoj novih problema sa spavanjem i mentalnim zdravljem kod onih koji prije nisu iskusili takve događaje, mogao je dovesti do poremećaja spavanja, nesanice i sindroma nemirnih nogu koji su se poboljšali s uklanjanjem infekcije.

Globalno je prepoznata velika uloga zdravstvenih djelatnika tijekom pandemije kao i opterećenost bolesnim pacijentima. Jedan od značajnih zdravstvenih problema uz bolesti dišnog sustava bio je i nedostatak sna koji bi svakako mogao imati negativan utjecaj na zdravlje. S druge strane, malo je dostupnih informacija u vezi povezanosti nesanice i COVID-19, osobito među zdravstvenim djelatnicima.

**Cilj** bio je istražiti COVID-somniju među zdravstvenim djelatnicima bez i sa prisutnom prethodnom infekcijom nakon pandemije.

**Metodologija** Provedeno je presječno istraživanje na 148 zdravstvenih djelatnika Unsko-sanskog kantona, kao online anketa pripremljena putem Google forme. Istraživanje je bilo

usredotočeno na sociodemografske (spol, dob); jesu li imali infekciju, status cijepljenja, povijest prethodne anksioznosti i poremećaja spavanja i karakteristike povezane sa profesionalnim rizicima (sudjelovanje u radu sa COVID-19 pacijentima).

**Rezultati** U istraživanju je učestvovalo 148 ispitanika, 88 (59.5%) ženskog i 60 (40.5%) muškog spola. Prosječna dob je iznosila 41.11±7.28 godina. COVID-19 imalo je 102 (68.9%) ispitanika, 26 (17.6%) nije imalo COVID-19, a 20 (13.5%) je imalo simptome ali nije potvrđena bolest. Na COVID odjelima/ambulantama je radilo 93 (62.8%) ispitanika većina preko 3 mjeseca. Protiv COVID-19 vakcinisano je 136 (91.9%) vs. 12 (8.11%) ne vakcinisanih ispitanika. Anksioznost kod COVID-19 oboljelih u odnosu na neoboljele imalo je: ponekad 41 (40.2%) u odnosu na 19 (35.8%); rijetko 58 (56.9%) u odnosu na 30 (56.6%) i uvijek 3 (2.9%) u odnosu na 4 (7.5%) ispitanika bez statistički značajne razlike ( $p=0.408$ ). Nesanicu povezanu s COVID-19 u odnosu na stanje bez COVID-19 umjereno je imalo 18 (17.6%) u odnosu na 18 (34%) ispitanika bez statistički značajne razlike ( $p=0.108$ ). Loše spavanje povezano s COVID-19 u odnosu na stanje bez COVID-19 imalo je 12 (11.8%) u odnosu na 7 (13.2%) bez statistički značajne razlike ( $p=0.198$ ). Analiza prosječnih vrijednosti Epworthove ljestvice pospanosti kod COVID-19 oboljelih u odnosu na neoboljele pokazala je postojanje značajne statističke razlike (Mann Whitney U test=957.5,  $p=0.033$ ).

**Zaključak** Iako je naša studija pokazala znatno veću pospanost kod ispitanika koji nisu bili zaraženi, nismo zabilježili značajne razlike u prisutnosti anksioznosti i probleme sa spavanjem prije i nakon pandemije COVID-19. Nadamo se da ovi rezultati mogu poslužiti za neka druga istraživanja kako bi se na vrijeme prevenirale i otkrile mentalne bolesti kod zdravstvenih profesionalalaca i na taj spriječile neželjene dugoročne posljedice nakon pandemije.

**Ključne riječi:** *anksioznost, problemi sa spavanjem, pandemija COVID-19, zdravstveni radnici*

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## COVID-somnia in healthcare professionals: fiction or reality?

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**Introduction** According to American Academy of Sleep Medicine (AASM) sleep is essential to health. Sleep is a biological necessity, and insufficient sleep and untreated sleep disorders are detrimental for health, well-being, and public safety. How much sleep we need changes with age. Thus, the Centers for Disease Control and Prevention (CDC) for adults aged 18-60 recommends 7 or more hours of sleep per night as a health-necessary sleep.

