EUROPREV Guide
on Promoting Health through Physical Activity

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EUROPREV

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- *The European Network for Prevention and Health Promotion in Family Medicine and General Practice (EUROPREV)*
- European network of national colleges of general practice/family medicine established in 1996 and affiliated to WONCA-Europe (at the present time 25 countries of Europe are represented)
- general aim: promote evidence-based prevention in general practice.

Networks of GPs (EUROPREV) :

→ permits sharing of information and compares guidelines and tools for prevention and health promotion

→ permits running of specific research projects

EUROPREV Guide on Promoting Health through Physical Activity

A Guide to Physical Activity
Counselling in Daily Practice

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What are the benefits of regular physical activity?

Regular physical activity has a lot of beneficial effects. Besides making us feel better it gives satisfaction, better self-esteem and helps us stay fit and vital. It is also used as a preventive and curative tool, since it

- lowers blood pressure
- increases insulin sensitivity and lowers blood glucose level
- lowers serum LDL cholesterol level
- increases serum HDL cholesterol level
- helps to prevent some types of cancer (e.g. breast, colon and prostate cancer)
- reduces percentage of body fat
- reduces stress
- improves cardiovascular functional status and performance
- prevents osteoporosis
- prevents and treats diseases of the locomotor system
- increases life expectancy compared to sedentary people

Physical activity readiness questionnaire (PAR-Q)

This questionnaire serves to recognise patients who would need additional cardiovascular investigation if their answer to any of the questions is "YES" or "DON'T KNOW" (80% specific, 100% sensitive).

Physical activity readiness questionnaire			
	Yes	Don't know	No
Have you ever had cardiac disease or diabetes?			
Have you ever had high blood pressure?			
Have you ever had chest pain during exercise or at rest?			
Are you currently taking any medication for blood pressure, heart disease, etc.?			
Have you ever had vertigo, dizziness or lost consciousness?			
Have you been seriously ill or admitted to hospital in the last year?			
Are you over 65 and not accustomed to physical activity?			
Have you ever had joint or bone problems, made worse by exercise?			
Do you have a viral infection (e.g. influenza) right now?			
Do you get asthma or shortness of breath while walking?			
Is there any other reason you should not be physically active?			

Adapted from Coaching NI Professional Instructors Award Training Manual (2066, p 61)

Tests for assessment of physical fitness

→ 2 km walking test (UKK 2 km)

This is very useful in population preventive programs, testing both subjective and

objective health status and cardiovascular fitness during 2 km of brisk walking. The patient's individual fitness is calculated by using a computer system to measure blood pressure and heart rate before and after exercise.

→ Cycloergometrical assessment

This is a clinical test, usually performed by cardiologists, which gives the most objective appraisal of a patient's cardiovascular fitness. Since it is not fully available in GP/FM, it is recommended for:

- cardiac patients
- sedentary adults (men over 40, women over 50 years), who would like to start intensive physical activity for the first time in their life.

Plan for physical activity

The **minimal** caloric threshold is 1000 kcal/week:

→ 200 kcal/day 4 times a week

or

→ 300 kcal/day 4 times a week.

The **optimal** caloric threshold for a healthy adult is 2000 kcal/week.

Calories spent in physical activity can be calculated from:

$$\frac{\text{MET x 3.5 x BW}}{200} = \text{kcal/min}$$

BW = body weight (kg)

1 MET = metabolic equivalent unit = 3.5 ml O2/kg/min

Intensity of different physical activities, expressed in METs:	
resting	1 METs
eating, dressing	2 METs
walking (4.8 km/h), fishing, billiards	3 METs
brisk walking (5.6 km/h)	4 METs
tennis (doubles), climbing stairs, cricket	5 METs
tennis (singles)	6 METs
basketball	7 METs
running (8 km/h), aerobics, mountaineering	8 METs

The **FIT (TP) formula**:

F - frequency (how many days per week)

I - intensity (mild, moderate, intense)

T - time (quantity of physical activity/day)

T - type of activity (aerobic, anaerobic, for strength, stretching…)

P - progression

The **FIT (TP) formula**:

F- Frequency

It is advisable that the patients are active **every day**, no matter what type of activity they choose. Physical activity gives beneficial effects when done regularly, the minimum being 30 minutes for 3-5 days per week (European recommendation).

