

ESERCIZIO FISICO NEL DIABETE.

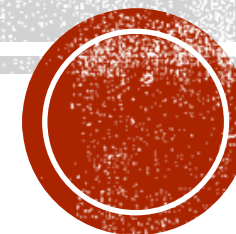
NOTE PER L'OTTIMIZZAZIONE DEGLI EFFETTI POSITIVI.

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Esercizio fisico nel diabetico di tipo 2

Consensus statement ACSM 2022

TABLE 2. Recommended types of exercise training for all adults with T2D.

Type of Training	Type	Intensity	Frequency	Duration	Progression
Aerobic	Walking, jogging, cycling, swimming, aquatic activities, rowing, dancing, interval training	40%–59% of $\dot{V}O_{2R}$ or HRR (moderate), RPE 11–12; or 60%–89% of $\dot{V}O_{2R}$ or HRR (vigorous), RPE 14–17	3–7 d·wk ⁻¹ , with no more than 2 consecutive days between bouts of activity	Minimum of 150–300 min·wk ⁻¹ of moderate activity or 75–150 min of vigorous activity, or an equivalent combination thereof	Rate of progression depends on baseline fitness, age, weight, health status, and individual goals; gradual progression of both intensity and volume is recommended
Resistance	Free weights, machines, elastic bands, or body weight as resistance; undertake 8–10 exercises involving the major muscle groups	Moderate at 50%–69% of 1RM, or vigorous at 70%–85% of 1RM	2–3 d·wk ⁻¹ , but never on consecutive days	10–15 repetitions per set, 1–3 sets per type of specific exercise	As tolerated; increase resistance first, followed by a greater number of sets, and then increased training frequency
Flexibility	Static, dynamic, or PNF stretching; balance exercises; yoga and tai chi increase range of motion	Stretch to the point of tightness or slight discomfort	≥2–3 d·wk ⁻¹ or more; usually done with when muscles and joints are warmed up	10–30 s per stretch (static or dynamic) group; 2–4 repetitions of each	As tolerated; may increase range of stretch as long as not painful
Balance	Balance exercises: lower body and core resistance exercises, yoga, and tai chi also improve balance	No set intensity	≥2–3 d·wk ⁻¹ or more	No set duration	As tolerated; balance training should be done carefully to minimize the risk of falls

1RM, 1-repetition maximum; HRR, heart rate reserve; PNF, proprioceptive neuromotor facilitation; RPE, rating of perceived exertion; $\dot{V}O_{2R}$, $\dot{V}O_2$ reserve.



Walking nel diabetico di tipo 2

Joint AMD/SID/SISMES 2020

Abstract *Aims:* Regular exercise is considered a cornerstone in the management of type 2 diabetes mellitus (T2DM). It improves glucose control and cardiovascular risk factors, contributes to weight loss, and also improves general well-being, likely playing a role in the prevention of chronic complications of diabetes. However, compliance to exercise recommendations is generally inadequate in subjects with T2DM. Walking is the most ancestral form of physical activity in humans, easily applicable in daily life. It may represent, in many patients, a first simple step towards lifestyle changes. Nevertheless, while most diabetic patients do not engage in any weekly walking, exercise guidelines do not generally detail how to improve its use. The aims of this document are to conduct a systematic review of available literature on walking as a therapeutic tool for people with T2DM, and to provide practical, evidence-based clinical recommendations regarding its utilization in these subjects.

Data synthesis: Analysis of available RCTs proved that regular walking training, especially when supervised, improves glucose control in subjects with T2DM, with favorable effects also on cardiorespiratory fitness, body weight and blood pressure. Moreover, some recent studies have shown that even short bouts of walking, used for breaking prolonged sitting, can ameliorate glucose profiles in diabetic patients with sedentary behavior.

Conclusions: There is sufficient evidence to recognize that walking is a useful therapeutic tool for people with T2DM. This document discusses theoretical and practical issues for improving its use.

Medical assessment
Functional assessment
Walking prescription
Walking management
Monitoring of walking
Special conditions



Attività fisica ed esercizio fisico nel diabetico di tipo 2

Position statement ADA 2016

Table 3—Exercise training recommendations: types of exercise, intensity, duration, frequency, and progression

	Aerobic	Resistance	Flexibility and Balance
Type of exercise	• Prolonged, rhythmic activities using large muscle groups (e.g., walking, cycling, and swimming) • May be done continuously or as HIIT	• Resistance machines, free weights, resistance bands, and/or body weight as resistance exercises	• Stretching: static, dynamic, and other stretching; yoga • Balance (for older adults): practice standing on one leg, exercises using balance equipment, lower-body and core resistance exercises, tai chi
Intensity	• Moderate to vigorous (subjectively experienced as “moderate” to “very hard”)	• Moderate (e.g., 15 repetitions of an exercise that can be repeated no more than 15 times) to vigorous (e.g., 6–8 repetitions of an exercise that can be repeated no more than 6–8 times)	• Stretch to the point of tightness or slight discomfort • Balance exercises of light to moderate intensity
Duration	• At least 150 min/week at moderate to vigorous intensity for most adults with diabetes • For adults able to run steadily at 6 miles per h (9.7 km/h) for 25 min, 75 min/week of vigorous activity may provide similar cardioprotective and metabolic benefits	• At least 8–10 exercises with completion of 1–3 sets of 10–15 repetitions to near fatigue per set on every exercise early in training	• Hold static or do dynamic stretch for 10–30 s; 2–4 repetitions of each exercise • Balance training can be any duration

