ALIMENTAZIONE, INTEGRAZIONE E NUTRACEUTICA

A SUPPORTO DELL'ATLETA VEGANO/VEGETARIANO

RIASSUNTO PRESENTAZIONE

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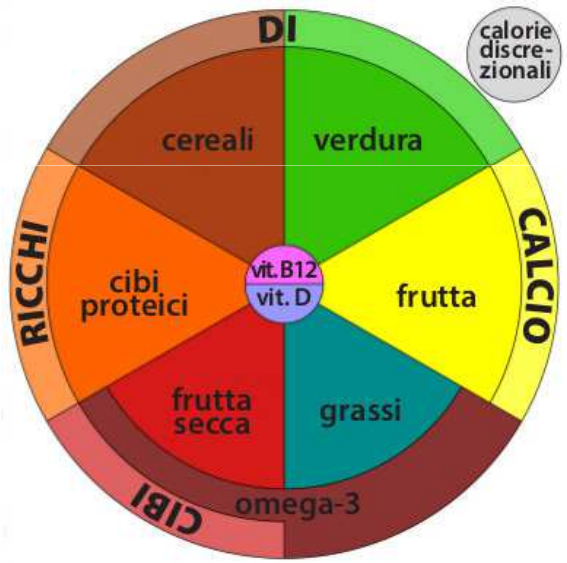
CONSIGLIERE NAZIONALE SINSEB

UNICAM

SERVIZIO IGIENE ALIMENTI E NUTRIZIONE
ASUR MARCHE AV2

http://www.piattoveg.info/my-plate.html

Il PiattoVeg sostituisce dal 2015 la già nota VegPyramid, con dati più aggiornati provenienti dalle nuove raccomandazioni nutrizionali internazionali e nazione



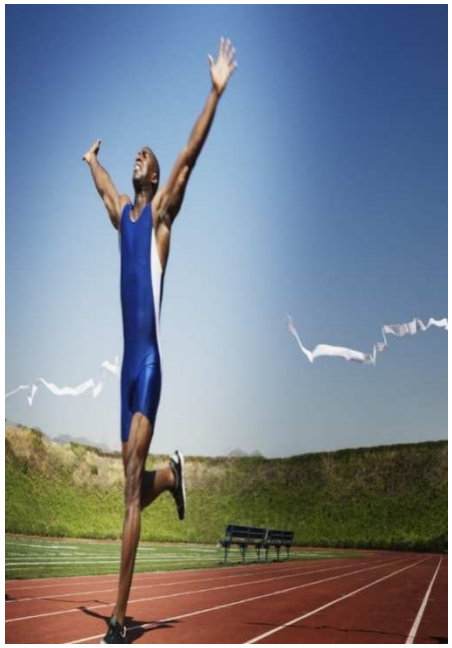
Il piatto Veg è sufficiente per soddisfare i fabbisogni nutrizionali di un atleta ?

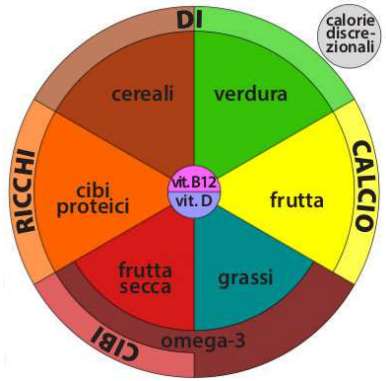
Valori validi per qualsiasi fabbisogno calorico:
Porzioni di cibi ricchi in proteine ogni giorno: 3
Porzioni di verdura ogni giorno: 6

Calorie	Cereali	Frutta	Frutta secca	Grassi (di cui 1 olio di lino)	Calorie discrezionali
1200	5	1	1	1	47
1400	7	1	1	1	57
1600	8	1,5	1,5	1	52
1800	9	2	2	1	46
2000	10	2,5	2	2	74
2200	11	3	2,5	2	69
2400	12	3	3	2	96
2600	13	3,5	3	3	124
2800	14	4	3	4	152
3000	15	4,5	3	5	179
3200	16	5	3	6	207
3400	17	5	3	7	267
3600	18	5	3	8	326
3800	19	6	3	9	332
4000	20	6	3	9	427