Although the effects of sleep deprivation on our organs have been obscure, recent epidemiological studies have revealed relationships between sleep deprivation and hypertension, coronary heart disease, and diabetes mellitus. During the COVID-19 pandemic, sleep deterioration has been referred to as COVID-somnia. This global event, being a productive environment for the development of new sleep and mental health issues in those who had not experienced such events before, could have led to the release of sleep disorders, insomnia and restless legs syndrome that improved with the clearance of infection.

The great role of health professionals during the pandemic is recognized globally as well as the workload with sick patients. One of the significant health problems in addition to respiratory diseases was the lack of sleep, which could certainly have a negative impact on health. On the other hand little information is available about the linkage between sleep affection and COVID-19 especially among health professionals.

**Aim** was to investigate COVID-somnia among healthcare workers without and with prior affection after pandemic.

**Methodology** A cross-sectional study is conducted among 148 healthcare professionals in Una-Sana Canton, as an online survey prepared via Google forms. The survey focused on sociodemographic (gender, age); whether they had an infection, vaccination status, history of previous anxiety and sleep disorders and characteristics related to professional risks (being involved in COVID-19 management).

**Results** 148 subjects participated in the research, 88 (59.5%) were female and 60 (40.5%) male. The average age was  $41.11 \pm 7.28$  years. 102 (68.9%) respondents had COVID-19, 26 (17.6%) did not have COVID-19, and 20 (13.5%) had symptoms but the disease was not confirmed. 93 (62.8%) respondents worked in the COVID wards/outpatient clinics, most of them for more than 3 months. 136 (91.9%) were vaccinated COVID-19 vs. 12 (8.11%) unvaccinated respondents. Anxiety related to COVID-19 prior vs. without COVID-19 condition had: sometimes 41 (40.2%) vs. 19 (35.8%); rarely 58 (56.9%) vs. 30 (56.6%) and always 3 (2.9%) vs. 4 (7.5%) respondents without a statistically significant difference ( $p=0.408$ ). Insomnia related to COVID-19 prior vs. without COVID-19 condition had moderately 18 (17.6%) vs. 18 (34%) without a statistically significant difference ( $p=0.108$ ). Poor sleep related to COVID-19 prior vs. without COVID-19 condition had 12 (11.8%) vs. 7 (13.2%) without a statistically significant difference ( $p=0.198$ ). Analysis of the average values of the Epworth sleepiness scale in COVID-19 prior vs. without COVID-19 condition showed a significant statistical difference (Mann Whitney U test=957.5,  $p=0.033$ ).

**Conclusion** Although our study showed significantly higher sleepiness in subjects who were not infected, we did not record significant differences in the presence of anxiety and sleep problems before and after the COVID-19 pandemic. We hope that these results can be used for some other research in order to prevent and detect mental illnesses in health professionals in time and thus prevent unwanted long-term consequences after the pandemic.

**Key words** *anxiety, sleep problems, COVID-19 pandemic, healthcare professionals*

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## Zdrav život u kurikulumu i edukaciji Katedre za porodičnu medicinu Medicinskog fakulteta u Sarajevu

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**Uvod:** Nastavni plan i program Integrirani studijski program “Medicina” (na bosanskom i engleskom jeziku) obuhvata ukupno 5535 sati (360 ECTS). Nastava iz oblasti porodične medicine održava se tokom završne godine u trajanju od 120 sati (10 ECTS), podijeljenih u 45 sati predavanja i 75 sati praktične nastave, uz 90 sati turnusne nastave. U teorijskoj i praktičnoj nastavi značajan dio posvećen je promociji zdravlja i prevenciji bolesti.

