

# The Evolution of Physical Activity on Prescription (FaR) in Sweden

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## Abstract

In 1996, the first Report of the US Surgeon General on Physical Activity and Health provided an extensive knowledge overview about the positive effects of physical activity (PA) on several health outcomes and PA recommendations. This contributed to an enhanced interest for PA in Sweden. The Swedish Professional Associations for Physical Activity (YFA) were appointed to form a Scientific Expert Group in the project "Sweden on the Move" and YFA created the idea of Physical Activity on Prescription (FaR) and the production of a handbook (FYSS) for healthcare professionals. In Swedish primary care, licensed healthcare professionals, i.e. physicians, physiotherapists and nurses, can prescribe PA if they have sufficient knowledge about the patient's current state of health, how PA can be used for promotion, prevention and treatment and are trained in patient-centred counselling and the FaR method. The prescription is followed individually or by visiting local FaR providers. These include sport associations, patient organisations, municipal facilities, commercial providers such as gyms, sports clubs and walking clubs or other organisations with FaR educated staff such as health promoters or personal trainers. In clinical practice, the FaR method increases the level of PA in primary care patients, at 6 and at 12 months. Self-reported adherence to the prescription was 65% at 6 months, similar to the known compliance for medications. In a randomised controlled trial, FaR significantly improved body composition and reduced metabolic risk factors. It is suggested that a successful implementation of PA in healthcare depends on a combination of a systems approach (socio-ecological model) and the strengthening of individual motivation and capability. General support from policymakers, healthcare leadership and professional associations is important. To lower barriers, tools for implementation and structures for delivery must be readily available. Examples include handbooks such as FYSS, the FaR system and the use of pedometers.

**Keywords:** Physical activity, healthcare, counselling, chronic disease, prevention, Sweden

## Zusammenfassung

1996 wurden im «Report of the US Surgeon General on Physical Activity and Health» das Wissen zu den Effekten von Bewegung auf die Gesundheit und die Bewegungsempfehlungen erstmals umfassend dargestellt. Dies führte in Schweden zu einem gesteigerten Interesse am Thema Bewegung. Die schwedischen Fachverbände im Bewegungsbereich wurden eingeladen, im Rahmen des Projektes «Sweden on the Move» eine wissenschaftliche Experten-Gruppe zu bilden. Die Gruppe entwickelte das Konzept von «Bewegung auf Verschreibung» (FaR) und verfasste dazu ein Handbuch (FYSS) für Fachleute im Gesundheitswesen. In der schwedischen Grundversorgung können Ärzte, Physiotherapeuten und Pflegefachkräfte Bewegung verschreiben, falls sie den Gesundheitszustand des Patienten beurteilen können, geschult in der Anwendung von körperlicher Aktivität in Prävention und Therapie sowie ausgebildet in patientenzentrierter Beratung und der FaR-Methode sind. Die Verschreibung kann individuell oder im Rahmen eines lokalen FaR-Angebots organisiert durch Sportverbände, Patientenorganisationen, Gemeindeinstitutionen, private Anbieter oder andere Vereinigungen mit ausgebildetem FaR-Personal (Gesundheitsförderer, Personal Trainers) umgesetzt werden. Im klinischen Alltag wird beobachtet, dass FaR das Bewegungsverhalten der Patienten nach 6 und 12 Monaten verbessert. Die selbstberichtete Compliance mit der Verschreibung nach 6 Monaten war 65%, also vergleichbar mit Medikamenteneinnahme. In einer randomisierten kontrollierten Studie zeigte die FaR-Methode eine signifikante Verbesserung der Körperzusammensetzung und der metabolischen Risikofaktoren. Die erfolgreiche Umsetzung der Bewegungsförderung in der Primärversorgung basiert auf der Kombination eines systemischen Ansatzes (sozio-ökologisches Modell) mit der Stärkung individueller Motivation und Fähigkeiten. Die Unterstützung durch Politik und das Gesundheitswesen sind wichtig. Zum Abbau von Barrieren braucht es Instrumente und Strukturen für die Umsetzung wie Handbücher, das FaR-System oder den Einsatz von Pedometern.

**Schlüsselwörter:** Physical activity, healthcare, counselling, chronic disease, prevention, Sweden

## The Evolution of Physical Activity on Prescription (FaR) in Sweden

Health care plays an essential role for the promotion of physical activity, fitness and health. Physicians, physiotherapists and nurses can and should all contribute. It is necessary that prevention and treatment methods are evidence-based. Therefore, education and training activities for healthcare professionals on all aspects of physical activity on prescription are needed. Also, knowledge tools and resources are important elements.

In the mid 1990s, an accumulating body of evidence about the positive effects of physical activity on several health outcomes and the novel physical activity recommendations presented in a report of the US Surgeon General (USDHHS 1996) contributed to an enhanced interest in Sweden. The Swedish National Institute of Public Health appointed the Swedish Professional Associations for Physical Activity (YFA) to form a Scientific Expert Group in the task to put "Sweden on the Move". In this large scale health promotion operation, different arenas in society, such as school, leisure time, workplace and healthcare were included. Within the healthcare setting, YFA formed the idea of Physical Activity on Prescription (FaR).

Before launching FaR, a survey called the Waiting Room Study revealed that 9 out of 10 patients in a primary care waiting room preferred physical activity over drug treatment if the outcome was the same (Leijon et Kallings, 2003).

In Swedish primary care, licensed health professionals such as physicians, physiotherapists and nurses can prescribe physical activity (FaR). The licensed professionals must have sufficient knowledge about the patient's current state of health, how physical activity can be used for promotion, prevention and treatment, knowledge of patient-centred counselling, the FaR method and the local FaR providers.