LA COMPLESSITA' DELLA PERFORMANCE ATLETICA

L'ATLETA E I FABBISOGNI NUTRIZIONALI





Calorie
Carboidrati
Proteine
Lipidi (Omega 3)
Minerali
Vitamine
Antiossidanti
Idratazione

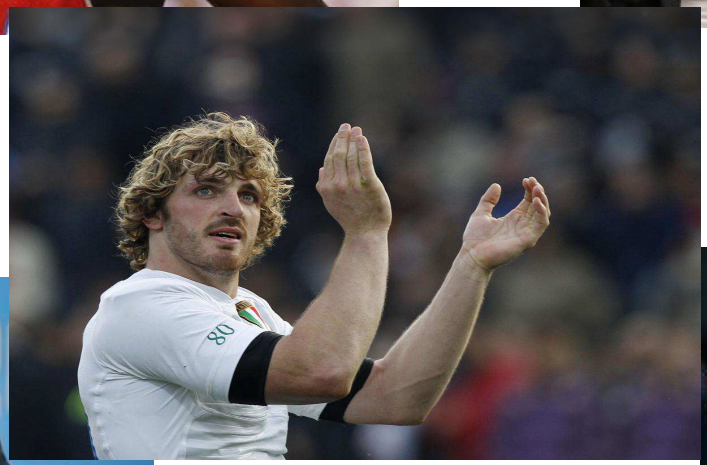
L'alimentazione ha un ruolo determinante nella pratica sportiva sia nella fase d'allenamento che di gara.

- Raggiungimento e mantenimento del peso corporeo ideale
- Massimo vantaggio dal programma d'allenamento
- Miglior recupero tra l'allenamento e le gare
- Ridotto rischio di infortuni e malattia

ATLETI VEGAN

Carl Lewis

Venus e Serena Williams



Mirko Bergamasco

Meagan Duhamel

Martina Navratilova

DIETE VEGETARIANE E AMENORREA

IL RISCHIO DELL'IMPROVVISAZIONE

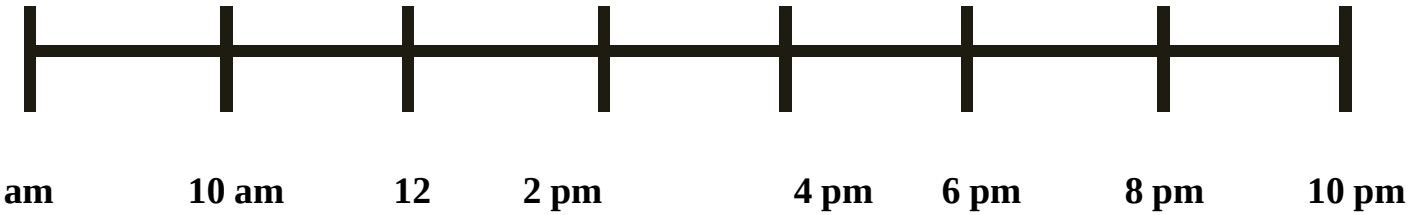
Barr SI. Am J Clin Nutr. 1999 Sep;70(3 Suppl):549S-54S. Review.

Valutazione del Fabbisogno energetico e ripartizione calorico nutrizionale nei vari pasti della giornata

Numero allenamenti giornalieri /settimanali

Orari degli allenamenti /gare

Impegni giornalieri e gestione degli orari pasti



PRE-EXERCISE | DURING EXERCISE | POST-EXERCISE

NUTRIENT TIMING

Certificazione Antidoping

LA PIRAMIDE DELL'ALIMENTAZIONE SPORTIVA adattata all'alimentazione vegetariana

SUPPLEMENTI/ERGOGENICS VEG

INTEGRATORI/SUPPLEMENTS VEG

FUNCTIONAL FOOD E NUTRACEUTICI

SPORT FOOD VEG
(Sport bar, Sport gel ,Liquid Meal, Recovery Meal, Energy drink)

ALIMENTAZIONE VEGETARIANA/VEGANA
(Corretto apporto calorico e ripartizione pasti)

ACQUA E SPORT DRINK

BODY COMPOSITION (ANTROPOMETRIA-PLICOMETRIA-BIVA-DEXA - ADIPOMETRIA)