Caratteristiche dell'esercizio fisico



Attività fisica ed esercizio fisico nel diabetico di tipo 2

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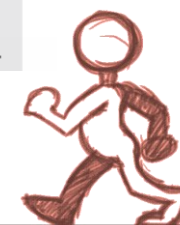
Table 3—Exercise training recommendations: types of exercise, intensity, duration, frequency, and progression

	Aerobic	Resistance	Flexibility and Balance
Frequency	• 3–7 days/week, with no more than 2 consecutive days without exercise	• A minimum of 2 nonconsecutive days/week, but preferably 3	• Flexibility: $\geq 2-3$ days/week • Balance: $\geq 2-3$ days/week
Progression	• A greater emphasis should be placed on vigorous intensity aerobic exercise if fitness is a primary goal of exercise and not contraindicated by complications • Both HIIT and continuous exercise training are appropriate activities for most individuals with diabetes	• Beginning training intensity should be moderate, involving 10–15 repetitions per set, with increases in weight or resistance undertaken with a lower number of repetitions (8–10) only after the target number of repetitions per set can consistently be exceeded • Increase in resistance can be followed by a greater number of sets and finally by increased training frequency	• Continue to work on flexibility and balance training, increasing duration and/or frequency to progress over time

Caratteristiche dell'esercizio fisico



Table 4—Exercise considerations for diabetes, hypertension, and cholesterol medications and recommended safety and dose adjustments		
Type/class of medication	Exercise considerations	Safety/dose adjustments
Diabetes		
Insulin	• Deficiency: hyperglycemia, ketoacidosis • Excess: hypoglycemia during and after exercise	• Increase insulin dose pre- and postexercise for deficiency • Decrease prandial and/or basal doses for excess insulin
Insulin secretagogues	• Exercise-induced hypoglycemia	• If exercise-induced hypoglycemia has occurred, decrease dose on exercise days to reduce hypoglycemia risk
Metformin	• None	• Generally safe; no dose adjustment for exercise
Thiazolidinediones	• Fluid retention	• Generally safe; no dose adjustment for exercise
Dipeptidyl peptidase 4 inhibitors	• Slight risk of congestive heart failure with saxagliptin and alogliptin	• Generally safe; no dose adjustment for exercise
Glucagon-like peptide 1 receptor agonists	• May increase risk of hypoglycemia when used with insulin or sulfonylureas but not when used alone	• Generally safe; no dose adjustment for exercise but may need to lower insulin or sulfonylurea dose
Sodium–glucose cotransporter 2 inhibitors	• May increase risk of hypoglycemia when used with insulin or sulfonylureas but not when used alone	• Generally safe; no dose adjustment for exercise
Hypertension		
β-Blockers	• Hypoglycemia unawareness and unresponsiveness; may reduce maximal exercise capacity	• Check blood glucose before and after exercise; treat hypoglycemia with glucose
Other agents	• Regular exercise training may lower blood pressure; some agents increase risk of dehydration	• Doses may need to be adjusted to accommodate the improvements from training and avoid dehydration
Cholesterol		
Statins	• Muscle weakness, discomfort, and cramping in a minority of users	• Generally safe; no dose adjustment for exercise
Fibric acid derivatives	• Rare myositis or rhabdomyolysis; risk increased with gemfibrozil and statin combination	• Avoid exercise if these muscle conditions are present



Attività fisica ed esercizio fisico nel diabetico di tipo 2

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Caratteristiche dell'esercizio fisico in
relazione a patologie concomitanti

Table 5—Physical activity consideration, precautions, and recommended activities for exercising with health-related complications

Health complication	Exercise considerations	Physical activity recommendations/precautions
Cardiovascular diseases		
Coronary artery disease	Coronary perfusion may actually be enhanced during higher-intensity aerobic or resistance exercise.	- All activities okay. - Consider exercising in a supervised cardiac rehabilitation program, at least initially.
Exertional angina	Onset of chest pain on exertion, but exercise-induced ischemia may be silent in some with diabetes.	All activities okay, but heart rate should be kept ≥ 10 bpm below onset of exercise-related angina.
Hypertension	- Both aerobic and resistance training may lower resting blood pressure and should be encouraged. - Some blood pressure medications can cause exercise-related hypotension.	- Ensure adequate hydration during exercise. - Avoid Valsalva maneuver during resistance training.
Myocardial infarction	Stop exercise immediately should symptoms of myocardial infarction (such as chest pain, radiating pain, shortness of breath, and others) occur during physical activity and seek medical attention.	- Restart exercise after myocardial infarction in a supervised cardiac rehabilitation program. - Start at a low intensity and progress as able to more moderate activities. - Both aerobic and resistance exercise are okay.



