Sport Therapy: Analisi, benefici e risultati. Esperienza di due centri.

Linda Peli

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AIEOP
ASSOCIAZIONE ITALIANA EMATOLOGIA ONCOLOGIA PEDIATRICA

CONGRESSO INFERMIERISTICO AIEOP
LECCE, 13-14 ottobre 2026
HILTON GARDEN INN

Disclosures of Linda Peli

Company name	Research support	Employee	Consultant	Stockholder	Speakers bureau	Advisory board	Other
NO	NO	NO	NO	NO	NO	NO	NO

EXERCISE SNACKS



da 3 a 6 volte al giorno

da 30 sec a 3 min

obiettivo: aumentare la richiesta cardiocircolatoria

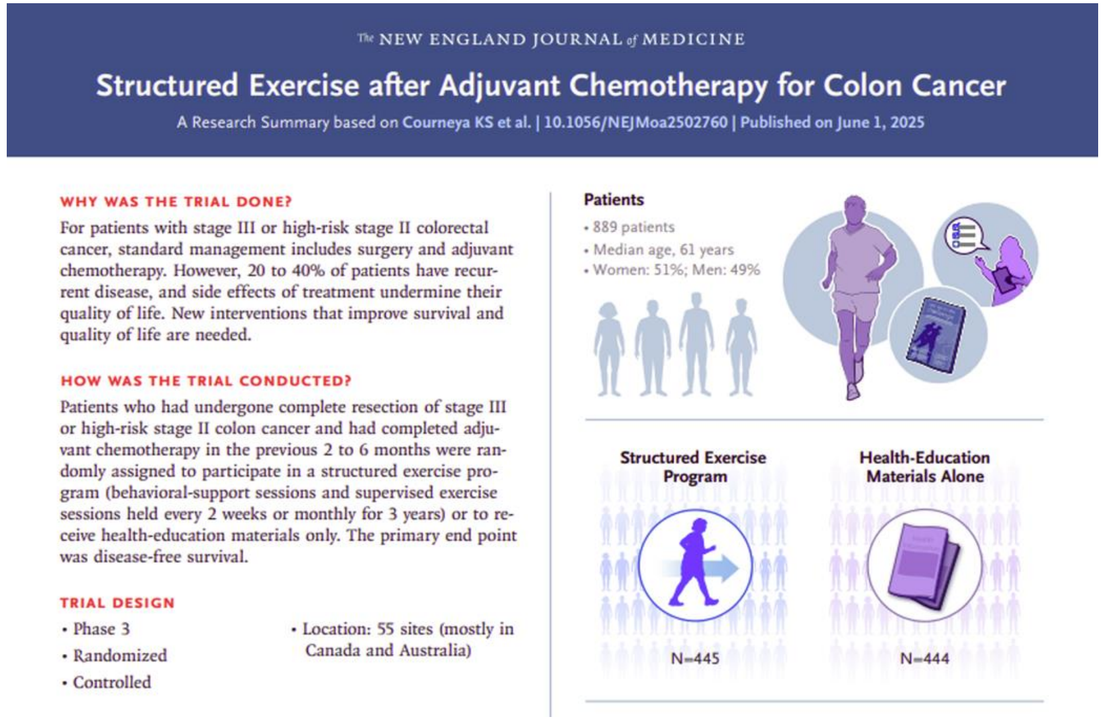
Liu & Liang, Acta Psychologica, 2026
Mues et al., Sports, 2025



SNACK

Esercizio e prognosi

lo studio “CHALLENGE” nell’adulto



The NEW ENGLAND JOURNAL of MEDICINE

Structured Exercise after Adjuvant Chemotherapy for Colon Cancer

A Research Summary based on Courneya KS et al. | 10.1056/NEJMoa2502760 | Published on June 1, 2025

WHY WAS THE TRIAL DONE?