Athlete's Health

Journal of the International Society of Sports Nutrition

2010

ISSN exercise & sports nutrition review: research & recommendations

Category	Muscle Building Supplements	Weight Loss Supplements	Performance Enhancement
Apparently effective and generally safe	Weight gain powders Creatine Protein EAA	Low-calorie foods, MRPs, and RTDs Ephedra, caffeine, and salicin-containing thermogenic supplements taken at recommended doses in appropriate populations (ephedra banned by FDA)	Water and sports drinks Carbohydrate Creatine Sodium phosphate Sodium bicarbonate Caffeine B-alanine
Possibly effective	HMB (untrained individuals initiating training) BCAA	High-fiber diets Calcium Green tea extract Conjugated Linoleic Acids	Post-exercise carbohydrate & protein EAA BCAA HMB Glycerol
Too early to tell	α-Ketoglutarate α-Ketoisocaproate Ecdysterones Growth hormone releasing peptides and secretogues Ornithine α-Ketoglutarate Zinc/magnesium aspartate	Gymnema sylvestre, chitosan) Phosphatidl Cholin Betaine Coleus F D	triglycerides
Apparently not effective and/or dangerous	Glutamine Smilax Isof jugated linoleic acids Gamma oryzanol Prohormones Tribulus terrestris Vanadyl sulfate (vanadium)	vate romium (non-diabetics) HCA L-Carnitine Phosphates Herbal diuretics	Glutamine Ribose Inosine

INTEGRAZIONE RAGIONATA BASATA SU EVIDENZE SCIENTIFICHE

Supplementi per i quali la letteratura scientifica ha dimostrato una certa efficacia e sicurezza di utilizzo.

Supplementi i cui studi iniziali hanno confermato un possibile uso in campo sportivo, ma richiedono maggiori indagini per stabilirne l'efficacia sull'allenamento e/o il recupero.

Supplementi per i quali esiste solo un interesse teorico e la mancanza di una ricerca applicata non consente ancora di approcciarne un utilizzo in campo sportivo.

Supplementi senza alcun razionale scientifico, poiché le ricerche hanno chiaramente dimostrato la loro inefficacia nel migliorare la prestazione e/o il recupero.

