

# Challenges of Physical Activity Counseling in Primary Health Care

## *Herausforderungen der ärztlichen Bewegungsberatung in der medizinischen Grundversorgung*

### Summary

- › **There is great need** to increase health-enhancing physical activity in most populations. At individual and group level, guidance provided by health professionals can be effective.
- › **The primary health care system (PHCS)** is in principle a favorable channel to provide physical activity (PA) counseling, but in reality this service is offered to only a small proportion of the clients. Many barriers for PA counseling can be listed, but most of them are consequences of the root cause, low priority of the counseling. The primary cause for this is, in turn, low confidence in the usefulness, especially effectiveness, of PA counseling. In order to increase confidence in PA counseling, firm evidence of its effectiveness to sufficiently and sustainably increase PA to lead to the expected health outcomes has to be provided.
- › **Furthermore**, counseling should be shown to be effective in real world conditions, and effective counseling procedures should be documented in detailed and standardized ways in order to make them analyzable and reproducible. These requirements are hard to meet.
- › **Currently**, there are only two evidence-based recommendations on PA counseling endorsed by an independent expert panel. Thus, more and new kinds of research and development has to be done in order to improve the effectiveness, feasibility, and cost- and competitive effectiveness of PA counseling in order to get it accepted large-scale and permanently in the routine functions of the PHCS.

### KEY WORDS:

Physical Activity, Counseling, Primary Health Care, Evidence-Based Recommendations

### Introduction

Physical inactivity (PIA) is a serious risk to health. Insufficient physical activity ranks fifth among 67 risk factors for burden of disease and injuries (sum of deaths and disability-adjusted life years) in Western Europe. The population-attributable fractions, i.e. the percentages of the disease incidence that would be eliminated if all in the population would be sufficiently active, for some major non-communicable diseases associated with PIA are also high: e.g. in Europe, the population-attributable fractions

### Zusammenfassung

- › **In den meisten Populationen** herrscht die große Notwendigkeit, gesundheitsfördernde Bewegung zu steigern. Die Beratung kann sowohl in Einzelpersonen als auch in Gruppen durch ärztliches Personal effektiv sein.
- › **Das medizinische Grundversorgungssystem** ist grundsätzlich ein vorteilhaftes Mittel, um körperliche Bewegungsberatung zur Verfügung zu stellen, doch leider ist dieser Service in der Realität nur einer kleinen Patientengruppe zugänglich. Es können viele Barrieren aufgezählt werden, die Bewegungsberatung erschweren. Die niedrige Priorität von Beratung stellt hier allerdings die Grundursache dar. Die Hauptursache dafür wiederum ist darin zu finden, dass ärztliche Bewegungsberatung nur geringes Vertrauen in Nutzen und speziell Effektivität hervorruft. Damit das Vertrauen in ärztliche Bewegungsberatung erhöht wird, müssen solide Nachweise über ihre Effektivität erbracht werden, um körperliche Aktivität ausreichend und nachhaltig zu steigern und so das erwartete Ergebnis zu erreichen.
- › **Weiterhin muss gezeigt werden**, dass Beratung tatsächlich effektiv sein kann. Effektive Beratungsabläufe müssen detailliert dokumentiert und standardisiert werden, sodass diese analysierbar und reproduzierbar sind. Diese Voraussetzungen sind schwer zu erreichen.
- › **Gegenwärtig** gibt es nur zwei evidenzbasierte Empfehlungen zur Bewegungsberatung, die von einem unabhängigen Expertengremium befürwortet wurden. Es bräuchte daher neue und zahlreiche Forschungen und Entwicklungen, um Wirksamkeit und Umsetzbarkeit sowie Kosten- und Wettbewerbseffektivität körperlicher Bewegungsberatung zu verbessern. So kann die Beratung weitreichend und dauerhaft in den Routineaufgaben des medizinischen Grundversorgungssystems aufgenommen werden.

### SCHLÜSSELWÖRTER:

Körperliche Aktivität, Beratung, medizinische Grundversorgung, evidenzbasierte Empfehlungen

## REVIEW

ACCEPTED: March 2016

PUBLISHED ONLINE: April 2016

DOI: 10.5960/dzsm.2016.225

Vuori I. Challenges of Physical Activity Counseling in Primary Health Care. Dtsch Z Sportmed. 2016; 67: 85-88.