For patients with stage III or high-risk stage II colorectal cancer, standard management includes surgery and adjuvant chemotherapy. However, 20 to 40% of patients have recurrent disease, and side effects of treatment undermine their quality of life. New interventions that improve survival and quality of life are needed.

HOW WAS THE TRIAL CONDUCTED?

Patients who had undergone complete resection of stage III or high-risk stage II colon cancer and had completed adjuvant chemotherapy in the previous 2 to 6 months were randomly assigned to participate in a structured exercise program (behavioral-support sessions and supervised exercise sessions held every 2 weeks or monthly for 3 years) or to receive health-education materials only. The primary end point was disease-free survival.

TRIAL DESIGN

- Phase 3
- Randomized
- Controlled
- Location: 55 sites (mostly in Canada and Australia)

Patients

- 889 patients
- Median age, 61 years
- Women: 51%; Men: 49%

Structured Exercise Program

N=445

Health-Education Materials Alone

N=444

- **Trial clinico - fase 3**
- **889 pazienti con tumore del colon**
- **3 anni di esercizio strutturato dopo chemioterapia adiuvante**

Sopravvivenza libera da malattia a 5 anni:

80,3%

73,9%

Sopravvivenza globale a 8 anni:

90,3%

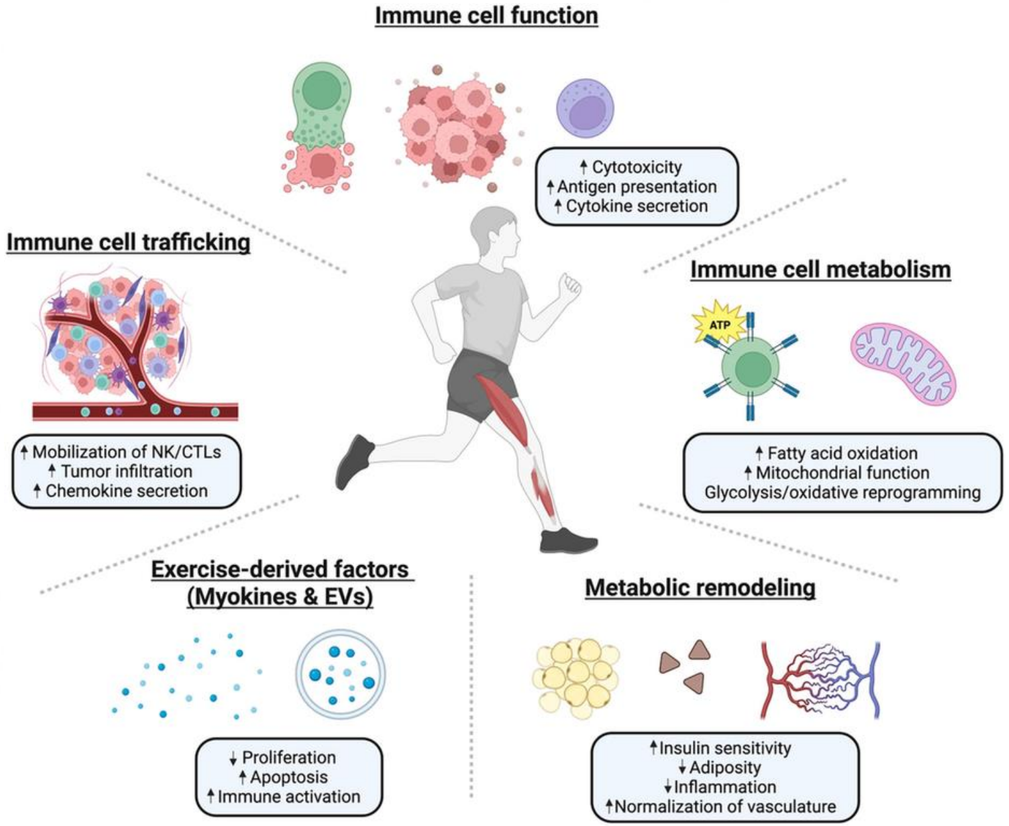
83,2%

L’esercizio strutturato dopo chemioterapia riduce recidiva/morte e migliora la sopravvivenza nel tumore del colon

Courneya KS et al. N Engl J Med. 2025;393:13–25. doi:10.1056/NEJMoa2502760.