Attività fisica ed esercizio fisico nel diabetico di tipo 2

Position statement ADA 2016

Caratteristiche dell'esercizio fisico in
relazione a patologie concomitanti

Table 5—Physical activity consideration, precautions, and recommended activities for exercising with health-related complications

Health complication	Exercise considerations	Physical activity recommendations/precautions
Stroke	• Diabetes increases the risk of ischemic stroke. • Stop exercise immediately if symptoms of a stroke (occurring suddenly and often affecting only one side of the body) happen during exercise.	• Restart exercise after stroke in a supervised cardiac rehabilitation program. • Start at a low intensity and progress as able to more moderate activities. • Both aerobic and resistance exercise are okay.
Congestive heart failure	• Most common cause is coronary artery disease and frequently follows a myocardial infarction.	• Avoid activities that cause an excessive rise in heart rate. • Focus more on doing low- or moderate-intensity activities.
Peripheral artery disease	• Lower-extremity resistance training improves functional performance (161).	• Low- or moderate-intensity walking, arm ergometer, and leg ergometer preferred as aerobic activities (162). • All other activities okay.
Nerve disease Peripheral neuropathy	• Regular aerobic exercise may also prevent the onset or delay the progression of peripheral neuropathy in both type 1 and type 2 diabetes (163).	• Proper care of the feet is needed to prevent foot ulcers and lower the risk of amputation (6). • Keep feet dry and use appropriate footwear, silica gel or air midsoles, and polyester or blend socks (not pure cotton). • Consider inclusion of more non-weight-bearing activities, particularly if gait altered.



Attività fisica ed esercizio fisico nel diabetico di tipo 2

Position statement ADA 2016

Caratteristiche dell'esercizio fisico in
relazione a patologie concomitanti

Table 5—Physical activity consideration, precautions, and recommended activities for exercising with health-related complications

Health complication	Exercise considerations	Physical activity recommendations/precautions
Local foot deformity	• Manage with appropriate footwear and choice of activities to reduce plantar pressure and ulcer risk (164).	• Focus more on non-weight-bearing activities to reduce undue plantar pressures. • Examine feet daily to detect and treat blisters, sores, or ulcers early.
Foot ulcers/amputations	• Moderate walking is not likely to increase risk of foot ulcers or reulceration with peripheral neuropathy (165).	• Weight-bearing activity should be avoided with unhealed ulcers. • Examine feet daily to detect and treat blisters, sores, or ulcers early. • Amputation sites should be properly cared for daily. • Avoid jogging.
Autonomic neuropathy	• May cause postural hypotension, chronotropic incompetence, delayed gastric emptying, altered thermoregulation, and dehydration during exercise (6). • Exercise-related hypoglycemia may be harder to treat in those with gastroparesis.	• With postural hypotension, avoid activities with rapid postural or directional changes to avoid fainting or falling. • With cardiac autonomic neuropathy, obtain physician approval and possibly undergo symptom-limited exercise testing before commencing exercise (166). • With blunted heart rate response, use heart rate reserve and ratings of perceived exertion to monitor exercise intensity (167). • With autonomic neuropathy, avoid exercise in hot environments and hydrate well.

Continued on p. 2074



Attività fisica ed esercizio fisico nel diabetico di tipo 2

Position statement ADA 2016

Caratteristiche dell'esercizio fisico in
relazione a patologie concomitanti

Table 5—Continued		
Health complication	Exercise considerations	Physical activity recommendations/precautions
Eye diseases		
Mild to moderate nonproliferative retinopathy	Individuals with mild to moderate nonproliferative changes have limited or no risk for eye damage from physical activity.	- All activities okay with mild, but annual eye exam should be performed to monitor progression. - With moderate nonproliferative retinopathy, avoid activities that dramatically elevate blood pressure, such as powerlifting.
Severe nonproliferative and unstable proliferative retinopathy	Individuals with unstable diabetic retinopathy are at risk for vitreous hemorrhage and retinal detachment.	- Avoid activities that dramatically elevate blood pressure, such as vigorous activity of any type. - Avoid vigorous exercise; jumping, jarring, and head-down activities; and breath holding (6). - No exercise should be undertaken during a vitreous hemorrhage.
Cataracts	Cataracts do not impact the ability to exercise, only the safety of doing so due to loss of visual acuity.	- Avoid activities that are more dangerous due to limited vision, such as outdoor cycling. - Consider supervision for certain activities.
Kidney diseases		
Microalbuminuria	- Exercise does not accelerate progression of kidney disease even though protein excretion acutely increases afterward (6,159). - Greater participation in moderate-to-vigorous leisure time activity and higher physical activity levels may actually moderate the initiation and progression of diabetic nephropathy (168–170).	All activities okay, but vigorous exercise should be avoided the day before urine protein tests are performed to prevent false positive readings.



