



Nutrition in sport

with Sascha van Lith

From the series :
Best Practice Sharing of
Innovative and Disruptive
Field Hockey Skills Erasmus+
Program 2019 - 2020



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HOKEJA NA TRAWIE

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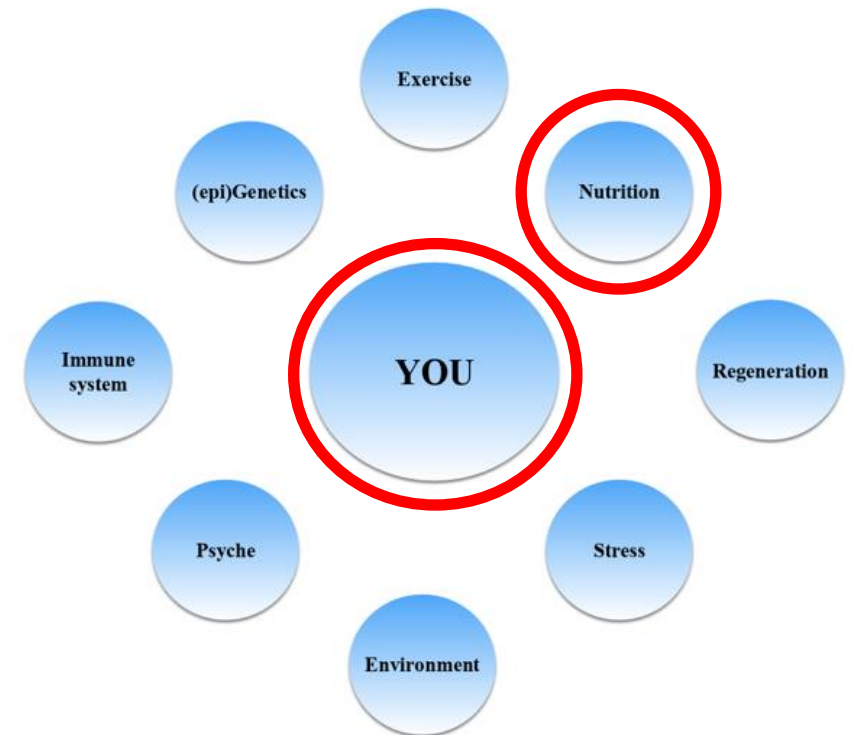


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A collaboration between

NUTRITION IN SPORT

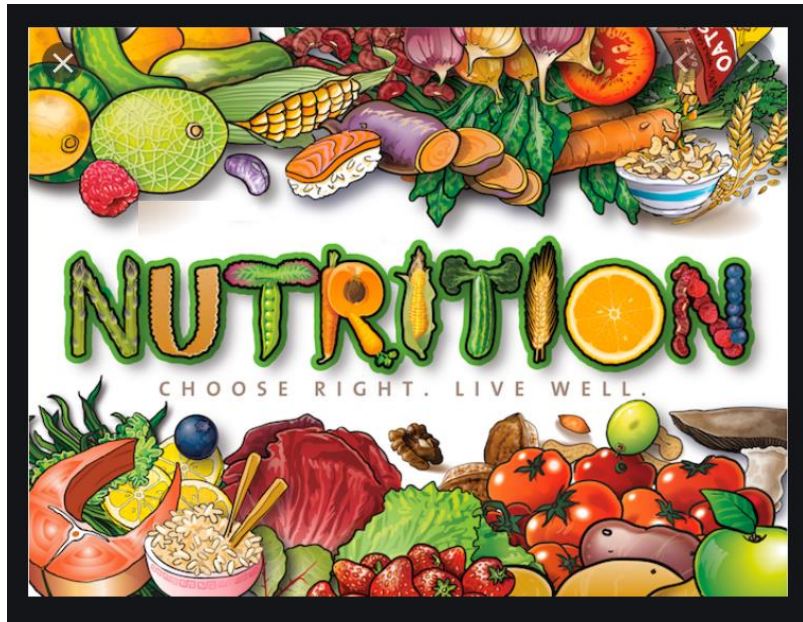
- Every part around **YOU** is important and plays a role in your performance
- Holistic approach – exercises, stress, health and **NUTRITION**
- Food should be your medicine
- Teach and explain the basics of nutrition to young athletes



„Like a car, putting in the best fuel will help lead to good performance“

NUTRITION IN SPORT

What are the benefits of balanced nutrition?



