

Elderly Activities To Keep Your Knee Healthy

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ABSTRACT

Knee pain is one of the most common complaints among the elderly. At this age, the main cause is osteoarthritis or arthritis. In the environment around us, sometimes we still often encounter elderly people who are still active and healthy, even physically fit, full of ideas and still productive and even more physically fit than younger people. The purpose of this study was to determine how the activities of the elderly to maintain knee health. The benefit of this research is for people who before entering old age can imitate and do the same thing to maintain knee health in old age. This research is a qualitative research with a phenomenological approach. The time approach used in this research is any time. The research population is elderly people in 3 sub-districts in the city of Semarang. The research sample was taken purposively to obtain informants according to the purpose of this study, namely elderly people who can provide information about how their activities are so that their knee health remains good. The researcher used 5 elderly people who had healthy knees as the main informants, while the triangulation informants were an anatomy lecturer and a physiotherapist. Data analysis used descriptive analysis (content analysis). The results of this study are that elderly people who have curved feet have better posture, because they can maintain body balance when standing, walking, running and jumping by distributing body weight evenly throughout the legs, elderly people must move their body by walking every day. days regularly or as often as possible, elderly people who do not consume milk have healthy knees, elderly people who do not take supplements for bones and joints still have healthy knees, elderly people should avoid movements that can cause knee arthritis. Advice that can be given is for elderly people who have flat feet should use footwear or shoes that are in accordance with the shape of the foot and the activity being carried out, consult a doctor about forms of exercise or exercise that are in accordance with health conditions, maintain normal weight, avoid activities or sports that put excessive stress on the legs, take time for a quick warm-up before moving, cooling is as important as warming up, moving the body by walking or any movement for at least 20-30 minutes per day on a regular basis or at any time, exercising all muscles support the knee. (Can walk, bike or swim).

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1. INTRODUCTION

Success development a country one of them be measured from level well-being increasing population increase, incl health and education. This impact on increasing age hope living (UHH) population every year like shown in Figure 1 below this.



Figure 1. Development of UHH in Semarang City

Consequence from situation the is enhancement elderly population age (elderly). According to Constitution Number 13 of 1998, elderly is someone who has 60 years old or more . From the amount the population of Semarang City as of July 2021 is 1,681,058 people (Department of Population and Registration Civilian City of Semarang), about 9 % ie around 151,290 inhabitants is carry on age and number This increase every year (approx residents of Semarang City). Based on data from the 2020 National Economic Census (Susenans) from the Central Statistics Agency (BPS) , the elderly in Semarang City are mostly big aged 60-69 years , ie by 77.22%, followed by elderly aged 70-79 years around 20.01% and the elderly 80 years old to on about 2.77%.

Life Expectancy public the show exists increase , will but Not yet fully accompanied with condition quality seniors , good from side health , economy , and education . Susenas data records that the morbidity rate of the elderly population in Semarang City reaches 28.7 % in 2020, which means

28 to 29 out of 100 elderly people complain about their health in the past month and disrupted daily activities. Quoting data from BPS , Ex Minister of Social Affairs Agus Gumiwang Kartasasmita (in press release in Bandung, 10 July 2019) , stated that one third elderly is disabled disability . kindly economy , said the Minister of Social Affairs , mostly elderly stay inside family with level economy was at 40 percent economy bottom . From aspect employment , approx half population elderly work in the sector work identical farm with income and level well-being low . Still quoting BPS survey , as many as 60% are elderly have low income and no stable so that big possibility they will return fall poor. As much more from one third elderly Not yet get service insurance health . The Minister of Social Affairs also stressed that condition elderly in Indonesia still Far from independence and well-being .

it in accordance with what was said Misnaniarti in the article entitled Analysis Situation Resident Carry on Age And Effort Enhancement Well-being Social In Indonesia, that resident elderly in Indonesia experience significant improvement in 30 years lastly , amount The population in 2014 was 20.7 million soul (about 8.2%). Pain score elderly by 25.05%. There are four serious disease relation with the aging process , namely : interference circulation blood , trouble hormonal metabolism , disorders of the joints , and various type neoplasm .

one frequent complaints experienced elderly is painful knee , cause mainly is osteoarthritis or inflammation joints . Osteorthritis (OA), according to explanation dr. Ade Sri Wahyuni on Kompas.com on May 5 2016, specialist rehabilitation medical , is the damage joints in a manner chronic bone disease prone . pain the appear Because meeting between bones triggered by thinning bone prone . At educational media events entitled "The Fast Way Overcome Knee Pain ", organized by the Pain and Bone Clinic Back in Jakarta (4/5/2016), Dr. Ade continued that inflammation joints can happened in all joints body , will but 60 percent occurs in the knee .