**Metoda:** Analiza nastavnog programa za oblast porodične medicine i literature na Medicinskom fakultetu u Sarajevu.

**Rezultati:** Nastavni plan i program predmeta porodična medicina u XI semestru obuhvata devetnaest modula sa svim oblastima i temama koje su od značaja za rad i kompetencije porodičnog ljekara, kao i karakteristike porodične medicine kao kliničke discipline. Promocija zdravlja i prevencija bolesti vezanih za određenu temu uključeni su u deset modula. Dva modula posebno se bave pitanjima promocije zdravlja i preventivnih aktivnosti u porodičnoj medicini. Svaka tema uključuje detaljna razmatranja o prevenciji obrađenog oboljenja, kao i promjenama ponašanja i promovisanja zdravih stilova života. Tokom kliničke turnusne nastave zastupljeno je ovladavanje specifičnim kliničkim vještinama provođenja preventivnih aktivnosti u opštoj populaciji: prevencija gojaznosti i pušenja, provođenje fizičke aktivnosti, imunizacija i rano otkrivanje malignih bolesti. U praktikumu porodične medicine, od ukupno petnaest vježbi u praktikumu, njih devet obuhvata aktivnosti promocije zdravlja i prevencije bolesti.

**Zaključak:** Pored ostalih kompetencija, važna uloga ljekara porodične medicine je provođenje preventivnih aktivnosti. Edukacija studenata o prevenciji bolesti i promociji zdravlja, kao

jednoj od primarnih uloga porodičnog ljekara, ima veliku važnost u pripremi studenata za budući rad, ne samo u kurativnom dijelu, već i u preventivnim aktivnostima.

***Ključne riječi:*** *porodična medicina, promocija zdravlja, prevencija bolesti, studenti, edukacija*

## Healthy life in the curriculum and education of the Department of Family Medicine of the Faculty of Medicine in Sarajevo

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**Introduction:** Curriculum The integrated study program of Medicine (in Bosnian and English language) covers a total of 5535 hours (360 ECTS). Family medicine classes are held during the final year for 120 hours (10 ECTS), divided into 45 hours of lectures, 75 hours of practical work as well as 90 hours of rotating classes. In theoretical and practical classes, a significant part is dedicated to health promotion and disease prevention.

**Method:** Analysis of family medicine curriculum and literature at the Faculty of Medicine in Sarajevo

**Results:** Curriculum of the family medicine course in the XI semester includes nineteen modules with all areas and topics that are significant for family medicine work, as well as the competencies of family medicine as a clinical discipline. Health promotion and disease prevention related to a specific topic are incorporated into ten modules. Two modules deal specifically with issues of health promotion and preventive activities. Each topic includes detailed considerations on the prevention of specific diseases, as well as behavior and lifestyle changes. During the clinical rotation, mastering of specific clinical prevention skills in the general population is represented - obesity, smoking, physical activity, immunization and early detection of malignant diseases. In the Workbook of Family Medicine, out of fifteen units, nine include health promotion and disease prevention activities.

**Conclusion:** Among others, essential role of a family medicine physicians is preventive care. Educating students about disease prevention and complete health maintenance as one of the primary roles of a family physician, preparing students for future work, not only in the curative part, but also in preventive activities.

**Key words:** *family medicine, health promotion, disease prevention, students, teaching*



## Uspostavljanje Instituta za Opću/Obiteljsku Medicinu na Sveučilištu Johannes Kepler u Linzu

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**Cilj:** U 2021. godini, na Medicinskom fakultetu Sveučilišta Johannes Kepler u Linzu, osnovan je Institut za Opću Medicinu. Misija tročlanog tima bila je stvaranje učinkovite ustanove odgovorne za nastavne i istraživačke aktivnosti na području obiteljske medicine na najmlađem medicinskom fakultetu u Austriji. Na početku smo zamolili ljekare opće prakse da izraze svoja očekivanja u vezi s novim institutom.