1. UKK INSTITUTE FOR HEALTH PROMOTION RESEARCH, Tampere, Finland



QR-Code scannen und Artikel online lesen.

### CORRESPONDING ADDRESS:

Ilkka Vuori, MD, PhD, Professor (Emeritus)  
UKK Institute for Health Promotion Research  
Jenseninkatu 19  
33610 Tampere, Finland  
✉: ilkka.vuori@uta.fi

variety of symptoms, syndromes, and diseases (5, 7, 8), and it is recommended for these purposes in numerous evidence-based clinical guidelines. E.g. Weiler et al. listed 39 British national guidelines that included promotion of PA for health reasons (36), and in the book *Physical Activity as Medicine* (in Finnish), the rationale and evidence-based advice for PA and exercise training are given for 35 health-related indications (33). Despite these facts, in most populations PIA is the prevalent behavior, and sufficient PA is practiced by a minority only (14, 37).

Physical activity behavior is determined by multiple genetic, familial, social, economic, and environmental factors. It is deeply rooted in the life of individuals, groups, and populations, and most often it is difficult to change. It has become obvious that successful strategies to increase PA in large scale and in sustainable ways, need to use interventions that include multiple components in order to address the necessary determinants of enduring change in physical activity behavior (6). All means and avenues, from environmental changes and population-wide approaches to individual targeting have to be taken into use, to cover the great number of various needs, constraints, and possibilities regarding PA among different people, living in different conditions in all parts of the world (15, 27).

### PA Promotion in the Health Care System

At individual and group level, professional guidance and support provided by the health care system, especially the primary health care (PHC), have to be taken into use. PA counseling in its various forms can be effective in increasing PA among the patients/clients (16, 26, 28, 30). In addition, the acceptance of and positive attention to PA as a health-enhancing factor by the health professionals and by the whole health care system, is likely to have wider and deeper effects in favor of PA among the decision makers, planners and ordinary people.

In principle, the primary health care system is a favorable channel for behavioral counseling (4, 35). Although PA counseling seems not to require much resources, it is offered to a minority of the patients only (9, 35). The most often given reasons hindering PA counseling by individual PHC practitioners are lack of several prerequisites for it such as time, knowledge of PA, training for counseling, materials for learning, education and information, protocols for delivery of the service, system support, resources, and incentives and reimbursement, and the perception of PA counselling as a secondary task and that patients often ignore the advice (35).

These and other barriers for PA counseling can be found at three levels: individual practitioner, PHC unit, and the PHC system (PHCS). Some of the obstacles can be eliminated or lessened by individual practitioners, e.g. by self-learning and allowing time for counseling, if the practitioner is sufficiently confident in the value of this service and motivated to invest time in doing it. However, the effects of these individual efforts take place in small scale and are often short-lived. Most and the most important barriers, such as lack of opportunities for the needed education and training and lack of opportunities, materials, fiscal and organizational resources, and incentives for systematically and professionally providing counselling services, are on the remit of the functional units of the PHC or the whole PHCS.

### Low Priority as the Root Cause of Lack of PA Counseling in PHCS

Most of the listed barriers for PA counseling in the PHCS are not primary factors but secondary to, consequences of, the low

priority given to PA counseling. However, this problem is not confined to PA only, but it regards more generally many preventive, especially counseling services. One of the principal causes for the low priority of PA counseling in the PHCS is that there is not sufficient confidence in its effectiveness, feasibility, and competitive effectiveness among the methods and means used in the PHCS (34). This is based on several factors: weak supporting scientific evidence, unfavorable personal experience or reputation of PA counseling, and lack of knowledge of the health potential of PA. It is good to remember that most of the evidence for the health-related effects of PA, is much more recent than that regarding e.g. smoking and nutrition, and in large extent the evidence is based on observational studies.