Actually disease inflammation joints This often experienced by people aged 45 years to top , though so do more people young can experience it too . A number of conditions too _ accelerate OA, for example obesity or often activities that use pedestal knee like sportsman or people who always active move . Symptom clinical inflammation joints including pain _ increase If do movement , joints become stiff , swollen , and at night pain day _ the more feels . Until moment This inflammation joints of course Not yet can cured , though thereby according to dr. There's a downside Can slow down ..

In environment around, still often found part still elderly _active and healthy in a manner physical , a lot ideas and productive even ability physique they Can exceed older people young . Still often found elderly people who walk with fast, cycling , doing gymnastics, doing activities at home , up and down ladder with well and other activities _ without complaint pain in the knee . this make researcher interested For know How elderly people the can maintain health keep your knees steady ok.

Objective study This is For know How activities of the elderly so that they can maintain health his knees . Study This need done Because Lots old people found Still Far from elderly , about 40 years but condition his knees Already No Healthy again . They must quick educated and motivated as soon as maybe so you can do activities similar to those carried out by elderly people with knees still healthy . Don't until late or Already happen damage or Sick knee .

2. METHOD

Type study This is qualitative with approach phenomenology . Data collected with method interview in a manner depth and observation . subject study is 5 healthy elderly people his knees Still ok . As informant transgulation taken 2 people (1 lecturer anatomy sport and 1 physiotherapist) . Data analyzed with content analysis method

3. RESULTS AND DISCUSSION

Overview of Research Locations

Scope study This located in the city of Semarang, where amount resident elderly in 2020 as many as 170,000 people or of 9.29% of amount resident city of Semarang. Amount resident elderly increase since in 2016 of 141 or by 8.17%. Increasing proportion of elderly population is actually good news , because it means that life expectancy and prosperity has increased in the city of Semarang, due to developments socioeconomic. Semarang city life expectancy is 77.34 years based the results of calculating the Human Development Index (IPM) for 2020, this figure has increased from the previous year i.e. 77.25 years in 2019 .

But reaching old age is not enough, it must be also think about how to fill the extra years so as not to become burden for resident age productive . Data from the Central Bureau of Statistics shows that almost half of the City's elderly people Semarang experienced health complaints. The percentage of male elderly who experience health complaints is equal to 43.27 % , while elderly women experienced health complaints of 52.59. The health complaint has resulted daily activities So disturbed .

Characteristics Informant

Study This is study qualitative , data collection is done through interview deep with 5 elderly people in the city of Semarang as informant principal and 2 experts as informant triangulation (1 lecturer anatomy sport and 1 physiotherapist). Characteristics can seen in Table 1

Table 1 Characteristics Informant

	INISIAL	Jenis Kelamin	Usia (Thn)	TB/BB	Pendidikan	Pekerjaan
Informan Utama	1. ST	P	60	155/60	S1	Swasta
	2. CT	P	61	150/59	SMA	Wirausaha katering
	3. MJ	P	61	155/58	S3	Dosen
	4. DH	P	75	155/44	S1	Dokter
	5. SN	P	80	156/45	SMP	Wirausaha dan Swasta
Informan Triangulasi	1. AG	L	50	-	S1	Fisioterapis
	2. SR	P	38	-	S2	Dosen

Table 1 shows that fifth informant main is women who are over 60 years old with level education and type different jobs . _ Three informants _ main own ideal height and weight , 2

informants main own ideal height and weight lower limit . Informant triangulation is a Woman 38 years old profession as lecturer anatomy and a man 50 years old profession as physiotherapist .