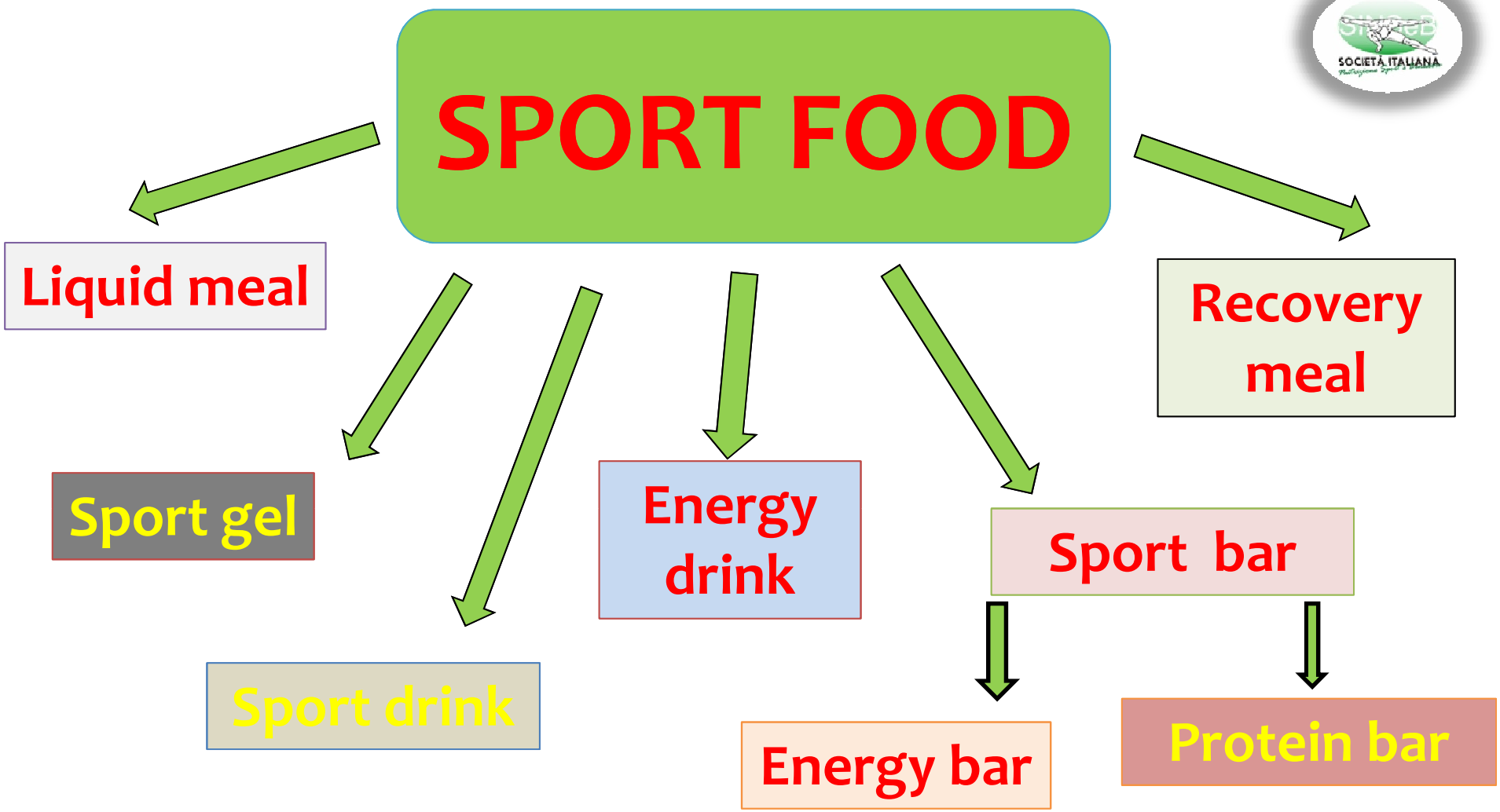


TABLE 3. Dietary supplements and sports foods with evidence-based uses in sports nutrition.

Category	Examples	Use	Concerns	Evidence
Sports food	Sports drinks Sports bars Sports confectionery Sports gels Electrolyte supplements Protein supplements Liquid meal supplements	Practical choice to meet sports nutritional goals especially when access to food, opportunities to consume nutrients or gastrointestinal concerns make it difficult to consume traditional food and beverages	Cost is greater than whole foods May be used unnecessarily or in inappropriate protocols	Burke (2015)[141]

IOC consensus statement: dietary supplements and the high-performance athlete

Table 2 Summary of common sports foods and functional foods used by athletes.

Sports food	Form	Typical composition	Common sports-related use
Sports drink	Powder or ready to drink liquid	5%–8% CHO 10–35 mmol/L sodium 3–5 mmol/L potassium	Simultaneous delivery of fluid+CHO during exercise Postexercise rehydration and refuelling
Energy drink	Ready-to-drink liquid or concentrated shot	Carbohydrate, especially in typical ready-to-drink varieties Caffeine Note: may contain taurine, B vitamins and other ingredients with variable supporting evidence and some level of concern	Pre-exercise caffeine supplement Carbohydrate and caffeine intake during exercise
Sports gel or sports confectionery	Gel: 30–40 g sachets confectionery: jelly-type confectionery (generally in pouch of ~40–50 g)	~25 g CHO per sachet or ~5 g CHO per confectionery piece Some contain caffeine or electrolytes	Carbohydrate intake during exercise
Electrolyte replacement supplements	Powder sachets or tablets	50–60 mmol/L sodium 10–20 mmol/L potassium Typically, low carbohydrate (2–4 g/100 mL)	Rapid rehydration following dehydration undertaken for weight-making Replacement of large sodium losses during ultra-endurance activities Rapid postexercise rehydration following moderate to large fluid and sodium deficits
Protein supplement	Powder (mix with water or milk) or ready-to-drink liquid Protein-rich bar, usually low in CHO	Provides 20–50 g protein in a single serve from high-quality types of animal (whey, casein, milk, egg) or vegetable (eg, soy) origin Note: may contain other ingredients, some of which are not evidence-based and may increase the risk of contamination	Postexercise recovery following key training sessions or events where adaptation requiring protein synthesis is desired Achievement of increase in lean mass during growth or response to resistance training Portable nutrition for busy schedule or travel
Liquid meal supplement	Powder (mix with water or milk) or ready-to-drink liquid	1–1.5 kcal/mL: 15%–20% protein and 50%–70% CHO Low to moderate fat Vitamins/minerals: 500–1000 mL supplies RDI/RDAs	Supplement high-energy diet (especially during heavy training/competition or weight gain) Low-bulk meal replacement (especially pre-event meal) Postexercise recovery (CHO and protein) Portable nutrition for busy schedule or travel
Sports bar	Bar	40–50 g CHO 5–10 g protein Usually low in fat and fibre Vitamins/minerals: 50%–100% of RDA/RDIs Note: may contain other ingredients, some of which are not evidence-based and may increase the risk of contamination	CHO source during exercise Postexercise recovery—provides CHO, protein and micronutrients Portable nutrition for busy schedule or travel
Protein-enhanced food	Milk, yoghurt, ice cream, cereal bars and other food forms	Increased protein content from normal food variety achieved by adding protein sources or filtration of water from product Typically allows normal portion to provide ~20 g protein to meet sports nutrition target	Value-added food able to achieve protein target for postexercise use or to improve protein content of other meals and snacks in an athlete's diet