Attività fisica ed esercizio fisico nel diabetico di tipo 2

Position statement ADA 2016

Table 5—Physical activity consideration, precautions, and recommended activities for exercising with health-related complications

Health complication	Exercise considerations	Physical activity recommendations/precautions
Overt nephropathy	- Both aerobic and resistance training improve physical function and quality of life in individuals with kidney disease. - Individuals should be encouraged to be active.	All activities okay, but exercise should begin at a low intensity and volume if aerobic capacity and muscle function are substantially reduced.
End-stage renal disease	Doing supervised, moderate aerobic physical activity undertaken during dialysis sessions may be beneficial and increase compliance (171).	- Exercise should begin at a low intensity and volume if aerobic capacity and muscle function are substantially reduced. - Electrolytes should be monitored when activity done during dialysis sessions.
Orthopedic limitations Structural changes to joints	Individuals with diabetes are more prone to structural changes to joints that can limit movement, including shoulder adhesive capsulitis, carpal tunnel syndrome, metatarsal fractures, and neuropathy-related joint disorders (Charcot foot) (25).	- In addition to engaging in other activities (as able), do regular flexibility training to maintain greater joint range of motion (10,12). - Stretch within warm-ups or after an activity to increase joint range of motion best (172). - Strengthen muscles around affected joints with resistance training. - Avoid activities that increase plantar pressures with Charcot foot changes.
Arthritis	- Common in lower-extremity joints, particularly in older adults who are overweight or obese. - Participation in regular physical activity is possible and should be encouraged. - Moderate activity may improve joint symptoms and alleviate pain.	- Most low- and moderate-intensity activities okay, but more non-weight-bearing or low-impact exercise may be undertaken to reduce stress on joints. - Do range-of-motion activities and light resistance exercise to increase strength of muscles surrounding affected joints. - Avoid activities with high risk of joint trauma, such as contact sports and ones with rapid directional changes.

Caratteristiche dell'esercizio fisico in
relazione a patologie concomitanti



Attività fisica ed esercizio fisico nel diabetico di tipo 2

Position statement ADA 2016

Caratteristiche dell'esercizio fisico e
supplementazione

Table 1—Suggested carbohydrate intake or other actions based on blood glucose levels at the start of exercise

Pre-exercise blood glucose	Carbohydrate intake or other action
<90 mg/dL (<5.0 mmol/L)	• Ingest 15–30 g of fast-acting carbohydrate prior to the start of exercise, depending on the size of the individual and intended activity; some activities that are brief in duration (<30 min) or at a very high intensity (weight training, interval training, etc.) may not require any additional carbohydrate intake. • For prolonged activities at a moderate intensity, consume additional carbohydrate, as needed (0.5–1.0 g/kg body mass per h of exercise), based on blood glucose testing results.
90–150 mg/dL (5.0–8.3 mmol/L)	• Start consuming carbohydrate at the onset of most exercise (~0.5–1.0 g/kg body mass per h of exercise), depending on the type of exercise and the amount of active insulin.
150–250 mg/dL (8.3–13.9 mmol/L)	• Initiate exercise and delay consumption of carbohydrate until blood glucose levels are <150 mg/dL (<8.3 mmol/L).
250–350 mg/dL (13.9–19.4 mmol/L)	• Test for ketones. Do not perform any exercise if moderate-to-large amounts of ketones are present. • Initiate mild-to-moderate intensity exercise. Intense exercise should be delayed until glucose levels are <250 mg/dL because intense exercise may exaggerate the hyperglycemia.
≥350 mg/dL (≥19.4 mmol/L)	• Test for ketones. Do not perform any exercise if moderate-to-large amounts of ketones are present. • If ketones are negative (or trace), consider conservative insulin correction (e.g., 50% correction) before exercise, depending on active insulin status. • Initiate mild-to-moderate exercise and avoid intense exercise until glucose levels decrease.

Adapted from Zaharieva and Riddell (88).



Low intensity =
intensità < del 50% della
HRR

Moderate intensity =
intensità compresa tra il 50
ed il 70% della HRR

High intensity =
intensità compresa tra il 70 e
l'85% della HRR

Table 2.3 General Carbohydrate Increases for Endurance Sports

Duration	Intensity ¹	Blood sugar before exercise in mg/dl (mmol/L)			
		<100 (5.6)	100–150 (5.6–8.3)	150–200 (8.3–11.1)	>200 (11.1) ²
15 min	Low	0–5	None	None	None
	Moderate	5–10	0–10	0–5	None
	High ³	0–15	0–15	0–10	0–5
30 min	Low	5–10	0–10	None	None
	Moderate	10–25	10–20	5–15	0–10
	High	15–35	15–30	10–25	5–20
45 min	Low	5–15	5–10	0–5	None
	Moderate	15–35	10–30	5–20	0–10
	High	20–40	20–35	15–30	10–25
60 min	Low	10–15	10–15	5–10	0–5
	Moderate	20–50	15–40	10–30	5–15
	High	30–45	25–40	20–35	15–30
90 min	Low	15–20	10–20	5–15	0–10
	Moderate	30–60	25–50	20–35	10–20
	High	45–70	40–60	30–50	25–40
120 min	Low	15–30	15–25	10–20	5–15
	Moderate	40–80	35–70	30–50	15–30
	High	60–90	50–80	40–70	30–60
180 min	Low	30–45	25–40	20–30	10–20
	Moderate	60–120	50–100	40–80	25–45
	High	90–135	75–120	60–105	45–90