The two breakthrough randomized trials showing the preventive potential of PA to prevent diabetes were published in 2001 and 2002, and only few corresponding studies have been published since then (18, 31). Thus, it is likely that a large part of the health care professionals are insufficiently aware of possibilities to use PA for health. There are at least two important reasons for this. First, information of PA is not at all or not sufficiently included in the curriculum of medical students or in the continuing education of physicians. Secondly, most of the articles related to health-related effects and use of PA for health have been published in sources not regularly followed by practicing physicians. Fortunately, there are exceptions such as the series of articles related to the health potential of PA and its use published in the *Lancet* in 2013 (20).

The obstacles listed above and their and root causes are difficult to overcome. This is shown by the unsuccessful attempts and slow progress in the implementation of PA counseling in the PHCS in many countries. However, the obstacles are not unsurmountable as shown by the wide, systematic inclusion of PA counseling into the functions of the PHCS e.g. in Sweden (17, 21) and Denmark (3). On the other hand, even in these countries, the usefulness of this service has been questioned by the Danish Health and Medicines Authority (3) and Swedish Society of General Practitioners (13).

### Measures to Increase the Priority of PA Counseling in the PHCS

What should and could be done to overcome the primary challenge or common nominator, low priority, to increase PA counseling in the PHCS? A short answer is: to create confidence in the value and in the competitive effectiveness of PA counseling among all those (the administrators and various practitioners such as physicians, nurses, physiotherapists etc.) involved in the decision making, planning, and practical work related to PA counseling, both in the PHCS at large and in the functional units where the counseling will take place. It does not help much to advocate for the great potential benefits to health of increased PA, but it is necessary to show also, how these benefits can be reached by the functions of the PHCS in the real life conditions. The following steps are needed:

1. To provide convincing evidence of the effectiveness of PA counseling, to increase physical activity sufficiently to lead to the expected health outcomes. Demonstration of efficacy (usefulness in ideal conditions) is an important step, but it is not sufficient. Counseling should be shown to be effective in the settings where it will be used, provided by the personnel that will be using it, and on subjects on whom it will be given. Studies by Grandes et al. are good examples of this kind of research (11, 12). Ideally, effectiveness should be demonstrated by showing expected changes in the health outcomes, such as

decreased incidence of coronary heart disease or at least in intermediary factors known to be causally related to the final health outcomes, e.g. blood lipids or blood pressure. Showing only changes in physical activity behavior is seldom sufficient to convince the health care administrators and practitioners of sufficient value of counseling.

2. To identify the factors in the content, delivery process and organization of the counseling that must be fulfilled for its effectiveness, and to document them thoroughly using standardized and quantitative measures as much as possible in order to make the effective counseling procedure reproducible (1, 9, 23).
3. To demonstrate the feasibility, i.e. the possibility to use the effective procedure in the PHC and in the units where it will be applied, by using the resources that can be made available for this function in the daily routine of the unit. It would be very desirable to demonstrate also the cost-effectiveness (2, 9, 24, 25, 29) and cost-utility (10) of the counseling, as well as its competitive effectiveness in relation to other means used in the PHCS.

### Evidence-Based Recommendations for PA Counseling in PHC

These requirements are hard to meet, not only regarding PA counseling but also counseling other health-related habits. This is clearly shown by the fact that the U.S. Preventive Services Task Force (USPSTF) has currently endorsed only 11 recommendations for behavioral counseling interventions (32). USPSTF is an independent panel of national experts in prevention and evidence-based medicine that gives recommendations on preventive interventions based on thorough systematic review and evaluation of the most recent research evidence on the certainty and magnitude of the net benefit of various preventive interventions. The evaluation assesses, whether an intervention in the clinical setting influences patients to change behavior, and whether the changing behavior improves health outcomes with minimal harms (4). The Recommendation on Healthful Diet and Physical Activity to Prevent Cardiovascular Disease in At-Risk Adults was accepted in 2014. It reads: The USPSTF recommends offering or referring adults who are overweight or obese and have additional cardiovascular disease (CVD) risk factors to intensive behavioral counseling interventions to promote a healthful diet and physical activity for CVD prevention. The recommendation is graded as B, not as the highest grade A. It means that USPSTF recommends this service for primary care providers for routine use as preventive service. There is high certainty that the net benefit of the intervention is moderate or there is moderate certainty that the net benefit is moderate to substantial. Moderate

certainty implies that future research may change the conclusion, e.g. increase the evidence to the highest grade A.