- ✓ Higher energy level
- ✓ Better muscle strength
- ✓ More flexibility
- ✓ Optimal concentration
- ✓ Injury prevention
- ✓ Less illness



TASK – write down a sample of your food on a regular day

(food and drinks as well....**BE HONEST**)

NUTRITION IN SPORT

Anne, girl, 14 years old, 9th grader
hockey and dance

EXAMPLE

Breakfast: 1 glass orange juice, 1 slice of bread with cheese/banana

1st break: 1 rice cake, 1 bottle of water

2nd break: 2 slices of bread, Bologna sausage

16.00: apple and a glass of milk

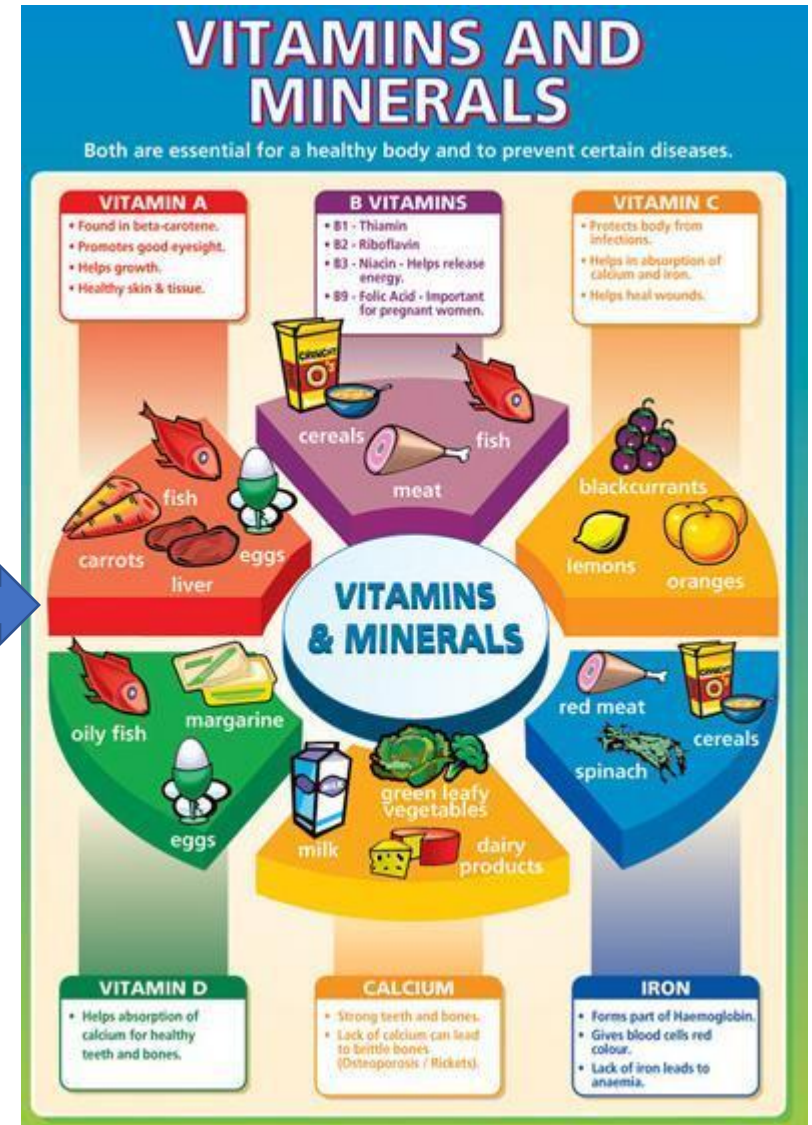
18.30: spaghetti, (Greek yogurt (Danone) and water

