



Emofilia e Sport

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4° CONVEGNO INTERREGIONALE
Attualità nel trattamento multidisciplinare dell'emofilia e delle altre coagulopatie emorragiche



L'attività fisica è fondamentale nella prevenzione di patologie correlate all'obesità

- Patologie cardiovascolari
- Ischemia cerebrale
- Diabete Mellito Tipo II
- Alcuni tipi di neoplasie



Centers for Disease Control and Prevention. Adult obesity facts. Updated 2016. Accessed 02/17/2017. Available online: <https://www.cdc.gov/obesity/data/adult.html>

Benefici dello sport

- miglioramento della performance motoria
- riduzione del rischio cardiovascolare e dismetabolico (diabete, ipercolesterolemia, ipertrigliceridemia)
- incremento dell' autostima ed in generale della qualità di vita.
- L'età dello sviluppo (pediatrico/adolescenziale) è un periodo fondamentale per apprendere, sviluppare e porre le basi per una proficua e prolungata continuazione di una attività sportiva.
- A tale età la partecipazione a sport di squadra assume anche una rilevanza in termini di crescita individuale e di affermazione sociale, contribuendo in modo significativo allo sviluppo della personalità.

The screenshot shows a web browser window with the URL <https://www.ncbi.nlm.nih.gov/pubmed/?term=hemophilia+AND+sport>. The search bar contains the text "hemophilia AND sport". The results are sorted by "Most Recent" and show 231 items. The top results are:

- Best matches for hemophilia AND sport:**
 - [Health-related quality of life in children and adolescents with hemophilia in Basra, Southern Iraq.](#) Taha MY et al. *J Pediatr Hematol Oncol.* (2014)
 - [The benefits of exercise for patients with haemophilia and recommendations for safe and effective physical activity.](#) Negrier C et al. *Haemophilia.* (2013)
 - [Evaluation of joint findings with gait analysis in children with hemophilia.](#) Cayir A et al. *J Back Musculoskelet Rehabil.* (2014)

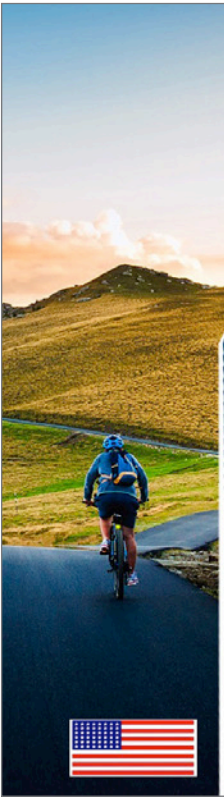
Below the search results, two specific articles are highlighted:

- [Hemostase](#), 1964 Jul-Sep;4:269-73.
[6 MONTHS' ACTIVITIES OF THE "HOPE" CENTER AT SAINT-ALBAN-LEYSSE (SAVOIE)].
[Article in French]
BARRACHIN M, BOSSER.
- [Haemophilia](#), 2018 Jul 13. doi: 10.1111/hae.13533. [Epub ahead of print]
Validation of the Haemophilia & Exercise Project-Test-Questionnaire (HEP-Test-Q)-An instrument for the assessment of subjective physical functioning in children with haemophilia.