Esercizio e oncologia

dalle evidenze alla pratica clinica



Oltre la qualità di vita

influenza su CRF e capacità funzionale

Un possibile ruolo biologico

Ricerca sui meccanismi immunitari e sul microambiente tumorale

Dalla ricerca alla pratica

Esercizio individualizzato, sicurezza clinica e integrazione con le cure

EXERCISE AS MEDICINE

Nash DM, Terry LV, Febbraio MA. Cancer Cell. 2025;43:2175–2180. doi:10.1016/j.ccell.2025.10.009.

...e l'oncoematologia pediatrica?
è il momento giusto!

SCIENTIFIC REPORTS
nature research

OPEN **Precision-based exercise as a new therapeutic option for children and adolescents with haematological malignancies**

Francesca Lanfranconi[1,2], W. Zardo[1], T. Moriggi[1], E. Villa[1], G. Radaelli[1], S. Radaelli[1], F. Paoletti[1], E. Bottes[1], T. Miraglia[1], L. Pollastri[1], P. Vago[1], F. Nichelli[1], M. Jankovic[1], A. Biondi[1] & A. Balduzzi[1]

Exercise during Hematopoietic Stem Cell Transplant Hospitalization in Children

CAROLINA CHAMORRO-VIÑA[1], JONATAN R. RUIZ[2], ELENA SANTANA-SOSA[1], MARTA GONZÁLEZ VICENT[3], LUIS MADERO[3], MARGARITA PÉREZ[1], STEVEN J. FLECK[4], ANTONIO PÉREZ[3], MANUEL RAMÍREZ[2], and ALEJANDRO LUCIA[1]

CLINICAL TRIAL
published: 05 June 2020
doi: 10.3389/fped.2020.00241

Benefits of Exercise Training for Children and Adolescents Undergoing Cancer Treatment: Results From the Randomized Controlled MUCKI Trial

OPEN ACCESS
Edited by: Kirsten K. Ness,

Sandra Stössel[†], Marie A. Neu[†], Arthur Wingerter[†], Wilhelm Bloch[†], Philipp Zimmer[†], Claudia Paret[†], Khalifa El Malki[†], Freerk T. Baumann[†], Alexandra Russo[†], Nicole Henninger[†], Nadine Lehmann[†], Henrike Otto[†] and Jörg Faber[†*]

Cochrane Library
Cochrane Database of Systematic Reviews

Physical exercise training interventions for children and young adults during and after treatment for childhood cancer (Review)

Braam KI, van der Torre P, Takken T, Veening MA, van Dulmen-den Broeder E, Kaspers GJL

Exercise Intervention in Pediatric Patients with Solid Tumors: The Physical Activity in Pediatric Cancer Trial

CARMEN FIUZA-LUCES[1,2], JULIO R. PADILLA[3], LUISA SOARES-MIRANDA[4], ELENA SANTANA-SOSA[1,3], JAIME V. QUIROGA[3], ALEJANDRO SANTOS-LOZANO[1,6], HELIOS PAREJA-GALEANO[1,3], FABIÁN SANCHIS-GOMAR[1], ROSALÍA LORENZO-GONZÁLEZ[7], ZORAIDA VERDE[3], LUIS M. LÓPEZ-MOJARES[3], ALVARO LASSALETTA[7], STEVEN J. FLECK[8], MARGARITA PÉREZ[3], ANTONIO PÉREZ-MARTÍNEZ[5,9], and ALEJANDRO LUCIA[1,3]

Scand J Med Sci Sports. 2019 Sep 4. doi: 10.1111/sms.13545. [Epub ahead of print]

Inhospital exercise benefits in childhood cancer: a prospective cohort study.