I - Intensity

According to physiological parameters, 3 levels of intensity exist:

(a) Mild: in mild exercise is less than 50% of the maximal pulse.

(b) Moderate: 50-70% of the maximal pulse.

(c) Intensive: more than 70% of the maximal pulse.

Intensity assessment

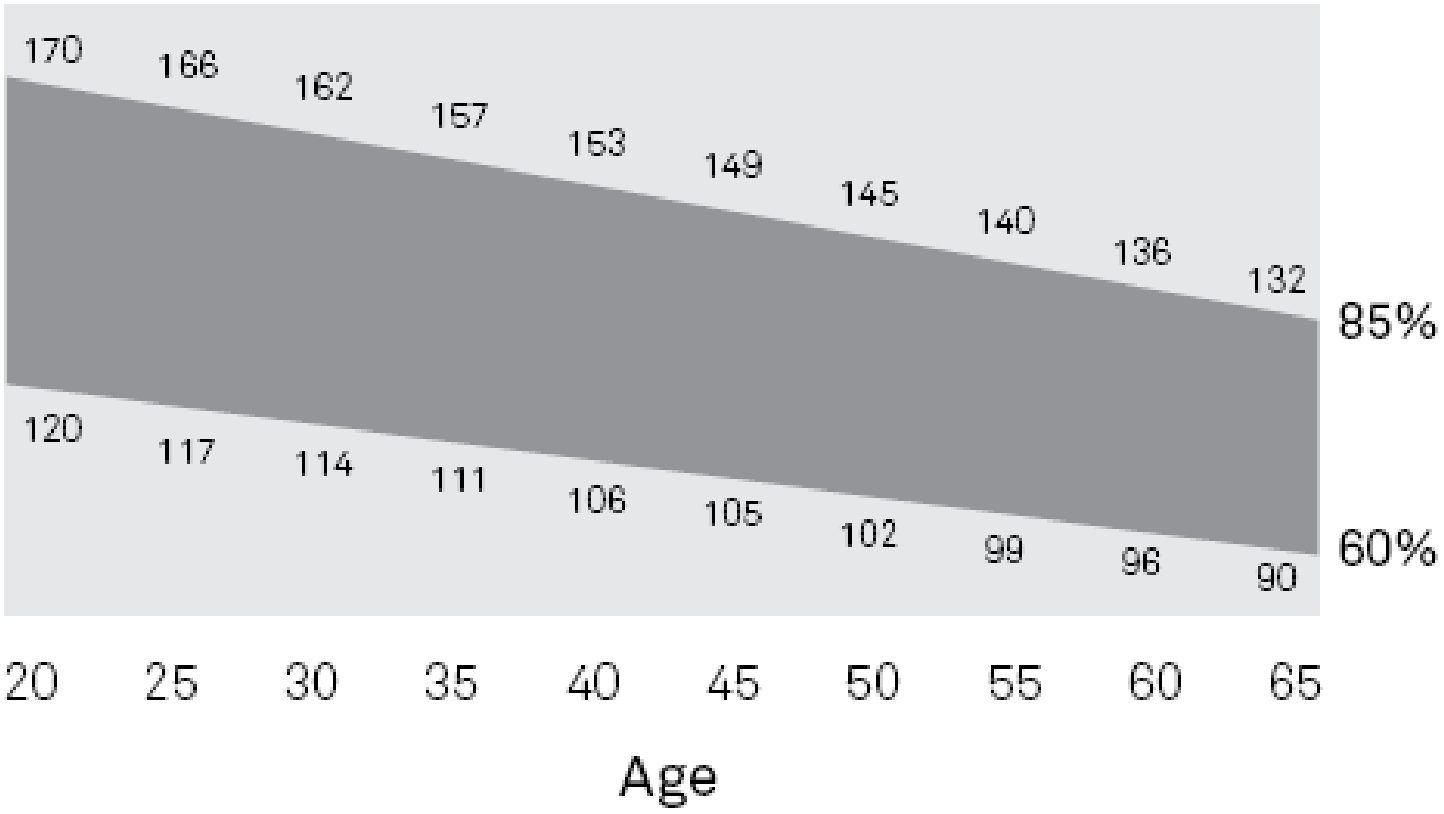
→ Pulse (heart rate) measurement

maximal pulse = Fr max = 220 - age
recommended pulse = Fr recom. = Fr max - Fr rest
target pulse for 50-85 % intensity: = ((Fr max - Fr rest) x 0.50 and 0.85 + Fr rest

Legend: Fr = frequency

When just beginning an exercise program, one should aim for the lower target heart rate (60%). As the fitness improves, one can exercise harder to get the heart rate closer to the top number (85%).

Target heart rates



(familydoctor.org)

Subjective reaction to physical activity:

Scale of RPE (rate of perceived exertion)

"How do you feel during physical activity?" (Please tick one box)	
1. I have no problems	❑
2. It was easily done	❑
3. I can do more	❑
4. I'm starting to feel breathless	❑
5. I'm rather breathless	❑
6. I'm very breathless	❑
7. I feel tired	❑
8. I feel very tired	❑
9. I can't breathe	❑
10. I feel exhausted	❑

1-3: not intensive enough

4-6: intensive enough

>6: too intensive

T - Type

→ **A. Aerobic exercise**

Types of aerobic exercise are: swimming, dancing, walking, running, climbing stairs (sustained for 20 minutes or more), rowing, chopping wood (sustained for 20 minutes or more), cross country skiing, hiking, jogging, cycling, etc.

→ **B. Anaerobic exercise**