4° CONVEGNO INTERREGIONALE

Aggiornamenti nell'ambito delle malattie emorragiche congenite ed acquisite

Catania, 15-16 Settembre 2018



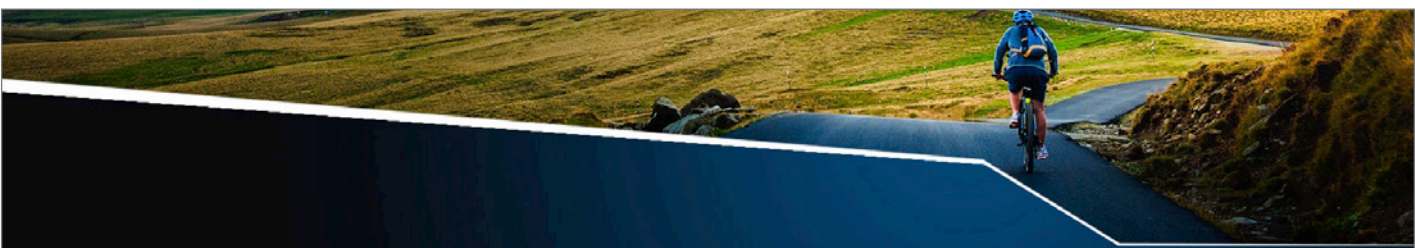
Bambini e Adolescenti con Emofilia VS coetanei senza emofilia

- Peggior stato di forma fisica
- Minore resistenza all'attività fisica aerobica
- Maggiore incidenza di sovrappeso

Pazienti Adulti con Emofilia > rischio % di infortuni rispetto a tutti i pazienti con patologie emorragiche



Ross C, Goldenberg NA, Hund D, et al. Athletic participation in severe hemophilia: bleeding and joint outcomes in children on prophylaxis. *Pediatrics* 2009;124:1267-72.

- 
- 2009: 29.5 % dei PCH era in sovrappeso ⁽¹⁾
 - 2009: 37 PCH pediatrici (16% in sovrappeso e 3 % Obeso) ⁽²⁾
 - Dati superiori alle medie nazionali
 - PCH > rischio di obesità e complicanze

1) Tiktinsky R, Kenet G, Dvir Z, et al. Physical activity participation and bleeding characteristics in young patients with severe haemophilia. *Haemophilia* 2009;15:695-700.

2) Ross C, Goldenberg NA, Hund D, et al. Athletic participation in severe hemophilia: bleeding and joint outcomes in children on prophylaxis. *Pediatrics* 2009;124:1267-72.

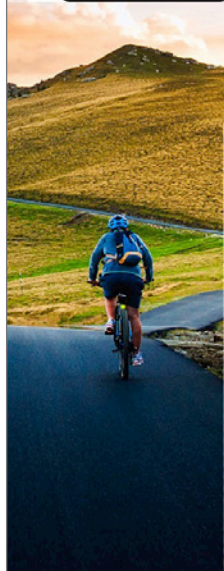


I pazienti con emofilia devono effettuare **regolarmente la profilassi**

Una regolare **attività fisica deve essere incoraggiata** perchè consente di mantenere condizioni fisiche generali buone

I PCH devono praticare attività fisica regolarmente **effettuando la profilassi** secondo le indicazioni del Centro di riferimento

E' importante **la personalizzazione della profilassi** in base alle caratteristiche fisiche e al tipo di attività sportiva che si vuole praticare



Quale è il Trough Level ideale?



10 % ?



2 % ?



30 % ?



1 % ?

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Profilassi Personalizzata (tailored prophylaxis)



Al fine di essere il più possibile efficace la profilassi dovrebbe essere adattata al paziente tenendo conto di: età, storia emorragica, condizioni articolari, attività fisica/sportiva, compliance del paziente alla terapia

La profilassi può essere variata nel tempo con il cambio dello stato clinico o del tipo di sport praticato dal paziente

Utilizzo della farmacocinetica nello stabilire il dosaggio personalizzato

[Haemophilia](#), 2000 Sep;6(5):537-46.

Participation in sports by Dutch persons with haemophilia.

[Heijnen L¹](#), [Mauser-Bunschoten EP](#), [Roosendaal G](#).