Table 2—Suggested initial pre-exercise meal insulin bolus reduction for activity started within 90 min after insulin administration

Exercise intensity	Exercise duration	
	30 min	60 min
Mild aerobic (~25% VO_{2max})	–25%*	–50%
Moderate aerobic (~50% VO_{2max})	–50%	–75%
Heavy aerobic (70%–75% VO_{2max})	–75%	N-A
Intense aerobic/anaerobic (>80% VO_{2max})	No reduction recommended	N-A

Recommendations compiled based on four studies (94–97). N-A, not assessed as exercise intensity is too high to sustain for 60 min. *Estimated from study (95).



Use of CSII and MDI for Activity

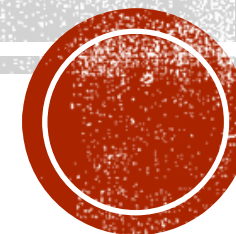
Individuals using CSII or MDI as a basal-bolus regimen can exercise with few restrictions. CSII offers some advantages over MDI due to greater flexibility in basal rate adjustments and limiting postexercise hyperglycemia (98), with some limitations. For example, aerobic exercise may accelerate basal insulin absorption from the subcutaneous depot (74), whereas basal insulin glargine absorption is largely unaffected (99). Skin irritation, pump tubing, and wearing a pump that is visible to others can be concerns (100). In certain sports, such as basketball or contact sports, wearing pumps and other devices may be prohibited during competition. Frustration with CSII devices and exercise may lead to discontinuation of pump therapy (100).

Use of Continuous Glucose Monitoring With Activity

Continuous glucose monitoring (CGM) may decrease the fear of exercise-induced hypoglycemia in type 1 diabetes by providing blood glucose trends that allow users to prevent and treat hypoglycemia sooner (83). Although a few studies have found acceptable CGM accuracy during exercise (101–104), others have reported inadequate accuracy (105) and other problems, such as sensor filament breakage (103,104), inability to calibrate (102), and time lags between the change in blood glucose and its detection by CGM (106). Differences in sensor performance have also been noted (107–109). Although it is a potentially useful tool during and after exercise (110), CGM values have traditionally required confirmation by fingerstick glucose testing prior to making regimen changes, but approval of non-adjunctive use is likely forthcoming in the near future.



QUALI SONO GLI OSTACOLI ALL'APPLICAZIONE?





OSTACOLI. TEMPO.

- **IL COUNSELING SULLO STILE DI VITA, RICHIEDE TEMPO, SIA AL MEDICO, SIA AL PAZIENTE.**
- **NEL PAZIENTE, L'ADERENZA AD UN NUOVO STILE DI VITA RICHIEDE PERSONALIZZAZIONE, MOTIVAZIONE E CAMBI COMPORTAMENTALI.**
- **I CAMBI COMPORTAMENTALI, AFFINCHÈ DIVENTINO STABILI, POSSONO RICHIEDERE MESI DI LAVORO, IN CUI È NECESSARIO IL CONTINUO FEEDBACK.**
- **LE LINEE GUIDA PARLANO DI 3-7 GIORNI DI ALLENAMENTO AEROBICO, 2-3 GIORNI DI ALLENAMENTO CONTRO RESISTENZA, 2-3 GIORNI DI ALLENAMENTO DI EQUILIBRIO E COORDINAZIONE, NONCHÉ DI RILASSAMENTO...**



OSTACOLI. TEMPO.



OSTACOLI. TEMPO.

**Does physical activity attenuate, or even eliminate, the detrimental association of sitting time with mortality?
A harmonised meta-analysis of data from more than
1 million men and women**



