

“KNOWLEDGE FOR HEALTH”: INTEGRATED HEALTH CARE

Koper, Slovenia, 1 October 2022

The annual “Knowledge for Health” event was held on 1 October, International Day of Older Persons. The United Nations General Assembly proclaimed this day to highlight the often overlooked role and position of this population group in society, despite the fact that the proportion of older people in the population is increasing. Experts from various fields participated in the event, which was aimed at a broad audience and was intended to highlight the issue of holistic health at the intersection of muscular, cognitive and cardiovascular health.

Talking about the consequences of an inappropriate lifestyle and how to take care of one’s health in a holistic way that is also accessible to the general public remains the main goal of the initiators of the “Knowledge for Health” event, held for the eleventh consecutive year in collaboration with the Institute for Kinesiological Research of the Scientific Research Centre (ZRS) Koper and the Izola General Hospital. During this period, numerous meetings and discussions were held and thousands of measurements of physical and functional fitness and risk factors were performed. Numerous public lectures were held with top experts who have time and again offered new insights for health.

This year’s event took place in the morning at Taverna in Koper, Slovenia, and included measurements of physical characteristics, functional abilities and health risk



factors. Participants had the opportunity to assess their cardiovascular, muscular and cognitive health through simple but relevant tests.

On the occasion of the International Day of Older Persons, the organizers of the event emphasized the importance of monitoring sarcopenia for general health. They identified severe sarcopenia in 9% of those measured and urged them to change their lifestyle for better health. Sarcopenia can have very serious consequences, such as insufficient muscle strength, decreased metabolic capacity, decreased aerobic capacity, leading to physical limitations, immobility, poorer quality of life, more fragile bones, cognitive decline, cardiovascular disease and ultimately premature death. This is mainly due to the excessive loss of muscle fibers and the reduction of the remaining fibers. What causes this is not yet entirely clear, and the answer is certainly very broad, which is why it is a syndrome rather than a disease. However, we can confirm with certainty that one of the causes is a lack of proper exercise with sufficient intensity to stimulate the repair and growth of muscle fibers. In addition to proper exercise, adequate protein intake is also important to support muscle repair after exercise.

The testing of participants at the “Knowledge for Health” event is an example of knowledge transfer to the general public, as it comes directly from the research work of colleagues from the Institute for Kinesiology Research, ZRS Koper. The irreversibility of the processes of muscle deterioration in the elderly motivated Prof. Dr Boštjan Šimunič to obtain two new national research projects. The “Validation of a muscle-quality marker for the diagnosis of sarcopenia (ARRS J7-2605)” project will develop a method that will enable the early detection of changes in muscle properties and performance during ageing, before they become visible with standard clinical instruments. The goal is to allow early intervention before sarcopenia actually sets in. The “Neuromuscular decline after physical inactivity: a comparison of younger and older adults (ARRS J5-4593)” project aims to investigate the mechanisms and temporal patterns of muscle mass and performance decline in younger and older adults, which is critical for understanding the processes of decline and for developing preventive and curative interventions/guidelines. The central nervous system controls muscle function and has been shown to be a key determinant of muscle performance. Under the leadership of Assoc. Prof. Dr Uroš Marušič, the researchers have been awarded the “TWINning the BRAIN with machine learning for neuromuscular efficiency – TwinBrain” international project, which investigates brain function during movement, during execution of various movements, and during motor learning with and without skeletal movement.

With the completion of the testing in Taverna in Koper, each participant received a ticket to the afternoon part of the event, which took place at Koper Theatre, where a panel of experts spoke about the importance and role of monitored characteristics in health. Too often we want to “measure health”, compare ourselves to the norms without knowing more about the parameters and indicators of (un)healthiness that are being measured. High-profile speakers and top experts tried to find answers to the question of what holistic health is and how muscular, cognitive and cardiovascular health form a whole. Prim. Dorjan Marušič, MD, PhD, spoke about cardiovascular health, Bojan

Rojc, MD, PhD, spoke about neuromuscular health and Uroš Marušič, PhD, Associate Professor, spoke about cognitive health.

The discussion was moderated by the founding fathers of the meeting, Prof. Dr Rado Pišot and Assoc. Prof. Dr Mladen Gasparini. The event was another in the series of events that brought together Koper Theatre, ZRS Koper and Izola General Hospital in an effort to contribute to the health and quality of life of our citizens, and was therefore once again supported by the Koper City Council.

Boštjan Šimunić, Nika Štravs, Matej Kleva, Peter Čerče

»ZNAJJE ZA ZDRAVJE«: CELOSTNA SKRIB ZA ZDRAVJE

Koper, Slovenija, 1. oktober 2022

Vsakoletni dogodek »Znanje za zdravje« je tokrat potekal 1. oktobra, ob mednarodnem dnevu starejših. Generalna skupščina Združenih narodov je ta dan razglasila zaradi pogosto spregledane vloge in položaja, ki ga ima ta skupina prebivalstva v družbi, čeprav se delež starejše populacije povečuje. Strokovnjaki z različnih področji so na dogodku, ki je namenjen najširši zainteresirani javnosti, poskušali osvetliti problem celostnega zdravja v preseku med mišičnim, kognitivnim in srčno-žilnim zdravjem.