- 217 pz. Emofilia A e B
- 71 % (155) dei pazienti praticavano uno o più sport
- 66 Nuoto, 36 Ciclismo, 21 Tennis, 18 palestra, 16 Pattinaggio sul ghiaccio, 10 Tennis tavolo.
- 16 pazienti impossibilitati a correre: 10 (63 %) praticavano uno sport

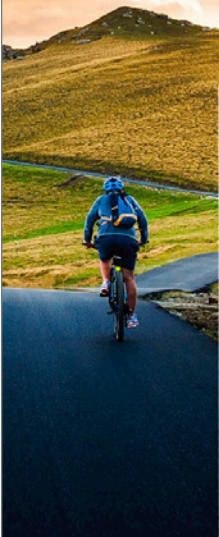
[Haemophilia](#), 2008 Nov;14 Suppl 6:45-51. doi: 10.1111/j.1365-2516.2008.01889.x.

The role of rehabilitation and sports in haemophilia patients with inhibitors.

Heijnen L¹.

Author information

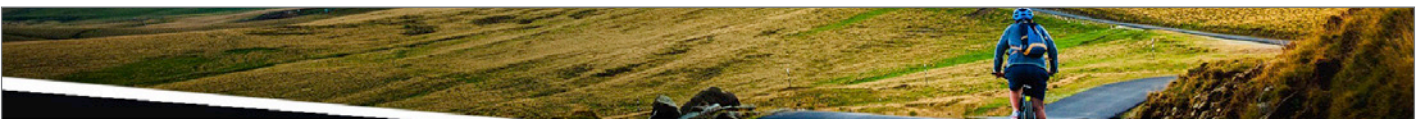
¹ Van CreveldKliniek UMC Utrecht and Rehabilitation Centre De Trappenberg, Huizen, The Netherlands. lheijnen@trappenberg.nl



L'Idroterapia è utile nel trattamento del dolore o dell'irrigidimento articolare o muscolare nei casi di emartro, ematoma muscolare o artropatia emofilica.

Va utilizzata nei casi di sinovite cronica e per la mobilizzazione dopo prolungata immobilizzazione a letto o dopo immobilizzazione articolare.

L'attività fisica è raccomandata, per almeno 30-60 minuti al giorno. Lo sport consigliato è il nuoto. Altre attività vanno valutate in base alle caratteristiche fisiche e alla storia emorragica del paziente



[Haemophilia](#), 2009 May;15(3):686-94. doi: 10.1111/j.1365-2516.2009.02006.x.

Participation and risk-taking behaviour in sports in children with haemophilia.

Köiter J¹, van Genderen FR, Brons PP, Nijhuis-van der Sanden MW.



- 99 pazienti emofilici di età inferiore a 18 anni
- La maggior parte praticava sport 5 volte / settimana
- La profilassi non era personalizzata in base al tipo di sport
- Sport più praticati: Calcio, Tennis, Nuoto, Palestra
- Nessuna differenza tra i pz. con emofilia ed i pari età non emofilici tranne che per l'Hockey.
- Non è stata individuata associazione tra pratica sportiva e aumentato rischio di traumi nemmeno nei pazienti con attività sportiva intensa
- Nessun paziente ha sviluppato una limitazione articolare durante lo studio

4° CONVEGNO INTERREGIONALE

Aggiornamenti nell'ambito delle malattie emorragiche congenite ed acquisite

Catania, 15-16 Settembre 2018



1990

Hemophilia and Sports.

McLain LG, Heldrich FT.

Abstract

In brief A 15-year-old boy with severe hemophilia who had played soccer the previous year was denied continued participation following a screening examination by a different physician. Athletes with hemophilia, such as this boy, can pose a difficult dilemma to physicians, who might inappropriately advise them to participate in- or to avoid- sports. Hemophilic athletes should be advised about sports participation only after their physicians review the type and severity of hemophilia. Usually individuals with hemophilia may participate safely in noncontact sports, but contact sports should be avoided. ←

but contact sports should be avoided.



1996

Sports and hemophilia: antagonist or protagonist.

Buzzard BM¹.