Morales JS[1], Santana-Sosa E[1], Santos-Lozano A[2,3], Baño-Rodrigo A[4], Valenzuela PL[5], Rincón-Castanedo C[1], Fernández-Moreno Somarriba M[6], Madero L[6], Lassaletta A[6], Fiuza-Luces C[2], Lucia A[1,2].

Neu et al. BMC Cancer (2025) 25:1275
https://doi.org/10.1186/s12885-025-14489-y

BMC Cancer

STUDY PROTOCOL Open Access

Get strong to fight childhood cancer - an exercise intervention for children and adolescents undergoing anti-cancer treatment (FORTEe): Rationale and design of a randomized controlled exercise trial

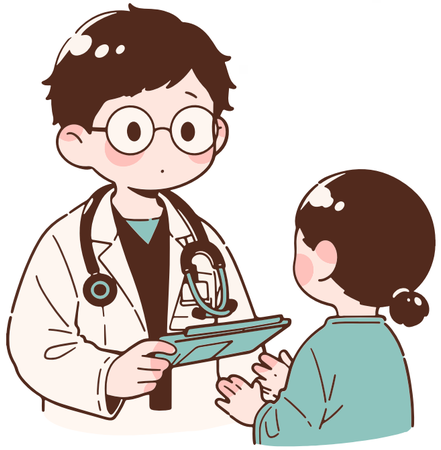
Marie Astrid Neu[1*], Elias Dreismickenbecker[1], Francesca Lanfranconi[2], Sandra Stössel[1], Adriana Balduzzi[2,3], Peter Wright[4], Stan Windsor[4], Joachim Wiskemann[5], Inaam El-Rajab[5], Alejandro Lucia[6], Carmen Fiuza-Luces[7], Rodolf Mongondry[8], Martin Kaj Fridh[9], Filippo Spreafico[10], Barbara Konda[11], Lidija Kitanovski[12], Barbara Heißerer[13], Marco Polak[14], Tobias Baader[15], Wilhelm Bloch[16], Miriam Götte[17], on behalf of Network ActiveOncoKids, Katie Rizvi[18], on behalf of Youth Cancer Europe, Christian Ruckes[19], Norbert W. Paul[20], Joerg Faber[1] and on behalf of the FORTEe Consortium

↓25% tolleranza all'esercizio

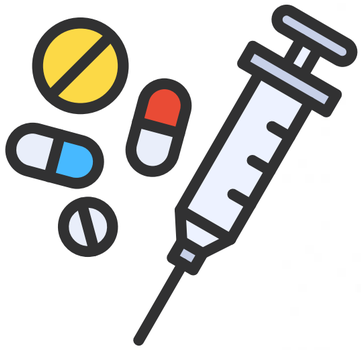
↓40% VO_2peak alla diagnosi

La tolleranza all'esercizio

è ridotta a causa di:



malattia



trattamento



allettamento

Schmidt-Andersen P, et al. Pediatr Blood Cancer. 2024;71(1):e30746.

Esercizio Fisico Strutturato come prevenzione nel percorso di cura



↑ Forza
qualità di vita
capacità cardiorespiratoria

↓ CRF

Linero-Bocanegra M, et al. Pediatr Phys Ther. 2024;36(4):422–438.

