

## Aktivan sam, dakle jesam: fizioterapijske intervencije u kardiovaskularnoj rehabilitaciji

### I am active, therefore I am: physiotherapy interventions in cardiovascular rehabilitation

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Nakon učinjene početne obrade kardiologa, fizijatra, prvostupnice sestrinstva i radne terapije, a po potrebi i psihologa, predstavljaju postupci koje provodi prvostupnik fizioterapije. Ciljevi fizioterapijskih intervencija kod pacijenta na KV rehabilitaciji poboljšanje su funkcionalnog kapaciteta te stabilizacija stanja, kako bi se postigla što bolja kontrola bolesti i prisutnih komorbiditeta, socijalna reintegracija i obnova radne sposobnosti.<sup>1,2</sup>

Fizioterapijski (FT) program u KV rehabilitaciji započinje evaluacijom stanja pacijenta koja se provodi analizom medicinske dokumentacije, uzimanjem FT anamneze, procjenom stanja modelima SOAP i ICF klasifikacije primjenjujući jednodimenzionalne ili multidimenzionalne standardizirane i nestandardizirane upitnike kojima evaluiramo učinke FT procesa: test opterećenja, antropometrijske mjere – indeks tjelesne mase, omjer opsega struka i bokova, mjere indeksa disanja, VAS skala boli, obujam ekstremiteta, ljestvica opaženog naprezanja prema Borgu, govorni test, *36-Item Short Form Health Survey* (SF-36), FIM – *Functional Independence Measure* i ostale testove za procjenu komorbiditeta. Nakon što je prvostupnica sestrinstva provela terapijsku edukaciju o KV čimbenicima rizika i pravilnog mjerenja frekvencije srca i arterijskog tlaka, prvostupnik fizioterapije nastavlja edukaciju o smjernicama i zakonitosti primjene tjelesne aktivnosti, pravilnom disanju, tehnikama relaksacije i poboljšanju posture. Identificiraju se individualne potrebe (vrsta, trajanje, učestalost, intenzitet) za FT intervencijama koje se provode primjenom metoda kardiorespiratorne i vaskularne terapije.<sup>3</sup> Potom se započinje s intervalnim KV treningom kojeg čine terapijske vježbe uglavnom aerobnog tipa, vožnjom ručnog bicikla, vožnjom na suvremenom kompjutorski kontroliranom nožnom biciklu, kod prisutne periferne arterijske bolesti i treninga hoda na pokretnom sagu, a u slučaju komorbiditeta

The procedures performed by the Bachelor of Physiotherapy are an indispensable part of cardiovascular (CV) rehabilitation following the initial workup performed by a cardiologist, physician, Bachelor of Nursing and Occupational Therapy, and, if necessary, by a psychologist. The goals of physiotherapy interventions in patients undergoing the CV rehabilitation are the improvement of the functional capacity and the stabilization of the condition in order to achieve better control of the disease and present comorbidities, social reintegration and recovery of the working abilities.<sup>1,2</sup>

Physiotherapy (FT) program in CV rehabilitation starts with an evaluation of the patient's condition performed by analyzing medical records, taking FT medical history, evaluating the condition by SOAP and ICF classification models, thereby using one-dimensional or multidimensional standardized and non-standardized questionnaires for evaluation of the effects of the FT process: stress test, anthropometric measures - body mass index, the waist to hip ratio, respiratory index measures, VAS pain scale, extremity volume, the Borg Scale of Perceived Exertion, voice test, *36-Item Short Form Health Survey* (SF-36), FIM – *Functional Independence Measure* and other tests for the evaluation of comorbidities. After the Bachelor of Nursing has completed the therapeutic education on CV risk factors and proper testing of the heart rate and blood pressure, Bachelor of Physiotherapy will continue with conducting the education on the guidelines and legislation pertaining to applying physical exercise, proper breathing, relaxation techniques and posture improvement. Individual needs (type, duration, frequency, intensity) are identified for FT interventions that are performed by applying the cardiorespiratory and vascular therapy methods.<sup>3</sup> This is followed by the interval CV training consisting of the therapeutic exercises mainly of aerobic type, riding a manual bike, riding on a modern computer controlled pedal

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na indikaciju fizijatra kreiramo i druge individualne programe. Preporuka kardioloških društava je 36 KV treninga u trajanju do 60 minuta dok je učestalost dolaženja 3-5x tjedno tijekom 3 mjeseca. Tijekom treninga nadziru se podnošljivost napora, klinički status i vitalni znaci, a elektrokardiogram se monitorira telemetrijskim praćenjem više puta (na početku, u sredini, na kraju i kod promjene intenziteta opterećenja). Ovisno o vrednovanju značaja subjektivnih tegoba timski se donosi odluka o potrebi promjene FT plana i intervencije. Na kontrolnim pregledima i redovitim sastancima tima KV rehabilitacije prati se i modificira učinak intervencija odnosno plana KV liječenja. Na kraju provedenog programa planira se otpust uz završnu FT procjenu i evaluaciju. Prvostupnik fizioterapije dokumentira sve elemente učinjenih FT intervencija primjenom šifri dijagnostičko-terapijskih postupaka u specijalističko-konzilijarnoj zdravstvenoj zaštiti koje propisuje Hrvatski zavod za zdravstveno osiguranje.

Pravovremenu KV rehabilitaciju u specijaliziranim i moderno opremljenim ustanovama<sup>14</sup>, poput Poliklinike Srčana, provodi tim kontinuirano educiranih zdravstvenih djelatnika još od 1982. godine, priskrbujući sigurnost i kvalitetu pružene ambulantne KV rehabilitacije kod otprilike 400 novih pacijenata godišnje.

bike, where treadmill walking is done in case of present peripheral arterial disease, while we also create some other individual programs if indicated by a physiatrist in case of comorbidities. The cardiology societies recommend 36 CV trainings in duration of up to 60 minutes, while the frequency of coming is 3-5 times a week for 3 months. Stress tolerance, clinical status and vital signs are monitored while doing the training, where the electrocardiogram is monitored by telemetric monitoring for several times (at the beginning, in the middle, at the end, and when changing the intensity of the stress). Subject to the assessment of the importance of subjective discomforts, the team makes a decision on the need to change the FT plan and intervention. The effect of the interventions or the CV treatment plan is modified at follow-up examinations and regular meetings of the CV rehabilitation team. At the end of the program, the discharge is being planned when a final FT assessment and evaluation is made. The Bachelor of Physiotherapy documents all elements of FT interventions performed by using the diagnostic and therapeutic procedure codes in specialist-consulting healthcare prescribed by the Croatian Health Insurance Fund.

The timely CV rehabilitation in specialized institutions with modern equipment<sup>14</sup>, such as Institute *Srčana* has been conducted by a team of continuously educated health professionals since 1982, providing safety and quality of performed outpatient CV rehabilitation for approximately 400 new patients on an annual basis.

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