To cite: Maughan RJ, Burke LM, Dvorak J, *et al*. *Br J Sports Med* Epub ahead of print: [*please include* Day Month Year]. doi:10.1136/bjsports-2018-099027

BEFORE EXERCISE

Recommendations. Prehydrating with beverages, if needed, should be initiated at least several hours before the exercise task to enable fluid absorption and allow urine output to return toward normal levels. Consuming beverages with sodium and/or salted snacks or small meals with beverages can help stimulate thirst and retain needed fluids.

DURING THE EXERCISE

Recommendations. Individuals should develop customized fluid replacement programs that prevent excessive (<2% body weight reductions from baseline body weight) dehydration. The routine measurement of pre- and postexercise body weights is useful for determining sweat rates and customized fluid replacement programs. Consumption of beverages containing electrolytes and carbohydrates can help sustain fluid-electrolyte balance and exercise performance.

AFTER THE EXERCISE

Recommendations. If time permits, consumption of normal meals and beverages will restore euhydration. Individuals needing rapid and complete recovery from excessive dehydration can drink ~1.5 L of fluid for each kilogram of body weight lost. Consuming beverages and snacks with sodium will help expedite rapid and complete recovery by stimulating thirst and fluid retention. Intravenous fluid replacement is generally not adventagous, unless medically merited.

GESTIONE DELL'IDRATAZIONE

When hydrating prior to exercise the individual should slowly drink beverages (for example, ~5–7 $mL \cdot kg^{-1}$ per body weight) at least 4 h before the exercise task. If the individual does not produce urine, or the urine is dark or highly concentrated, s/he should slowly drink more beverage (for example, another ~3–5 $mL \cdot kg^{-1}$) about 2 h before the event. By hydrating several hours prior to exercise there is sufficient time for urine output to return towards normal before starting the event. Consuming beverages with sodium (20–50 $mEq \cdot L^{-1}$) and/or small amounts of salted snacks or sodium-containing foods at meals will help to stimulate thirst and retain the consumed fluids (88,112,128).

The composition of the consumed fluids can be important. The Institute of Medicine provided general guidance for composition of "sports beverages" for persons performing prolonged physical activity in hot weather (73). They recommend that these types of fluid replacement beverages might contain ~20–30 $meq \cdot L^{-1}$ sodium (chloride as the anion), ~2–5 $meq \cdot L^{-1}$ potassium and ~5–10% carbohydrate (73). The need for these different components (carbohydrate and electrolytes) will depend on the specific exercise task (e.g., intensity and duration) and weather conditions. The sodium and potassium are to help replace sweat electrolyte losses, while sodium also helps to stimulate thirst, and carbohydrate provides energy. These components also can be consumed by nonfluid sources such as gels, energy bars, and other foods.