Recapitulation results Interview Deep Main Informant

Table 2 Recapitulation Results Interview Deep Key Informants (1)

PERTANYAAN	REKAPITULASI HASIL WAWANCARA INFORMAN UTAMA
KONDISI UMUM	
1. Apakah lutut anda pernah nyeri?	5 orang menjawab pernah
2. Seberapa parah dan sering?	5 orang menjawab tidak parah dan jarang terjadi
3. Apakah kira-kira penyebabnya?	2 orang menjawab terlalu lama berdiri, 2 orang menjawab salah gerak, 1 orang karena suhu dingin.
4. Bagaimana kondisi lutut anda sekarang?	Semua menjawab baik
5. Bagaimana bentuk telapak kaki anda? (<u>flat</u> atau ada lekukan)	Semua ada lekukan
6. Genetik? Bagaimana kondisi orangtua atau saudara?	Semua menjawab bagus
7. Bagaimana kondisi kesehatan anda secara keseluruhan? (ada penyakit tertentu spt. <u>diabetes, hipertensi</u> , dll, atau pernah cedera shg mengganggu lutut?)	4 orang menjawab baik/tidak ada penyakit tertentu hanya lekukan darah cenderung agak naik tapi cenderung normal, 1 org menjawab punya tekanan darah tinggi dan selalu mengkonsumsi obat, juga nafas agak berat jika jalan agak lmy n jaraknya, sekitar 50 meteran.

DISCUSSION

Fifth informant main own condition healthy knees at age them , though sometimes there is pain or rheumatic pain But No until bother activity them . There is 1 informant main smoking , have pressure blood high , breath heavy or congested when road only about 50 meters , however condition knee No problem . Fifth informant Main also has curved soles that can sustain or support position good knee .

According to expert physiotherapist and lecturer anatomy , people with curved soles _ own more posture _ ok . According to dr. Pittara Pansawira (Medical Editor at Alodokter), normal feet have a curved shape or There is basin in the middle soles . _ The function of the arch is to maintain the balance of the body when standing, walking, running or jumping method distribute burden body evenly on all parts of the leg. on someone with palm flat feet or flat, sole of one or both soles her feet have no arches. This condition is seen when the sufferer stands or steps on a flat surface . Flat feet can cause a number complications Serious If No quick handled , namely :

- a. Bunions
- b. Inflammation joints (arthritis)
- c. lump bones growing all around _ joints (osteophytes)
- d. Knee pain
- e. Calluses
- f. Hip pain
- g. Splint bone dry

Flat feet that occur with age mature sometimes Can avoided with treat feet with ok . Following a number of possible effort _ done For guard foot health :

- a. Use shoe or suitable footwear with foot shape and moderate activity done .
- b. Consult with doctor For type exercise or appropriate sport _ with condition health .
- c. Check it out self to doctor in a manner regular If own disturbance medical , like pressure blood tall , obese or diabetes.
- d. keep it up normal weight during pregnancy .
- e. Avoid activity or sport too burden on the feet.

Table 3 Recapitulation Results Interview Deep Key Informants (2)

PERTANYAAN	REKAPITULASI HASIL WAWANCARA INFORMAN UTAMA
USAHA YANG TELAH DILAKUKAN	
A. TERUS AKTIF BERGERAK	
1. Apakah kegiatan anda sehari-hari? (di rumah, tempat kerja, atau lainnya)	2 orang menjawab banyak berdiri dan beraktivitas di rumah, terkadang olahraga ringan 2-3x seminggu. 1 orang menjawab setiap hari selalu senam pemanasan selama 30-60 menit, 2 org menjawab aktivitas kerja di luar rumah ada beberapa tempat sehingga membunhikan gerak yg berpindah2 terus, ditambah mereka aktif berolahraga ringan seperti senam, bersepeda atau jalan kaki hampir setiap hari.
2. Bagaimanakah cara anda melakukan kegiatan tsb? (Aktivitas/gerakan yang lebih spesifik)	Semua menjawab bisa mengatur gerakannya dengan hati-hati, tidak terlalu berlebihan dan tidak sembrono.
3. Seberapa sering anda melakukan kegiatan tsb?	Semua menjawab setiap hari/ hampir setiap hari
4. Seberapa lama anda melakukan kegiatan tsb?	3 orang menjawab bahwa pekerjaannya membunhikan keaktifan karena bes bergerak kesana kemari berjam-jam dari pagi sampai sore, bahkan ditambah olahraga ringan 1 jam 3-6x seminggu. 2 orang menjawab bahwa pekerjaannya membutuhkan posisi berdiri beberapa jam dan riwa riwi dalam rumah, ditambah olahraga ringan 2-3x seminggu.