**Metode:** U suradnji s Liječničkim udruženjem Gornje Austrije (OÖÄK), online upitnik, razvijen od strane Instituta za Opću medicinu, distribuiran je svojim članovima (obavezno članstvo) putem programa essentials3. Upitnik je tražio uvide u nekoliko ključnih područja: a. Očekivanja prema institutu za opću medicinu, b. Željene teme za studentske prezentacije, i c. Interesi za istraživanje među općim praktičarima. Respondenti su potaknuti da pruže višestruke odgovore. Upitnik je dostavljen za 1110 ljekara opće medicine, Liječničkog Udruženja Gornje Austrije. Period istraživanja trajao je od 29. listopada 2021. do 1. prosinca 2021. Poslana su dva prijateljska podsjetnika onima koji nisu odgovorili ili nisu sudjelovali. Analiza teksta provedena je koristeći maxqda4, dok je za kvantitativnu analizu podataka korišten SPSS5.

**Rezultati:** Stopa odgovora bila je 34.68% (n=385), uključujući 78.70% punog radnog vremena (n=303), 18.96% nepunog radnog vremena (n=73), i 2.34% također zaposlenih u bolnicama (n=9). Rodna distribucija bila je relativno uravnotežena, s 55.06% muških (n=212) i 44.94% ženskih (n=173) ispitanika. Među 369 ispitanika, 212 (57.45%) izrazilo je interes za predavanja. Slika 2 ilustrira sirove podatke i postotak željenih tema za predavanja koje su ljekari opće prakse(OP) željeli uključiti u medicinski obrazovni program. Ukupno 30.91% (n=119) izrazilo je želju za aktivnim doprinosom, bilo kao mentori u nastavi prakse (n=77) ili kao predavači fakulteta (n=42). Slika 3 prikazuje 11 najvažnijih specijalnosti u nastavi koje su

ponudili uspostavljeni opći praktičari. Nadalje, 28.15% (n=105 od ukupno n=373) pokazalo je interes za provođenje istraživanja.

Rasprava i Zaključak: Obiteljska medicina u Austriji klasificirana je kao slabi sustav unutar europskog konteksta, ističući kritičnu važnost uspostavljanja učinkovitih mehanizama u obrazovnom procesu kako bi se buduće liječnike osvijestilo o ovom kliničkom području. Ovaj članak će predstaviti razvoj instituta, njegove aktivnosti i buduće planove.

*Ključne riječi: implementacija, Zavod za opću medicinu, Suradnja, očekivanje*

# Establishing an Institute for General/Family Medicine at Johannes Kepler University Linz

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**Objective:** In 2021, the Institute for General Medicine was established at the Medical Faculty of Johannes Kepler University in Linz. The mission of the three-member team was to create an effective institution responsible for both teaching and research activities in the field of family medicine at the youngest medical faculty in Austria. At the start we ask the General practitioner to express their expectation regarding the new institute.

**Methods:** In collaboration with the Medical Association of Upper Austria (OÖÄK), an online questionnaire, developed by the Institute of General Medicine, was distributed via the essentials3 program to its members (mandatory membership). The questionnaire sought insights on several key areas: a. Expectations towards the institute for general medicine, b. Desired topics for student presentations, and c. Research interests among general practitioners. Respondents were encouraged to provide multiple answers. The questionnaire reached a total of 1,110 members of the Medical chamber in Upper Austria. The survey period ran from October 29th, 2021, to December 1st, 2021. Two friendly reminders were sent on to non-respondents or those who had not participated. Text analysis was conducted using maxqda4, while SPSS5 was utilized for quantitative data analysis.

**Results:** The response rate was 34.68% (n=385), comprising 78.70% full-time (n=303), 18.96% part-time (n=73), and 2.34% also employed in hospitals (n=9). Gender distribution was relatively balanced, with 55.06% male (n=212) and 44.94% female (n=173) respondents. Among the 369 respondents, 212 (57.45%) expressed interest in delivering lectures. A total of 30.91% (n=119) expressed a desire to actively contribute, either as mentors in teaching practice (n=77) or as faculty lecturers (n=42). Furthermore, 28.15% (n=105 out of a total of n=373) indicated an interest in conducting research.

**Discussion and Conclusion:** Family medicine in Austria is classified as a weak system within the European context, highlighting the critical importance of establishing effective mechanisms

in the educational process to sensitize future physicians to this clinical domain. With this text we would like to present the development of the institute, its activities, and future plans.