Examples of anaerobic exercise include: weight lifting, sprinting, jumping, etc.

Examples of **anaerobic** exercise include: weight lifting, sprinting, jumping, etc.

In primary prevention the rule of **balanced physical activity** should be followed:

50% = 4-7 days a week: endurance exercise - aerobic activity

25% = 2-4 days a week: anaerobic activity for muscular strength

25% = 4-7 days a week: exercise for flexibility (stretching plus relaxation)

T- Time

There are several different recommendations on the duration of physical activity:

ACSM (American College of Sports Medicine) recommendation: 20-60 minutes per day
European recommendation: 3-4 days /week for 30 minutes of 50-80% Fr max or all days in a week for 30 minutes of < 50% Fr max

Fr max = maximal frequency (maximal pulse).

P- Progression

Healthy adults can achieve 3 stages: start, improvement and maintenance

Stage	Week	Frequency-F (times/week)	Intensity-I (%)	Time-T
Starting	1	3	40-50	12
	2	3	50	14
	3	3	60	16
	4	3	60-70	18
	5	3	60-70	20
Improvement	6-9	3-4	70-80	21
	10-16	3-4	70-80	24
	17-19	4-5	70-80	28
	20-27	4-5	70-80	30
Maintenance	28 and more	5-6	70-85	30-45

Exercise **advice** and **tips**

→ **Talking with your doctor.**
→ **Choose the activity you like to do.**
→ **Get a partner.**
→ **Vary your routine.**
→ **Choose a comfortable time of day.**
→ **Don't get discouraged.**
→ **Forget "no pain, no gain".**
→ **Make exercise fun.**
→ Use **appropriate clothes** and **footwear.**
→ Drink plenty of **fluids**.
→ **Warm up.** Do not forget to **cool down and stretch** at the end of your exercise!