Fifth informant main has try Good in a manner aware or no they are active move almost every day . All add activity daily with sport light several times inside a week , at least 2 times in a week until almost every day outside job . Fifth informant main neither too excessive in exercise and also try be careful in do every movement .

Lecturer anatomy and experts physiotherapist explain that should do activity sport or do movement whatever of course Don't too burden knee , do it natural movement _ with burden light until currently course , but done in a manner regular almost every day with duration 30-60 minutes just Already Enough For guard health knee . Therapist physicist at Preferred Physical Therapy in Kansas City, says Sidney Hagge-Cocke , PT, DPT always do heating and cooling . If we skip part warmup or cooling from exercise everyday , then We Can make knee We become tired . Simple gestures For warmup that is various type sitting exercises , incl *ankle pumping, long arc quad, seated marches, and hip adduction* . Do cooling The same importance with warm up . Do some movement too For stretching *hamstring, quadriceps, adductor* and *IT bands* For Keep going guard flexibility body . Use the right shoes can maintain the right shape during Exercise. If the wrong shoes are used , you can cause sick . Each person has arch different feet so that requires a different shoe model as well further Hagge-Cocke , consult to doctor or already expert Professionals are also needed he added .

Trainer advice personal certified and expert nutrition , Danielle Gray that is with move body with strolling at least for 20-30 minutes per day in a manner routine or whenever . Walking is nice activity For withhold burden with impact low . Activity This No only can make body part lower still healthy , but also can increase Power stand cardio in a manner whole . Gray added that another nice move For guard knee still strong is swim . Swim is method good low *impact* For keep feet steady strong and healthy . this _ because water gives great resistance a must faced thigh front and thighs behind We For move . Besides that , can also swim refreshing , soothing , beneficial , and good For We in a manner physique nor mentally.

Coach personal WITS certified , Joy Fletcher says method best for people over 60 years For guard knee still Healthy is with practice all supporting muscles _ knee , train all thigh muscles _ front , muscle thigh behind or hamstrings, as well muscle *abductors* and *adductors* (muscles inside and outside). Imbalance muscle whatever will _ cause problem or knee become wear out

Table 4 Recapitulation Results Interview Deep Key Informants (3)

PERTANYAAN	REKAPITULASI HASIL WAWANCARA INFORMAN UTAMA
B. MENJAGA GAYA HIDUP SEHAT	
1. Bagaimana pola makan anda? (jenis, frekuensi, jumlah)	Semua menjawab tidak ada perubahan makan apapun tapi sesedapnya saja, tidak terlalu banyak dan berlebihan, tapi juga tidak membatasi kalori. 3 orang menjawab tidak ada perubahan pola makan. 2 orang hanya saja tidak ada perubahan pola.
2. Bagaimana istirahat anda?	Semua menjawab tidak ada perubahan pola 10 menit sampai 30 menit dari pagi hingga malam tidak ada perubahan.
3. Apakah ada merokok?	4 orang menjawab tidak merokok. 1 orang merokok 20-30 mg 2-3 kali sehari.

DISCUSSION

In guard style life healthy , fifth informant main Eat with experience or reasonable course , no There is taboo . All informant main neither _ consume milk with routine , even something is not consume the same milk very Because No like . About time rest , fifth informant main answer Sleep more early and up early in the morning once . One informant main used to smoke until Now But knee still Healthy only his breath heavy moment walk about 50 meters.

According to Frank Hu, MD, PhD, a professor epidemiology and nutrition at the Harvard TH Chan School of Public Health in Boston, consumption containing food and drink _ cheese and dairy products instead can increase inflammation . According to Centers for Disease Control and Prevention , consumption of milk can slow down healing inflammation joints knee . In fact , when researched about enhancement milk consumption and development disease inflammation joints , healing precisely more slower in women who consume milk. Apparently , there is Lots other factors that could cause slow healing process inflammation joints for people who consume milk. this _ including How weight , smoking or no , including consumption alcohol . Fixed milk needed , origin low fat and enough calcium . According to Frank, more Good consume yogurt instead of milk for lower inflammation , insulin resistance and can prevent type 2 diabetes .