Author information

Abstract

Until recent years the life for the person with hemophilia was dictated by the severity and frequency of bleeding episodes. Those with hemophilia tended to be overprotected and not allowed to participate in sporting activities normal to their peer group. The past 2 decades has seen a dramatic change in attitudes, mainly due to the introduction of factor replacement, home therapy, and comprehensive care programs. Those involved in the care of people with hemophilia now recognize that sport and exercise can reduce or prevent intraarticular hemorrhages. The arguments for and against sport as described in the literature from 1960 to 1990 are reviewed. Swimming, golf, and table tennis were recommended by doctors, whereas most contact sports, including football, were discouraged. The move toward more active pursuits brings with it an increase in sporting injuries, which is addressed in this article, but more importantly the prevention of injuries is highlighted.

whereas most contact sports, including football, were discouraged.

Anaerobic power and muscle strength in young hemophilia patients.

Falk B¹, Portal S, Tiktinsky R, Weinstein Y, Constantini N, Martinowitz U.

Author information

¹ Ribstein Center for Sport Medicine Sciences and Research, Wingate Institute, Israel. bfalk@post.tau.ac.il

Abstract

PURPOSE: The purpose of this study was to evaluate muscle strength and anaerobic power in young boys with hemophilia compared with healthy boys.

METHODS: Thirteen boys with severe hemophilia (H) (mean (+/- SD) age = 12.0 +/- 3.17 yr) and 16 control (C) boys (age = 11.9 +/- 2.8 yr) performed elbow and knee flexion and extension on the Biodex System II dynamometer at two angular velocities. They also performed a Wingate Anaerobic Test (WAnT) for the legs and for the arms. All H subjects received prophylactic factor VIII treatment in the 24 h pretesting, and no test was performed in the presence of hemorrhage.

RESULTS: C were consistently stronger than H in all dynamic strength measures (e.g., elbow flexors: 0.47 +/- 0.15 vs 0.36 +/- 0.08 N x m x kg(-1) for C and H, respectively, P < 0.05). Anaerobic mean power was also higher in C compared with H in both upper and lower extremities (arms: 3.08 +/- 0.99 vs 2.22 +/- 0.46 W x kg(-1) for C and H, respectively; legs: 6.94 +/- 1.62 vs 5.54 +/- 1.03 W x kg(-1) for C and H, respectively, P < 0.05). Upper and lower extremity strength, as well as anaerobic power, increased with age in C but not in H. By using the Godin Leisure-Time Exercise Questionnaire, H were found to be much less active, especially in intense activities, compared with C.

CONCLUSION: Children and adolescents with hemophilia are characterized by lower muscle strength and anaerobic power compared with age-matched controls. This may be related to their lower leisure-time activity. ←

2000

lower muscle strength and anaerobic power compared with

Risks and benefits of sports and fitness activities for people with haemophilia.

Mulder K¹, Cassis F, Seuser DB, Narayan P, Dalzell R, Poulsen W.

Author information

¹ Children's Hospital, Winnipeg Canada. kmulder@hsc.mb.ca

Abstract

Physical activity is a key component of a healthy lifestyle. Exercise and physical activity have been shown to help maintain a healthy body weight, reduce stress, increase self-esteem and feelings of wellbeing, control blood pressure, and prevent heart disease and diabetes. Children with haemophilia may feel restricted from competing in sports through parental concern or pain and difficulty in moving, or they may rebel against such restrictions, thus leaving themselves open to serious injury. Several groups have attempted to classify sports activities with regard to the level of risk involved; however, these are not consistent. It is important to match the child's abilities with the sport in which they want to take part, and suggest alternatives if this is not possible. Prevention of injury should not depend solely on use of factor concentrates.