Studio multicentrico randomizzato

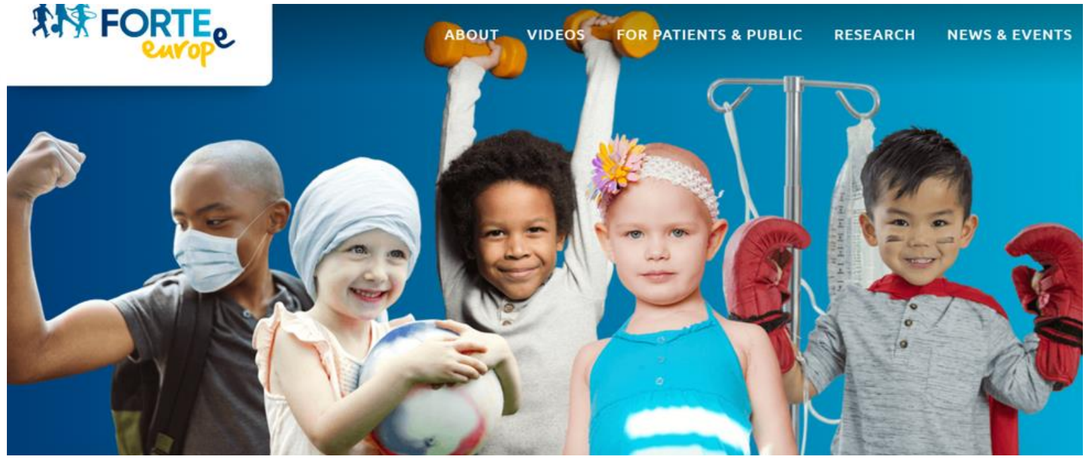
intervento strutturato di esercizio



2021/2026

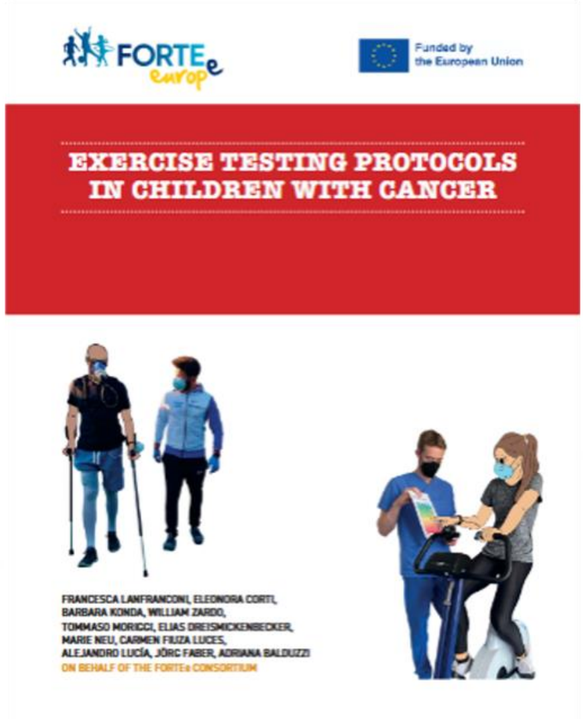
16 ospedali

450 bambini e adolescenti



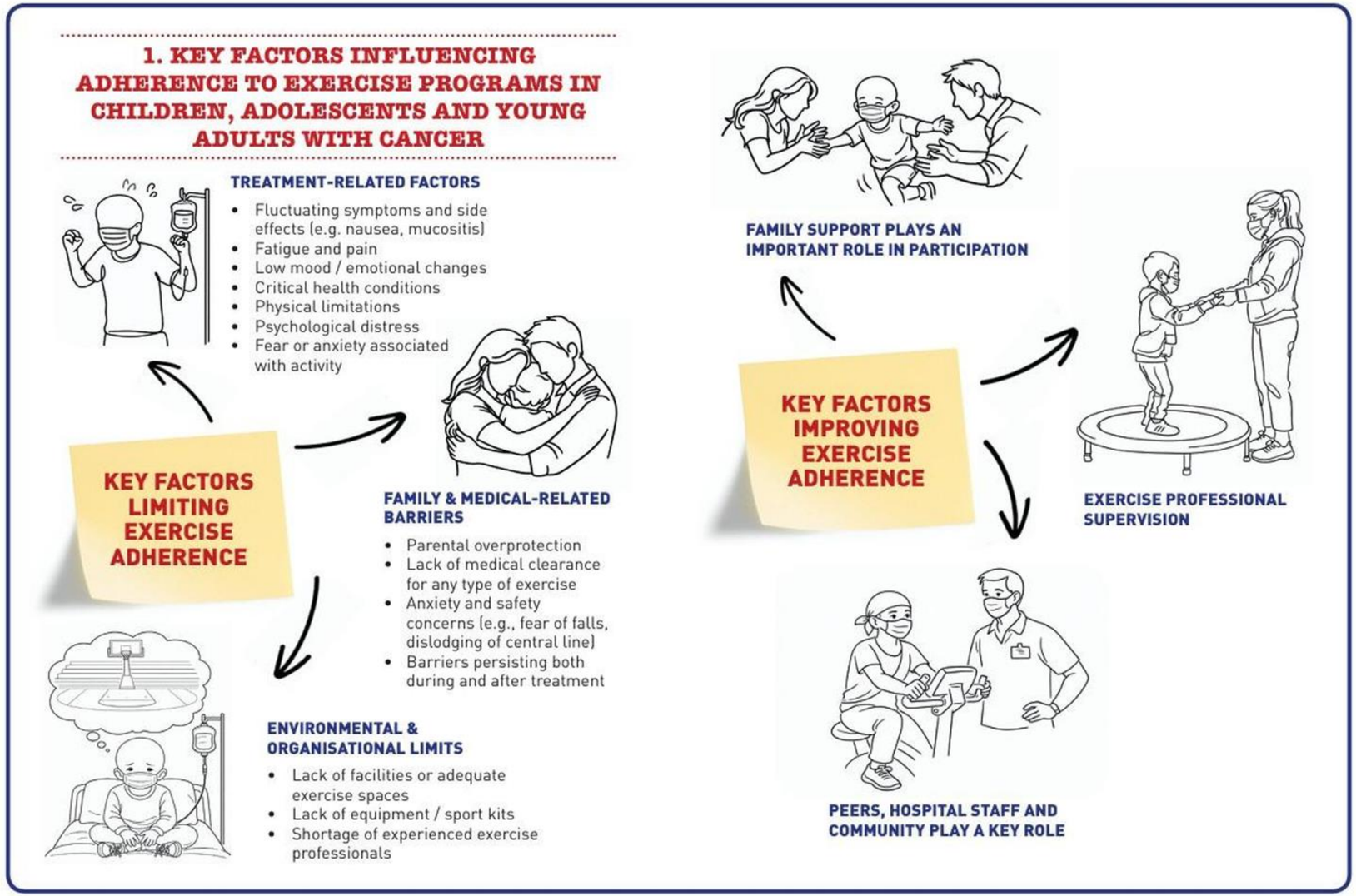
FORTE e europe





FREE DOWNLOAD

Funded by the European Union

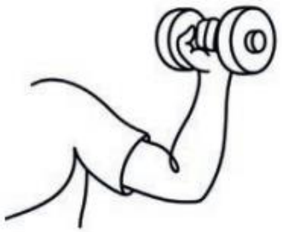


Lanfranconi F, et al. Front Pediatr. 2026;14:1907775.

Un programma multicomponente adattato



CARDIORESPIRATORY



RESISTANCE



FLEXIBILITY



BALANCE



+ ESERCIZI PER SPECIFICHE CONDIZIONI CLINICHE

Dalla ricerca alla pratica clinica

1. Sicurezza clinica

Valutazione medica e monitoraggio delle condizioni del bambino.

2. Personalizzazione

Attività adattata a diagnosi, terapia, capacità funzionale e condizioni del giorno.

3. Team multidisciplinare

Medici, professionisti dell'esercizio, infermieri e psicologi.

4. Integrazione nel reparto

Ruoli condivisi, continuità organizzativa e collaborazione con le cure.