Other factors do not can forgotten For lower risk inflammation joints that is diet and exercise patterns . Nutritionist recommend For avoid soda because full with sugar, aspartame and acid phosphate . Substances the impact negative on ability body For absorb calcium .

Following This a number of possible recommendations relieve inflammation joints other than milk with calcium :

a. Tea

Tea is one drink that gives benefit more on sufferers inflammation joints . Especially tea green , black , white , and all are rich in *polyphenols* ; compound from plants that have effect strong anti - inflammatory. Tea green considered as the most useful from all Because material active is known polyphenols as *epigallocatechin 3-gallate* (*EGCG*). When discussing about activity antioxidant , *EGCG* proved 100 times more strong of Vitamins C and E. Research has show that substance it can too help protect bone cartilage and bone .

b. Jus

Tomato , orange , pineapple and carrot juice all of which are rich in vitamin C characteristic antioxidants and can neutralize radical cause free inflammation . Cherry juice is also evident protect gout attacks and reduce symptom osteoarthritis .

c. White Water

A hydrated body is very important For throw away poison go out from able body help oppose inflammation . Consume enough water can make joints lubricated with good and got help prevent attack inflammation joints . Drink water before eat too help stomach feels more filled and can Eat with portion more little , so can lower weight .

Table 5 Recapitulation Results Interview Deep Key Informants (4)

PERTANYAAN	REKAPITULASI HASIL WAWANCARA INFORMAN UTAMA
C. MINUM SUPPLEMENT PENGUAT SENDI DAN MEREDAKAN NYERI DENGAN OBAT YANG TEPAT 1. Apakah anda mengkonsumsi supplement utk menyehatkan sendi? Apa nama supplementnya? Mengapa anda memilih supplement tsb?	Semua menjawab tidak pernah mengkonsumsi supplement
2. Apakah anda mengkonsumsi/memakai obat pereda nyeri sendi? Apa nama obatnya? Mengapa anda memilih obat tsb?	4 orang menjawab tidak pernah mengkonsumsi obat Pereda nyeri sendi km jika nyeri, nyerinya biasa aja tidak berlebihan dan akan hilang sendiri dg diistirahatkan. 1 orang menjawab pernah mengkonsumsi obat nyeri saat lutul lutu terkena hawa dingin berjam-jam di pesewar ke luar negeri selama lebih dari 8 jam.
3. Seberapa sering anda mengkonsumsinya?	1 orang menjawab hanya sekali itu saja stlh itu tidak pernah nyeri/lum lagi karena dia menghindari hawa dingin.

Fifth informant main No Once taking supplements for guard health his knees . Only 1 person ever consume drug reliever painful moment caught weather long cold inside aircraft about 8 hours, will but after healed the pain No Once consume drug or any supplements .

according to dr. Sienny Agustin (alodokter) Glucosamine function guard health bone prone . Unfortunately , production glucosamine will reduce along increase age . Lack glucosamine can cause damage joints in a manner gradually . order quantity glucosamine in body still awake and joints still healthy , produce supplement glucosamine from shell shell or fermentation bacteria grain . Supplement This often used _ For treat inflammation joints .

Actually benefit glucosamine in overcome inflammation joints Still debated . Evidence and research more carry on Still Keep going done For support benefit glucosamine the .

Following is results study about influence glucosamine against two types inflammation common joints happened :

Osteoarthritis (OA)

Osteoarthritis happen when bone prone to become bearing joints destroyed . this can trigger pain and stiffness , so make the sufferer difficult move or activity . pain generally occurs in the joints hands , knees , bones back , or hip . According to a number of research , glucosamine No can treat osteoarthritis . However , supplements This Can relieve joint pain and symptoms osteoarthritis other from time to time If consumed during at least 6 months . If circumstances getting better after consuming supplement this , then Can continue it . However If No There is improvement , preferably consult to doctor For get handling more continue .