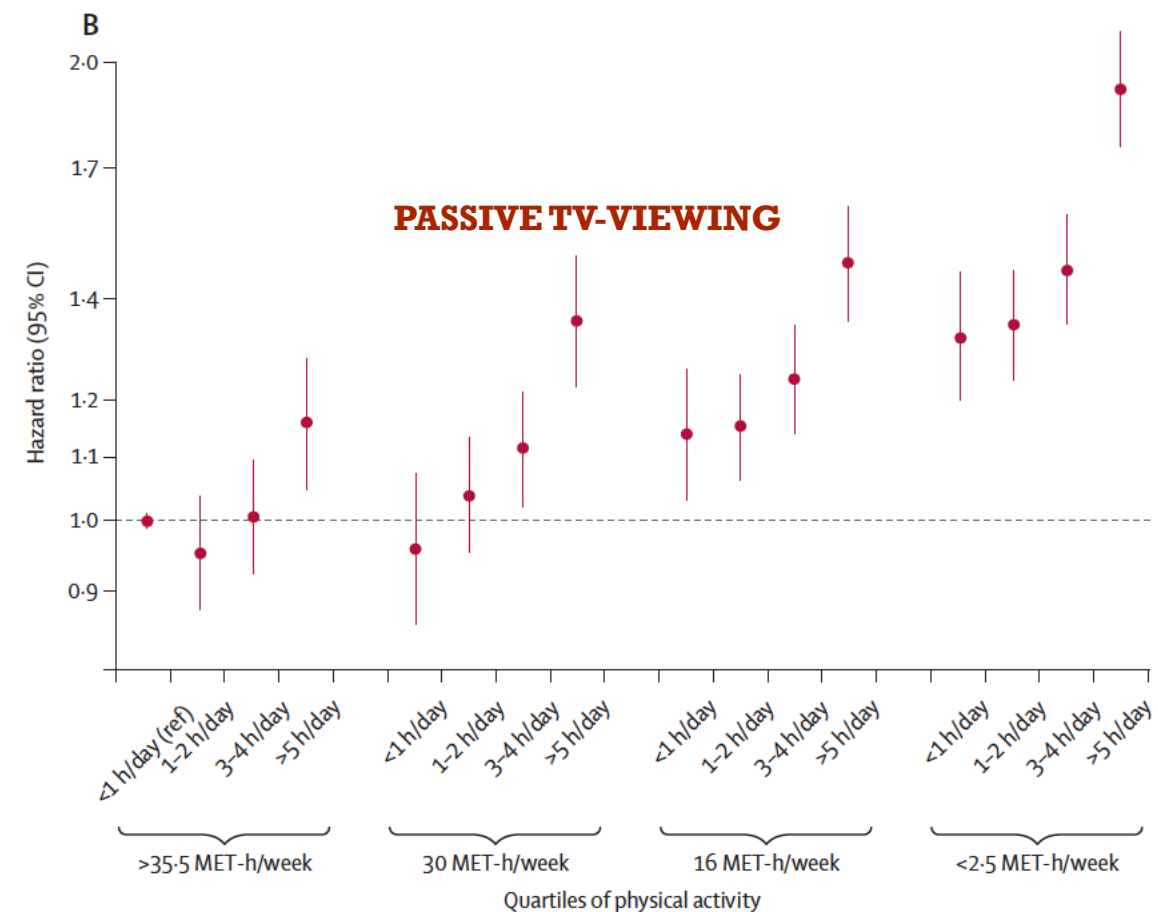
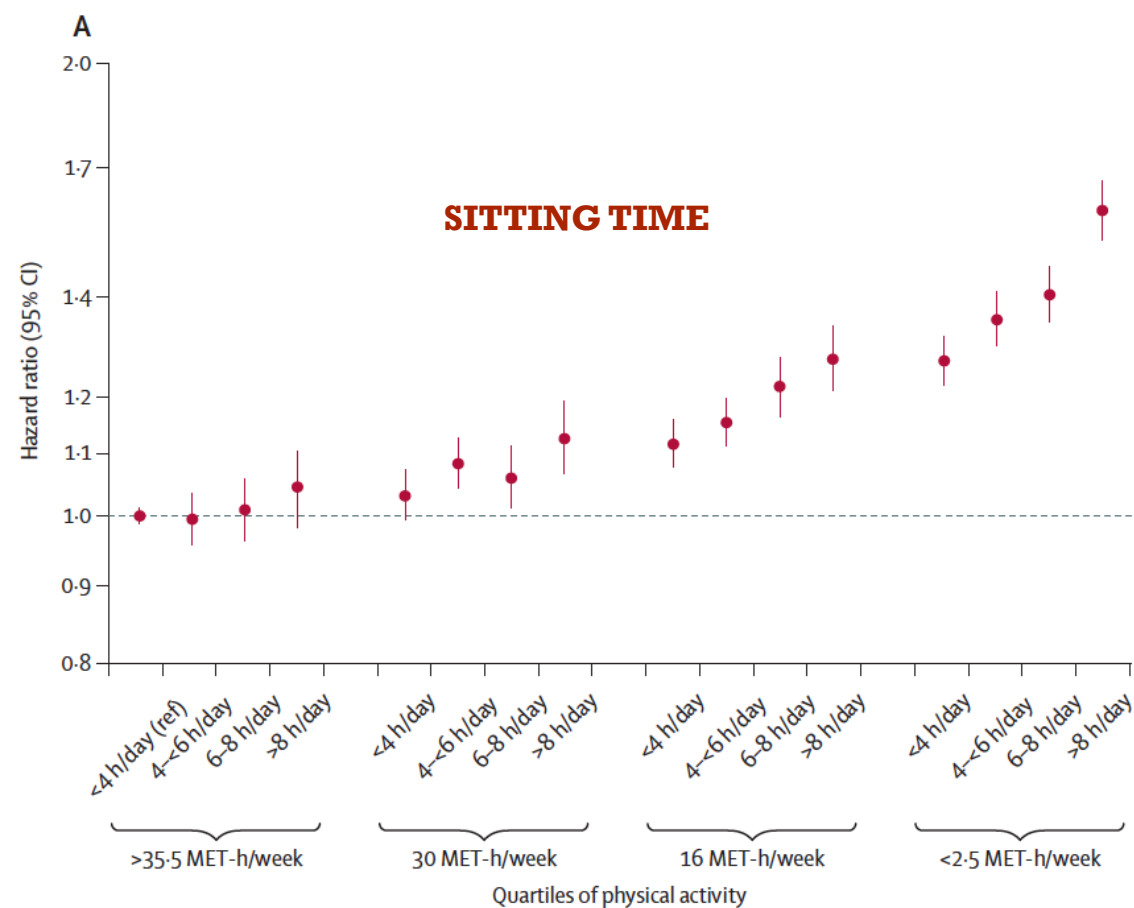
*Ulf Ekelund, Jostein Steene-Johannessen, Wendy J Brown, Morten Wang Fagerland, Neville Owen, Kenneth E Powell, Adrian Bauman, I-Min Lee,
for the Lancet Physical Activity Series 2 Executive Committee* and the Lancet Sedentary Behaviour Working Group**