Neu et al. Front Oncol. 2026;16:1893935. doi:10.3389/fonc.2026.1893935

Dove siamo? 1

2017





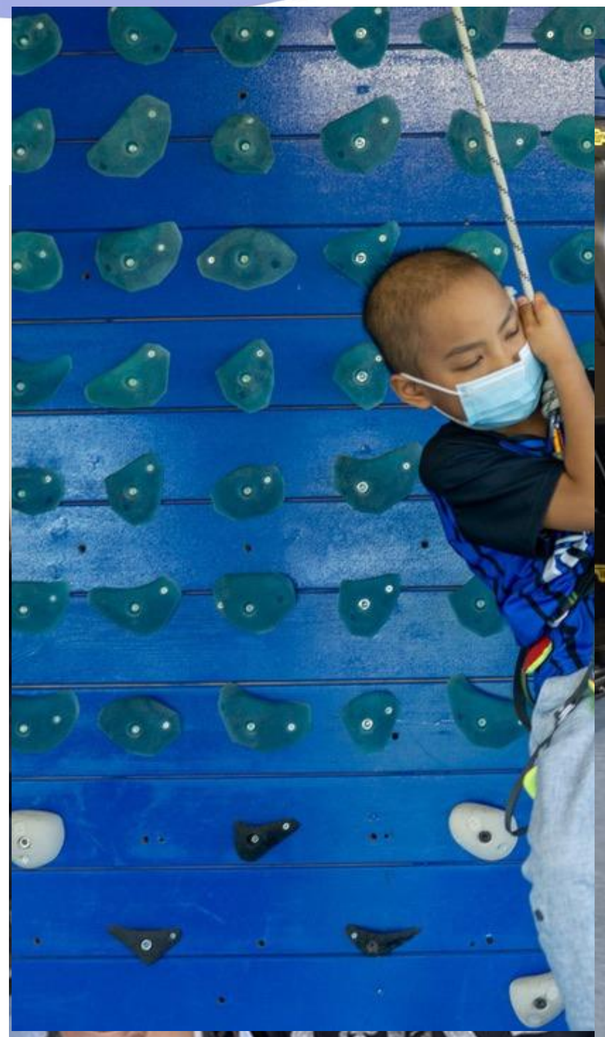
Centro Maria Letizia Verga, Monza



Fondazione Maria Letizia Verga ETS

FONDAZIONE Monza e Brianza per il BAMBINO e la sua MAMMA onlus

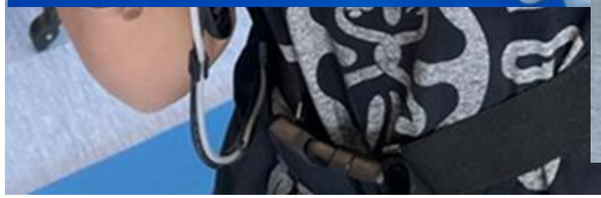
2026




STRIDER
STRIDER







Dove siamo? 2

2018



Sistema Socio Sanitario
Regione Lombardia
ASST Spedali Civili

ASST Spedali Civili, Brescia

LILT
prevenire è vivere
ASSOCIAZIONE PROVINCIALE DI BRESCIA



2026


ORT
RAPY


ZAINO
TRASPORTO
ALOHA!





E’ costoso? Ricerca + Assistenza 28.000 euro/mese

FONDAZIONE Monza e Brianza per il BAMBINO e la sua MAMMA onlus

Fondazione Maria Letizia Verga ETS

780 bambini e bambine allenati

15 allenamenti/die x 5 sett

9 pubblicazioni scientifiche

1 grant europeo (FORTEe) e 3 Min del Lavoro

600 libri protocolli di esercizio distribuiti



E' costoso? Ricerca + Assistenza 3.000 euro/mese

LILT
prevenire è vivere
ASSOCIAZIONE PROVINCIALE DI BRESCIA



46 bambini e bambine allenati

5 allenamenti/die x 3 v/sett

2 pubblicazioni scientifiche

Eventi di raccolta fondi



Tu fai la differenza



Grazie per l'attenzione

linda.peli@unibs.it