Rheumatoid arthritis (RA)

Rheumatoid arthritis different from OA. RA is disease possible autoimmune attack every joints in the body . Disease This even can affect other organs, eg eye , heart , or lungs . RA can make joints become pain , swelling , stiffness , to lost function . A study show that take 1,500 mg of glucosamine hydrochloride for 3 months can reduce RA symptoms . However , still doubt is supplement glucosamine truly Can overcome RA. Of course Still needed study more carry on For ensure effectiveness supplement glucosamine in overcome RA.

Table 6 Recapitulation Results Interview Deep Key Informants (5)

PERTANYAAN	REKAPITULASI HASIL WAWANCARA INFORMAN UTAMA
D. HINDARI GERAKAN YANG MEMPERBERAT RADANG SENDI	
1. Apakah anda mengetahui gerakan yang menyebabkan/memperparah radang sendi?	Semua menjawab tahu, yaitu tidak melakukan gerakan yang mengangkat beban terlalu berat, menghindari Gerakan yang meloncat-loncat. Menjaga setiap Gerakan yang dilakukan tidak terlalu tergesa-gesa atau saat berpindah arah gerakan harus hari-hati.
2. Apakah anda menghindari gerakan rsb? Atau terpaksa melakukan gerakan tsb?	Semua mengatakan menghindari gerakan2 tersebut di atas. 3 orang mengatakan tidak tau, hanya istirahat aja sebentar jika ada pegal2 di kaki.
3. Apakah anda mengetahui gerakan untuk merawat/memperkuat sendi agar mengurangi nyeri?	2 orang mengatakan tahu, dengan menggerak2kan sendi terus saat mulai kaku karena diam terlalu lama. Jadi berusaha menyadarkan diri kalau mereka tidak boleh diam terlalu lama/ duduk terlalu lama.

Fifth informant main answer has try avoid possible movements worsen inflammation joints , everything say be careful when activity or when do movement and can measure the load , if Already felt too heavy or excessive so they will stop For rest . When they in too long stationary position and feel There is part his body was stiff , then they direct try For do movement For can more defuse it .

According to dr. Allert Benedicto Ieuan Noya (Medical Marketing Manager at HealthReplies.com , a lot activity everyday without realized can trigger painful joints . Most common place happening painful joints namely at the knees , ankles and around the shoulders. Joint pain caused by existence affecting injuries network surrounding ligaments and tendons joints . Usually painful joints causing pain on the part experiencing body injury , level severity and pain from painful joints varies start from light to medium until heavy level . Various matter can become factor risk

happening painful joint , start from intake no nutrition balance , advantage weight , age , sex work , effects of stress, activity physique everyday and happening injury too influence appearance painful joints .

Reason painful joints There is various sort of , however a number of activity physical too cause happening painful joints like :

a. Lift burden heavy

Lift too much burden excessive can cause painful joints on the back . Lift or move object with position the wrong body can too cause painful joints on the back .

b. Jump

Various type different situations and activities , sometimes _ require somebody jump For reach to something location purpose , p This it turns out can cause pain and injury joint , if No be careful in do it .

c. Excess exercise

Sport of course can build strength muscle and guard health joints However If done too much , exercise can too cause painful joints . Type sport certain suspected trigger happening painful joints in parts body certain too. Like running and basketball using knee as pedestal moment jump so that risk For experience painful joints in parts inclined knees and ankles _ more big .

d. Injury

Sprain or the injury caused moment move or exercise too cause painful joints in parts injured body . kindly general required sport movement muscle repeated like tennis field , feather badminton , rowing and golf have risk sprain or more injuries high . Lift load and variety type workout at *the gym* that is repetition is also possible cause injury and pain joints , especially If done with the wrong way or wrong footing , no done in a manner gradually and without preceded with sufficient heating .

4. CONCLUSION

Conclusion from study This is elderly people who have form curved soles more Good posture , because can guard balance body moment standing , walking , running and jumping with distribute body weight evenly throughout legs , elderly people must move body with strolling each day in a manner routine or often maybe , elderly people who don't consuming milk apparently have condition fixed knee healthy , elderly people who are not consume supplement For bones and joints still own healthy knee , elderly people should avoid possible movements resulted inflammation joints knee .

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