The second USPSTF recommendation on Healthful Diet and Physical Activity to Prevent Cardiovascular Disease in Adults was accepted in 2012, but the grade is only C. This means that there is at least moderate certainty that the net benefit is small. Future research may change the conclusion. The recommendation reads: Although the correlation among healthful diet, physical activity, and the incidence of cardiovascular disease is strong, existing evidence indicates that the health benefit of initiating behavioral counseling in the primary care setting to promote a healthful diet and physical activity is small. This applies to adults aged  $\geq 18$  years who do not have cardiovascular disease, hypertension, hyperlipidemia, or diabetes. Clinicians may choose selectively counsel patients rather than incorporate counseling into the care of all adults in the general population. For both recommendations on diet and physical activity behaviors, the USPSTF recommends intensive interventions (4, 19).

### The Work Ahead

This is where we stand now: we have evidence-based recommendations to offer intensive PA counseling as effective preventive interventions in the PHCS routinely for subjects with high risk and selectively for subjects with low-risk of CVD. These statements apply directly only to US and CVD, but the main message applies also to European countries and to other, e.g. metabolic diseases. These recommendations and other evidence-based statements can be used in the efforts to get PA counseling included in the functions of the PHCS.

However, very important work is left: to develop feasible counseling procedures for the prevailing circumstances, to demonstrate their effectiveness and viability in the real life conditions, and to document them in detail to secure their reproducibility. Much new and new kind of research is needed and helpful in order to develop and test better theoretical basis and practical working methods, to improve the clinical value of PA counseling to the level that leads to its wide acceptance in the health care system as one means to decrease the burden of non-communicable diseases (1, 9, 30). However, much knowledge and experience is already available for collection, assessment, application, and evaluation among researchers and practitioners at various levels. The 5<sup>th</sup> EIEIM conference is one venue to further these functions. ■