OSTACCO TEMPO.

Figure 2: Meta-analyses of the joint associations of sitting time and physical activity with all-cause mortality (A) and of TV-viewing time and physical activity with all-cause mortality (B)

(A) Sitting time analysis, N=1005791. (B) TV-viewing time analysis, N=465450. The reference categories are the groups with the highest levels of physical activity (>35.5 MET-h per week) in combination with <4 h/day of sitting (A) or <1h/day of TV-viewing (B). The median MET-h per week for the upper boundary for the first (lowest) quartile was 2.5 MET-h per week (equivalent to about 5 min of moderate intensity activity per day). Corresponding values for the second and third quartiles were 16 MET-h per week (about 25–35 min of moderate intensity activity per day) and 30 MET-h per week (about 50–65 min of moderate intensity activity per day), and the lower boundary for the fourth (top) quartile was 35.5 MET-h per week (about 60–75 min of moderate intensity activity per day).



SEDENTARIETÀ O COMPORTAMENTI SEDENTARI. È SOLO UNA QUESTIONE DI TOTALI?



OSTACOLI. TEMPO.

- In adulti sedentari, ogni ora di sedentarietà che supera le 8 ore giornaliere incrementa il rischio di sviluppare diabete di tipo 2 del 22%. Un alto livello di fitness può attenuare tale incremento del rischio.
- L'interruzione della sedentarietà, ogni 30 minuti, con 3 minuti di pratica di attività fisiche di intensità leggera, nell'arco delle 8 ore, riduce l'iperglicemia post-prandiale, l'insulinemia, la trigliceridemia e l'infiammazione sistemica.
- Sostituire, ogni 30 minuti, le attività svolte da seduti con attività svolte da in piedi, e con cammino ad intensità leggera, per un totale, rispettivamente, di 2.5 ore e 2.2 ore giornaliere, determina migliori risultati su glicemia e sensibilità insulinica della pratica di esercizio fisico.