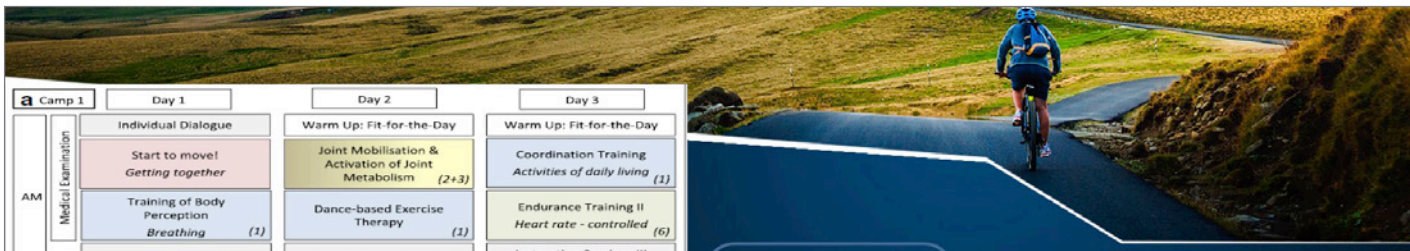
2004

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a Camp 1		Day 1	Day 2	Day 3
AM	Medical Examination	Individual Dialogue	Warm Up: Fit-for-the-Day	Warm Up: Fit-for-the-Day
		Start to move! Getting together	Joint Mobilisation & Activation of Joint Metabolism (2+3)	Coordination Training Activities of daily living (1)
		Training of Body Perception Breathing (1)	Dance-based Exercise Therapy (1)	Endurance Training II Heart rate - controlled (6)
		Instruction Seminar I Training physiology	Instruction Seminar II Individual home training	Instruction Seminar III Joint Mobilisation, Metabolism & Coordination
Rest				
PM	Medical Examination	Resistance Training I Upper extremity - Low weight (5)	Supervised Home Training I	Supervised Home Training II
		Endurance Training I Perceived exertion - controlled (6)	Resistance Training II Lower extremity - Low weight (5)	Final Move Activities - team building
		Relaxation Training Autogenous training (4)	Aqua Gymnastics (2-6)	Group Evaluation & Farewell
Home training over 6 months				

2018



[Orphanet J Rare Dis](#), 2018 Mar 5;13(1):38. doi: 10.1186/s13023-018-0777-7.

Programmed Sports Therapy (PST) in People with Haemophilia (PwH) "Sports Therapy Model for Rare Diseases".

Hilberg T¹.

Author information

¹ Department of Sports Medicine, University of Wuppertal, Pauluskirchstr. 7, D-42285, Wuppertal, Germany. Hilberg@uni-wuppertal.de.




BASSO	BASSO MODERATO	MODERATO	MODERATO ALTO	ALTO
Nuoto	Ciclismo	Ballo	Pallavolo	Rugby
Immersioni	Pilates	Tuffi	Basket	Sollevamento pesi
Pesca	Palestra	Canottaggio	Surf	Motociclismo
Golf		Corsa	Calcio	Pugilato
Frisbee		Yoga	Equitazione	Hockey
Camminare		Tennis	Karate	

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Think once, think twice and think again ...

THINK ONCE!

These activities are usually safe choices for you:

- Swimming
- Golf
- Yoga
- Hiking
- Sailing
- Canoeing
- Kayaking
- Bicycling
- Tai Chi



THINK TWICE!!

These activities can cause some injuries, but can be fun to do with friends. If you pre-treat, use the proper equipment and have learned the skills you need, go ahead and participate in:

- Badminton
- Basketball
- Baseball
- Bowling
- Tennis
- Skating
- Volleyball
- Cross-country skiing
- Running
- Soccer
- Hackysack



THINK AGAIN!!!

These activities can cause injury even to people who do not have a bleeding disorder because they involve speed and/or body contact. Even though they might seem fun to do, you need to ask yourself if they are worth the risk of getting hurt. They include:

- Football
- Hockey
- Downhill skiing
- Rollerblading
- Skateboarding
- Karate/Judo
- Snowboarding
- Wrestling
- Boxing
- Taekwondo
- Dirt bike racing
- Racquetball
- Snowmobiling



Grazie per l'attenzione!!!