### Conflict of Interest

*The author has no conflict of interest.*

## References

- (1) **ALCÁNTARA C, KLESGES LM, RESNICOW K, STONE A, DAVIDSON KW.** Enhancing the Evidence for Behavioral Counseling: A Perspective From the Society of Behavioral Medicine. *Am J Prev Med.* 2015; 49: S184-S193. doi:10.1016/j.amepre.2015.05.015
- (2) **ANOKYE NK, TRUEMAN P, GREEN C, PAVEY TG, HILLSDON M, TAYLOR RS.** The cost-effectiveness of exercise referral schemes. *BMC Public Health.* 2011; 11: 954. doi:10.1186/1471-2458-11-954
- (3) **BREDAHL TVG GA, KRISTENSEN T, PUGGAARD L, SKOVGAARD T, SØRENSEN J, SØRENSEN JB, AAGAARD PG.** Resultatopsamling af Motion på Recept i Danmark. Sundhedsstyrelsen 2010: <http://www.sst.dk/~media/3DE17317E7B64743BC0023F7CCAD7BAB.ashx>. [Accessed Oct 1, 2015].
- (4) **CURRY SJ, WHITLOCK EP.** Behavioral Counseling Interventions Expert Forum: Overview and Primer on U.S. Preventive Services Task Force Methods. *Am J Prev Med.* 2015; 49: S129-S137. doi:10.1016/j.amepre.2015.04.017
- (5) **DEPARTMENT OF HEALTH AND HUMAN SERVICES.** Physical activity guidelines for Americans. 2008; <http://www.health.gov/paguidelines/pdf/paguide.pdf>. [Accessed August 25, 2015].
- (6) **DRENOWATZ CWO, FISCHBACH N, STEINACKER JM.** Intervention Strategies for the Promotion of Physical Activity in Youth. *Dtsch Z Sportmed.* 2013; 64: 170-175. doi:10.5960/dzsm.2012.078
- (7) **FYSS PAFPAS.** Physical activity in the prevention and treatment of disease. <http://www.fyss.se/fyss-in-english/>. [Accessed August, 25, 2015].
- (8) **FYSS PAFPAS.** Physical activity in the prevention and treatment of disease. <http://www.fyss.se/om-fyss-2/fyss-2015/>. [Accessed October, 1, 2015].
- (9) **GAGLIARDI AR, ABDALLAH F, FAULKNER G, CILISKA D, HICKS A.** Factors contributing to the effectiveness of physical activity counselling in primary care: a realist systematic review. *Patient Educ Couns.* 2015; 98: 412-419. doi:10.1016/j.pec.2014.11.020
- (10) **GARRETT S, ELLEY CR, ROSE SB, O'DEA D, LAWTON BA, DOWELL AC.** Are physical activity interventions in primary care and the community cost-effective? A systematic review of the evidence. *The British journal of general practice : the journal of the Royal College of General Practitioners.* 2011; 61: e125-133.
- (11) **GRANDES G, SANCHEZ A, MONTOYA I, ORTEGA SANCHEZ-PINILLA R, TORCAL J.** Two-year longitudinal analysis of a cluster randomized trial of physical activity promotion by general practitioners. *PLoS ONE.* 2011; 6: e18363. doi:10.1371/journal.pone.0018363
- (12) **GRANDES G, SANCHEZ A, SANCHEZ-PINILLA RO, TORCAL J, MONTOYA I, LIZARRAGA K, SERRA J.** Effectiveness of physical activity advice and prescription by physicians in routine primary care: a cluster randomized trial. *Arch Intern Med.* 2009; 169: 694-701. doi:10.1001/archinternmed.2009.23
- (13) **GUSTAFSSON THB, HULTBERG J, RUDEBECK CE, SJÖNELL G.** Onödiga eller skadliga åtgärder (Unnecessary or harmful measures in health care). 2014. <http://www.sfam.se/artiklar/onodiga-eller-skadliga-atgarder-i-svensk-allmanmedicin-del-2>. [Accessed October 1, 2015].
- (14) **HALLAL PC, ANDERSEN LB, BULL FC, GUTHOLD R, HASKELL W, EKELUND U.** Global physical activity levels: surveillance progress, pitfalls, and prospects. *Lancet (London, England).* 2012; 380: 247-257. doi:10.1016/S0140-6736(12)60646-1
- (15) **HEATH GW, PARRA DC, SARMIENTO OL, ANDERSEN LB, OWEN N, GOENKA S, MONTES F, BROWNSON RC.** Evidence-based intervention in physical activity: lessons from around the world. *Lancet (London, England).* 2012; 380: 272-281. doi:10.1016/S0140-6736(12)60816-2
- (16) **HOBBS N, GODFREY A, LARA J, ERRINGTON L, MEYER TD, ROCHESTER L, WHITE M, MATHERS JC, SNIHOTTA FF.** Are behavioral interventions effective in increasing physical activity at 12 to 36 months in adults aged 55 to 70 years? A systematic review and meta-analysis. *BMC Med.* 2013; 11: 75. doi:10.1186/1741-7015-11-75
- (17) **KALLINGS LV, LEIJON M, HELLENUS ML, STAHL A.** Physical activity on prescription in primary health care: a follow-up of physical activity level and quality of life. *Scand J Med Sci Sports.* 2008; 18: 154-161. doi:10.1111/j.1600-0838.2007.00678.x