Apporto di fluidi : 0,4-0,8 L / h

Na: 20-30 m eq L (Na: 460-690 mg/l)

K: 2-5 m eq L (78- 190 mg/l)

HYPONATREMIA

- Do not drink in excess
  - No demonstrable benefits of over hydration
  - Increases risk of hyponatremia

Rogerson Journal of the International Society of Sports Nutrition (2017) 14:36
DOI 10.1186/s12970-017-0192-9

Journal of the International Society of Sports Nutrition

REVIEW Open Access

Vegan diets: practical advice for athletes and exercisers

David Rogerson

2017

AMERICAN COLLEGE of SPORTS MEDICINE

AMERICAN DIETETIC ASSOCIATION
DIETITIANS OF CANADA

JOINT POSITION STATEMENT

Nutrition and Athletic

2016

Fueling the Vegetarian (Vegan) Athlete

Joel Fuhrman and Deana M. Ferrei
Dr. Fuhrman.com, Inc., Flemingtoı., ...

2010

LA LETTERATURA SCIENTIFICA

Sports Med. 2006;36(4):293-305.
Vegetarian diets : nutritional considerations for athletes.
Venderley AM, Campbell WW.

Review.

Nutrition. 2004 Jul-Aug;20(7-8):696-703.
Nutritional considerations for vegetarian athletes.
Barr SI, Rideout CA.

Review.

AMERICAN COLLEGE of SPORTS MEDICINE

AMERICAN DIETETIC ASSOCIATION
DIETITIANS OF CANADA

Nutrition and Athletic Performance

JOINT POSITION STATEMENT

Athletes may opt for a vegetarian diet for various reasons from ethnic, religious, and philosophical beliefs to health, food aversions, and financial constraints or to disguise disordered eating. As with any self-induced dietary restriction, it would be prudent to explore whether the vegetarian athlete also presents with disordered eating or a frank eating disorder.[13,14] A vegetarian diet can be nutritionally adequate containing high intakes of fruits, vegetables, whole grains, nuts, soy products, fiber, phytochemicals, and antioxidants.[149] Currently, research is lacking regarding the impact on athletic performance from long-term vegetarianism among athletic populations.[150]

Depending on the extent of dietary limitations, nutrient concerns for vegetarianism may include energy, protein, fat, iron, zinc, vitamin B-12,, calcium, n-3 fatty acids,[149] and low intakes of creatine and carnosine.[151] Vegetarian athletes may have an increased risk of lower bone mineral density and stress fractures.[152] Additional practical challenges include gaining access to suitable foods during travel, restaurant dining, and at training camps and competition venues.

SOCIETÀ ITALIANA

Una dieta vegana ben strutturata può essere adeguata per lo sportivo

Non ci sono dati sull'impatto sulla performance sportiva da una dieta vegetariana sul lungo periodo

Criticità in relazione alle limitazioni: energia, proteine, grassi, ferro, zinco, calcio, vitamina B 12, omega 3. Scarso apporto di creatina e carnosina

Aumento del rischio di alterata densità ossea e fratture da stress

Fondamentale il nutrizionista sportivo per la pianificazione e programmi di educazione alimentare

DIETE VEGETARIANE E SPORT

FONDAMENTALE LA PIANIFICAZIONE PERSONALIZZATA

Conclusioni

- **Esistono vari tipi di approcci Vegetariani alla Dieta ed ognuno di essi ha alcuni benefici e alcune lacune che devono essere valutate con un piano individualizzato tenuto conto delle condizioni antropometriche, ematochimiche, ormonali dell'atleta**

- **L'intake proteico deve essere adeguato e a volte aumentato a seconda delle condizioni di partenza e dello sport praticato (Endurance, Controresistenza, Misto)**

- **Deve essere assolutamente valutata la composizione corporea sia densità minerale ossea , massa grassa,massa muscolare e idratazione**

- **Può essere proposta una Integrazione con Supplementi a base di Proteine/Aminoacidi essenziali /BCAA , Creatina, Vitamina D , Vitamina B12, Zinco, Ferro e Nutraceutici (es. succo di barbabietola)**

- **Gli studi in letteratura non evidenziano al momento grandi differenze tra vegetariani e non vegetariani**