*Key words: implementation, Institut of General Medicine, Cooperation, expectation*

# Prijelaz nastave obiteljske medicine s klasične 'kontakt' nastave na nastavu 'na daljinu': Presječna studija u bivšoj Jugoslaviji tijekom COVID-19

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**Cilj:**Zemlje bivše Jugoslavije imaju slične zdravstvene i obrazovne sustave koji su se mijenjali tijekom zadnjih godina. Malo se zna o prelasku nastave obiteljske medicine s klasične 'kontakt' nastave na nastavu 'na daljinu' tijekom pandemije COVID-19. Cilj je bio istražiti iskustvo studenata i nastavnika tijekom ovog prijelaza.

**Metode:**Ispitivanjem provedenim od prosinca 2021. do ožujka 2022. bio je obuhvaćen 21 medicinski fakultet na području bivše Jugoslavije. Sudjelovali su nastavnici u pred/poslijediplomskoj nastavi kao i studenti/specijalizanti obiteljske medicinu. Od 31 pitanja za studente i 35 za nastavnike, sva pitanja, osim devet otvorenih, analizirana su deskriptivnom statistikom.

**Rezultati:**Stotinu sedamnaest (117) sudionika sa 17 medicinskih fakulteta iz svih zemalja bivše Jugoslavije uzelo je učešće u studiji . Na početku pandemije, 30% nastavnika, 26% studenata i 15% specijalizanata pohađalo je formalnu pripremu za nastavu na daljinu. Od toga, 92% nastavnika i 58% studenata i specijalizanata smatralo je da nisu pripremljeni na odgovarajući način. 'On-line nastava u živo' bila je glavna korištena metoda, a trećina je koristila hibridne metode. Svi sudionici su imali najmanju razinu samopouzdanja u vezi s *online* ocjenjivanjem. Više od 75% ispitanika smatralo je da se predavanja mogu zadržati u online formatu, ali ne i konzultacije s pacijentima ili nastava iz praktičnih vještina.

**Zaključak**Nastavnici su koristili razne stare i nove metode kako bi pružili prilike za učenje usprkos ograničenjima uzrokovanim pandemijom COVID-19. Učinkovite strategije temeljene na tehnologiji ključne su za osiguravanje pouzdanosti ocjenjivanja i poboljšanje okruženja za učenje.

***Ključne riječi: pandemija COVID-19, nastava na daljinu, obiteljska medicina, studenti,***

***nastavnici***

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# **Transitioning from face-to-face to distance education. Cross-sectional study in the former Yugoslavia during COVID-19**

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## **Background and objective**

The countries of the former Yugoslavia have health and education systems with the same tradition but these have changed over the years. Little is known about how family medicine teaching transitioned from face-to-face to distance education during the COVID-19 pandemic. Objectives is to investigate student/teacher experience in transitioning from face-to-face to distance education.

## **Methods**

A cross-sectional, online survey was conducted among 21 medical schools of the former Yugoslavia between December 2021 and March 2022. Under/postgraduate teachers and students who taught/studied family medicine during the academic year 2020/2021 were invited to participate. Of 31 questions for students and 35 for teachers, all but nine open questions were analysed using descriptive statistics.

## **Results**

Seventeen of 21 medical schools contributed data involving 117 participants representing all countries of the former Yugoslavia. At the beginning of the pandemic, 30%, 26% and 15% of teachers, students and trainees, respectively, received formal preparation in distance education. Of these, 92% of teachers and 58% of students/trainees felt they were not adequately prepared. Synchronous teaching was the main method used, with a third using hybrid methods. All participants were least confident about online assessment. More than 75% of respondents agreed that lectures could be kept online, not patient consultations or practical skills' classes.

## Conclusion

Teachers used various old and new methods to provide learning opportunities despite COVID-19 constraints. Effective technology-based strategies are essential to ensure assessment integrity and enhance the learning environment

**Keywords:** *COVID-19 pandemic, distance education, family medicine, students, teachers, trainees*

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