- (18) **KNOWLER WC, BARRETT-CONNOR E, FOWLER SE, HAMMAN RF, LACHIN JM, WALKER EA, NATHAN DM.** Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. *N Engl J Med.* 2002; 346: 393-403. doi:10.1056/NEJMoa012512
- (19) **KRIST AH, BAUMANN LJ, HOLTROP JS, WASSERMAN MR, STANGE KC, WOO M.** Evaluating Feasible and Referable Behavioral Counseling Interventions. *Am J Prev Med.* 2015; 49: S138-S149. doi:10.1016/j.amepre.2015.05.009
- (20) **LANCET.** Physical Activity Series. 2012; 380.
- (21) **LEIJON ME, BENDTSEN P, NILSEN P, EKBERG K, STAHL A.** Physical activity referrals in Swedish primary health care - prescriber and patient characteristics, reasons for prescriptions, and prescribed activities. *BMC Health Serv Res.* 2008; 8: 201. doi:10.1186/1472-6963-8-201
- (22) **LIM SS, VOS T, FLAXMAN AD, DANAEI G, SHIBUYA K, ADAIR-ROHANI H ET AL.** A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet (London, England).* 2012; 380: 2224-2260. doi:10.1016/S0140-6736(12)61766-8
- (23) **MCNELLIS RJ, ORY MG, LIN JS, O'CONNOR EA.** Standards of Evidence for Behavioral Counseling Recommendations. *Am J Prev Med.* 2015; 49: S150-S157. doi:10.1016/j.amepre.2015.06.002
- (24) **MULLER-RIEMENSCHNEIDER F, REINHOLD T, WILLICH SN.** Cost-effectiveness of interventions promoting physical activity. *Br J Sports Med.* 2009; 43: 70-76. doi:10.1136/bjism.2008.053728
- (25) **MURPHY SM, EDWARDS RT, WILLIAMS N, RAISANEN L, MOORE G, LINCK P, HOUNSOME N, DIN NU, MOORE L.** An evaluation of the effectiveness and cost effectiveness of the National Exercise Referral Scheme in Wales, UK: a randomised controlled trial of a public health policy initiative. *J Epidemiol Community Health.* 2012; 66: 745-753. doi:10.1136/jech-2011-200689
- (26) **ORROW G, KINMONTH AL, SANDERSON S, SUTTON S.** Effectiveness of physical activity promotion based in primary care: systematic review and meta-analysis of randomised controlled trials. *BMJ.* 2012; 344: e1389. doi:10.1136/bmj.e1389
- (27) **PRATT M, PEREZ LG, GOENKA S, BROWNSON RC, BAUMAN A, SARMIENTO OL, HALLAL PC.** Can population levels of physical activity be increased? Global evidence and experience. *Prog Cardiovasc Dis.* 2015; 57: 356-367. doi:10.1016/j.pcad.2014.09.002
- (28) **RICHARDS J, HILLSDON M, THORGOOD M, FOSTER C.** Face-to-face interventions for promoting physical activity. *Cochrane Database Syst Rev.* 2013; 9: CD010392.
- (29) **ROMÉ ÁPU, EKDAHL C, GARD G.** Costs and outcomes of an exercise referral programme – A 1-year follow-up study. *Eur J Physiother.* 2014; 16: 82-92. doi:10.3109/21679169.2014.886291
- (30) **SANCHEZ A, BULLY P, MARTINEZ C, GRANDES G.** Effectiveness of physical activity promotion interventions in primary care: A review of reviews. *Prev Med.* 2015; 76: S56-S67. doi:10.1016/j.ypmed.2014.09.012
- (31) **TUOMILEHTO J, LINDSTROM J, ERIKSSON JG, VALLE TT, HAMALAINEN H, ILANNE-PARIKKA P, KEINANEN-KIUKAANNIEMI S, LAAKSO M, LOUHERANTA A, RASTAS M, SALMINEN V, UUSITUPA M.** Prevention of type 2 diabetes mellitus by changes in lifestyle among subjects with impaired glucose tolerance. *N Engl J Med.* 2001; 344: 1343-1350. doi:10.1056/NEJM200105033441801
- (32) **US. PREVENTIVE SERVICES TASK FORCE.** <http://www.uspreventiveservicestaskforce.org/BrowseRec/Index>. [Accessed August, 30, 2015].
- (33) **VUORI I.** Liikuntaa lääkkeeksi. *Readme Helsinki.* 2015.
- (34) **VUORI I.** Role of Primary Health Care in Physical Activity Promotion. *Dtsch Z Sportmed.* 2013; 64: 176-182. doi:10.5960/dzsm.2012.073
- (35) **VUORI IM, LAVIE CJ, BLAIR SN.** Physical activity promotion in the health care system. *Mayo Clin Proc.* 2013; 88: 1446-1461. doi:10.1016/j.mayocp.2013.08.020
- (36) **WEILER R, FELDSCHEIBER P, STAMATAKIS E.** Medicolegal neglect? The case for physical activity promotion and exercise medicine. *Br J Sports Med.* 2012; 46: 228-232. doi:10.1136/bjism.2011.084186
- (37) **GLOBAL HEALTH OBSERVATORY WHO.** (GHO) data - Risk factors. [http://www.who.int/gho/ncd/risk\\_factors/en/](http://www.who.int/gho/ncd/risk_factors/en/). [Accessed March, 8, 2016].