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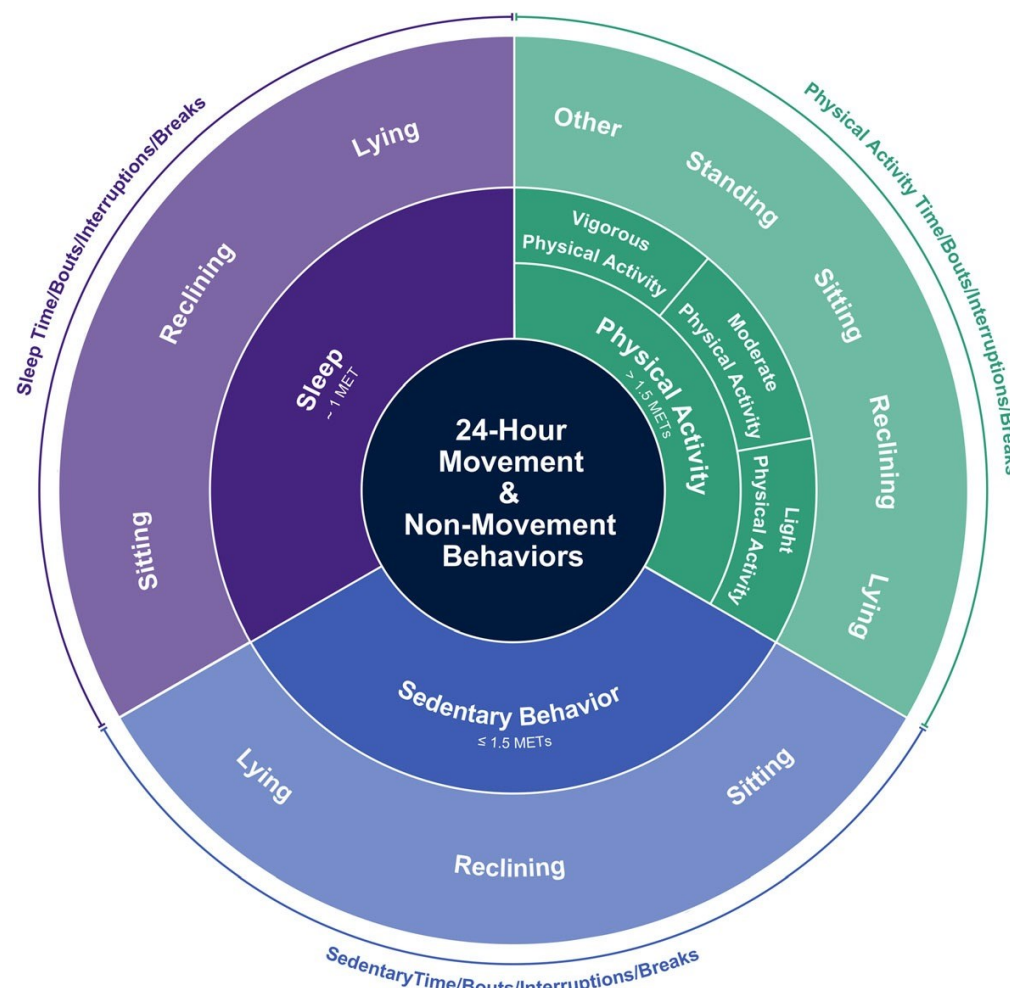
- Inserire la pratica di attività fisica di intensità leggera, della durata di 20 minuti, nella fase post-prandiale, riduce il picco glicemico ed il picco insulinico conseguenti al pasto.
- Ottimizzare 2 sedute settimanali di allenamento attraverso la pratica di allenamenti misti (**CONCURRENT TRAINING**), in cui si allenano contemporaneamente la forza e la resistenza, in quest'ordine, contenenti recuperi incompleti durante l'allenamento di forza.
- Stimolare il movimento in ogni sua forma, favorire l'esposizione giornaliera alla luce naturale, la pratica di esercizi di rilassamento su base respiratoria, 3 volte al giorno, tutti i giorni, al mattino, appena svegli e prima di alzarsi, a metà giornata ed alla sera, 30-45 minuti prima di coricarsi.



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SID
Società Italiana
di Diabetologia





Scarica un qr code reader sul tuo smartphone ed
inquadra il QR code, oppure digita
<https://palestrecertificateabruzzo.univaq.it/>



CON IL PATROCINIO DI



OMCEO
ORDINE PROVINCIALE DI CHIETI
DEI MEDICI CHIRURGHI E DEGLI ODONTOIATRI



La regione Abruzzo ha
avviato la creazione di
una rete territoriale di
palestre e professionisti
certificati in
coordinamento con gli
specialisti di medicina
dello sport e con i
servizi di igiene
epidemiologia e sanità
pubblica.

**NON ESSERE PIGRO!
SFRUTTA L'OCCASIONE E FAI
ANCHE TU QUALCOSA PER TE!**

Vuoi conoscere le
palestre ed i
professionisti certificati
a te più vicini?
**Vuoi scoprire il tuo
livello giornaliero di
attività fisica ed il tuo
rischio
cardiovascolare?**
Vuoi sapere di più
sull'importanza del
movimento?

OSTACOLI. RETE DI PROFESSIONISTI.

FIGURE 1: Whole-of-Government solutions for Physical Inactivity



Numbers shown refer to the recommended policy actions. For full details refer to the main report.



Di cosa si occupa la palestra certificata di 1° livello o "Palestra della salute"?

La palestra certificata di 1° livello o "Palestra della salute" si occupa della promozione della salute, attraverso l'esercizio fisico, in persone sane o con basso rischio.

Come si accede alla palestra certificata di 1° livello o "Palestra della salute"?



Come fare per conoscere quali sono le palestre certificate di 1° livello della propria zona?

Scarica un QR code reader sul tuo smartphone ed inquadra il QR code.

CON IL PATROCINIO DI



ORDINE PROVINCIALE DI CHIETI
DEI MEDICI CHIRURGHI E DEGLI ODONTOIATRI



Ordine dei Medici Chirurghi e degli Odontoiatri della Provincia di Pescara.
Ente ausiliario dello Stato



Di cosa si occupa la palestra certificata di 2° livello o "Palestra sicura"?

La palestra certificata di 2° livello o "Palestra sicura" si occupa della promozione della salute, attraverso l'esercizio fisico, in persone con patologie croniche non trasmissibili con stabilità clinica.

Come si accede alla palestra certificata di 2° livello o "Palestra Sicura"?



Come fare per conoscere quali sono le palestre certificate di 2° livello della propria zona?

Scarica un QR code reader sul tuo smartphone ed inquadra il QR code.

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SENZA DIMENTICARE L'EFFETTO INDIPENDENTE DELLA NATURA SULLA NOSTRA SALUTE

OSTACOLI. COME SI PUÒ OTTIMIZZARE?



GRAZIE PER L'ATTENZIONE

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