Spregovoriti o posledicah neustreznega življenjskega sloga in kako celostno poskrbeti za svoje zdravje na način, ki je dostopen najširši javnosti, tudi sicer ostaja glavno vodilo pobudnikov dogodka »Znanje za zdravje«, ki je že enajsto leto zapored potekal v sodelovanju Inštituta za kineziološke raziskave Znanstveno-raziskovalnega središča (ZRS) Koper in Splošne bolnišnice (SB) Izola. V tem času so izvedli številna srečanja in pogovore, več tisoč meritev telesne in funkcionalne pripravljenosti ter dejavnikov tveganja. Organizirali so številna javna predavanja z vrhunskimi strokovnjaki, ki so vedno znova ponudili nova znanja za zdravje.

Na letošnji prireditvi so v koprski Taverni v dopoldanskem času potekale meritve telesnih značilnosti, funkcionalnih sposobnosti in dejavnikov tveganja za zdravje. Udeleženci so imeli možnost na osnovi preprostih, vendar relevantnih meritev preveriti svoje srčno-žilno, mišično in kognitivno zdravje.

Ob svetovnem dnevu starejših so organizatorji dogodka posebej poudarili pomen spremljanja sarkopenije za celostno zdravje. Pri kar 9 % izmerjenih so odkrili hudo obliko sarkopenije in jih opozorili, naj spremenijo svoj življenjski slog za kakovostnejše zdravje. Sarkopenija lahko privede do zelo hudih posledic, kot so premajhna mišična



moč, manjše presnovne sposobnosti in manjše aerobne sposobnosti, vse to pa vodi v gibalne omejitve, nemobilnost, slabšo kakovost življenja, krhkejše kosti, kognitivni upad, srčno-žilne bolezni in v skrajni posledici v prezgodnjo smrt. Razlog je predvsem v preveliki izgubi mišičnih vlaken in zmanjšanju tistih, ki še ostanejo. Kateri so vzroki, ki privedejo do tega, še ni popolnoma jasno, in odgovor je gotovo zelo širok, zato je to tudi sindrom, bolj kot bolezen. Prav gotovo pa lahko kot enega od vzrokov potrdimo pomanjkanje primerne, dovolj intenzivne gibalne vadbe, ki spodbuja obnovo in rast mišičnih vlaken. Ob pravilni vadbi je pomemben tudi zadosten vnos beljakovin, ki podpirajo obnovo mišic po vadbi.

Na dogodku »Znanje za zdravje« izvedene meritve udeležencev so primer prenosa znanja v širšo javnost, saj izhajajo neposredno iz raziskovalnega dela sodelavk in sodelavcev Inštituta za kineziološke raziskave ZRS Koper. Ireverzibilnost procesov upada mišične mase pri starejših je namreč motivirala prof. dr. Boštjana Šimuniča k pridobitvi dveh novih nacionalnih raziskovalnih projektov. V sklopu projekta Validacija markerja mišične kakovosti za diagnosticiranje sarkopenije (ARRS J7-2605) razvijajo metodo, ki bo omogočala zgodnjo zaznavo sprememb v mišičnih značilnostih in zmogljivostih med staranjem, še preden bo ta vidna s standardnimi kliničnimi orodji. Cilj je zagotoviti še pravočasno ukrepanje pred dejanskim nastopom sarkopenije. V sklopu projekta »Upad živčno-mišičnega sistema po gibalni neaktivnosti: primerjava mlajših in starejših odraslih (ARRS J5-4593)« pa nameravajo proučiti mehanizme in časovne zakonitosti upada mišične mase in zmogljivosti pri mlajših in starejših, kar je ključno za razumevanje procesov upada ter oblikovanje preventivnih in kurativnih ukrepov/smernic. Centralni živčni sistem nadzoruje delovanje mišic in je bil prepoznan za ključni dejavnik mišične zmogljivosti. Pod vodstvom izr. prof. dr. Uroša Marušiča so raziskovalci pridobili mednarodni projekt TWINning the BRAIN with machine learning for neuromuscular efficiency – TwinBrain, v sklopu katerega proučujejo delovanje možganov med gibanjem, v procesu izvedbe različnih gibov, med motoričnim učenjem s premikanjem skeleta in brez premikanja.

Z opravljeno meritvijo v koprski Taverni je vsak udeleženec pridobil vstopnico za popoldanski del dogodka, ki je potekal v Gledališču Koper. Na njem so strokovnjaki spregovorili o pomenu in vlogi spremljanih značilnosti za zdravje. Prevečkrat si namreč želimo »izmeriti zdravje«, se primerjati z veljavnimi normami, ne da bi hkrati o merjenih parametrih in kazalnikih (ne)zdravja vedeli kaj več. Eminentni predavatelji, vrhunski strokovnjaki, so poskušali poiskati odgovore na vprašanja, kaj sploh je celostno zdravje ter kako mišično, kognitivno in srčno-žilno zdravje tvorijo celoto. Prim. mag. Dorjan Marušič, dr. med., je tako spregovoril o srčno-žilnem zdravju, doc. dr. Bojan Rojc o nevromišičnem zdravju, izr. prof. dr. Uroš Marušič pa o kognitivnem zdravju.

Pogovor sta povezovala idejna očeta srečanja prof. dr. Rado Pišot in doc. dr. Mladen Gasparini. Dogodek je ponovno združil Gledališče Koper, ZRS Koper in SB Izola v želji, da bi prispevali h kakovosti zdravja in življenja naših občanov, zato ga je tudi tokrat podprla Mestna občina Koper.

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