The prescription can be followed individually or by visiting local FaR providers, e.g. gyms, sports clubs, walking clubs or other associations with FaR educated staff such as health promoters, personal trainers or club members. The FaR education was created based on a pilot education program during 2001. This program revealed the need for different approaches depending on living conditions of patients and their access to clubs and gyms. In this program, the use of pedometers was introduced in Swedish Health Care as a tool for intervention and evaluation and for those who prefer to follow the prescription on their own. It also identified ethical questions on how to communicate information about a patient's health status outside the healthcare system as well as a lack of compatibility with existing patient record systems (Leijon et Kallings, 2003). Furthermore, the need was identified for a handbook based on the evidence about physical activity in the prevention and treatment of disease. Therefore, YFA took the responsibility to write the first edition of the 600-page book FYSS in 2003 which is now available in a second edition also in English (SNIPH 2010). It contains the scientific background on current PA recommendations for almost 40 diseases (e.g. cardiovascular, metabolic, orthopaedic, psychiatric, pulmonary, and neurologic diseases or cancer) or conditions (e.g. pregnancy, old age).

### Establishment of the approach

The Swedish Council on Technology Assessment in Health Care (SBU) report concluded that general 'brief' advice on physical activity could increase the level of physical activity by up to 50% at 6 months (SBU 2007). With more intense

counselling, supported by pedometers, written advice and/or follow-ups, the level of physical activity may increase a further 15–50% at 6 months.

The pilot work, the SBU report and the further development in different county councils and regions has contributed to form today's FaR. The core aspect of FaR is its patient-centred dialogue approach with its origin in the patient's state of health, symptoms, diagnoses, potential risk factors, prior experience of physical activity and preferred activities. The counselling leads to a written prescription and the basis of the prescription is the handbook FYSS.

The prescribed activity can either be performed individually or with local activity organizers. The cooperation between the Health Care System and various physical activity organizers in the local community (NGOs such as sport associations, patient organizations or municipal facilities and private business) helps increase or maintain the level of physical activity. The concept of individualized counselling and prescription in combination with the cooperation between the Health Care System and NGOs seem to be unique (Kallings, 2011).

Many patients prefer to be physically active on their own. Walking is reported to be the most preferred physical activity (Ham et al., 2009). Following the SBU report (SBU 2007), a common approach among Swedish physiotherapists is to use pedometers to help increase physical activity levels (Raustorp 2013). An important part is the follow-up, i.e. the monitoring of progress and the possible adjustment of the prescription. With a validated pedometer it is possible to bridge the gap between research and practice. The most recent physical activity recommendations are expressed as steps per day (Garber et al., 2011). In a review, the Lancet (Heath et al., 2012) reported that interventions using pedometers had the largest effect size among evidence based interventions to increase physical activity.

### Results so far

In clinical practice, the Swedish (FaR) method has been found to increase the level of physical activity in patients in primary care, at 6 months as well as at 12 months (Leijon et al, 2009). The self-reported adherence to the prescription was 65% at 6 months (Kallings et al, 2009a), a fraction well in correspondence with the known compliance rate of medications. In a randomized controlled study, physical activity on prescription significantly improved body composition and reduced metabolic risk factors (Kallings et al., 2009b).

Today FaR is implemented in all Swedish councils and it is widely spread in primary care. It is also increasingly used in specialist care, especially in psychiatry (Kallings 2011).

However, physical activity as a treatment modality in healthcare is still underutilized. While physicians believe that advice on PA is important, only a small minority of patients is actually given advice or counselling on PA in the clinical setting. There are no comprehensive statistics about prescriptions on a national basis. A rough estimate is that 50'000 prescriptions were given in 2010 with an increasing trend and at present about 1/1000 of the Swedish healthcare visits result in a prescription of physical activity (Kallings 2012).

The Swedish National Board of Health and Welfare recently produced national guidelines on methods to prevent disease (Socialstyrelsen 2011) highlighting the importance of structured advice, with additional support and follow-up (equivalent to physical activity on prescription), to increase the PA level in

insufficiently active patients at risk for diseases such as obesity, diabetes and hypertension.

One of the main challenges may be that some physicians do not regard lifestyle issues to be their responsibility. Possibly this is because they do not fully realise the massive potential treatment effects of PA for many of their patients with non-communicable diseases, that is for most patients in everyday practice.

### Lessons learned and the way forward

It has been suggested that a successful implementation of physical activity counselling in healthcare depends on a combination of a systems approach (socio-ecological model) and the strengthening of individual motivation and capability (Börjesson et Sundberg, 2013). First, there needs to be general support from the policymakers, healthcare leaders and from professional societies. This should be expressed through national evidence-based recommendations and guidelines as well as through educational programmes, all the way from undergraduate levels up to continuing medical education. Such measures increase awareness and legitimacy and help to enhance motivation. Second, to lower the barrier for the prescribing healthcare professionals, tools for implementation and structures for delivery must be readily available (Börjesson et Sundberg, 2013). Examples include handbooks such as FYSS and physical activity on prescription systems and methods such as the use of pedometers as supported by the evidence.

The FYSS book has been translated into English, Norwegian and Vietnamese (Hellenius et Sundberg, 2011) and discussions are ongoing for other languages. The Vietnamese translation was part of a collaboration project that included education and training of healthcare personnel, awareness building through mass media campaigns as well as interaction with the Vietnamese government. Swedish Professional Associations for Physical Activity actively seek collaborators around the world to make further translations.

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