20.00: cookie and tea

NUTRITION IN SPORT

Nutrients can be divided into 2 categories:

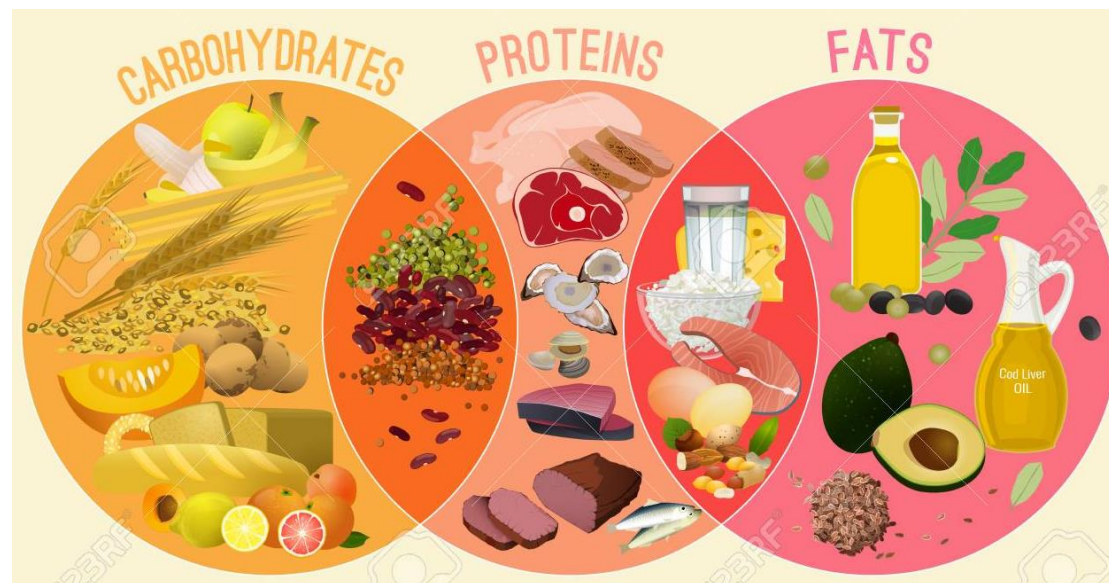
- MICRONUTRIENTS - nutrients that the body needs in smaller amounts (vitamins, minerals)
- MACRONUTRIENTS - nutrients that the body needs in large amounts. These provide the body with energy (calories)



MACRONUTRIENTS

IMPORTANT MACRONUTRIENTS TO KNOW:

1. PROTEIN
2. CARBOHYDRATES
3. FATS



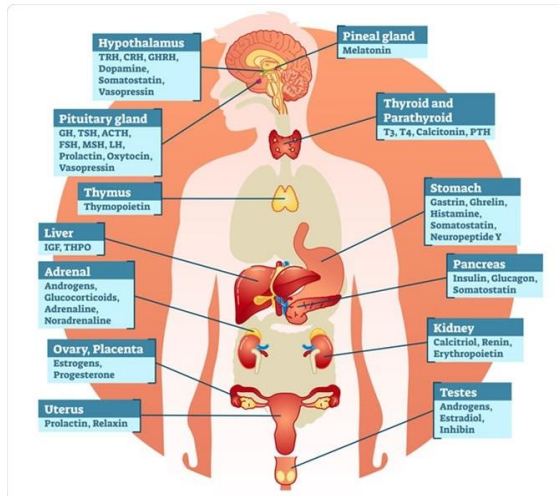
MACRONUTRIENTS = ENERGY FOR THE BODY

1) PROTEIN

- does a variety of jobs in the human body

Protein functions as:

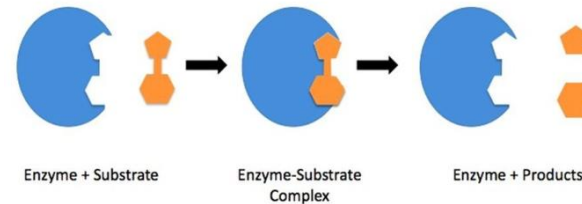
hormone



enzyme

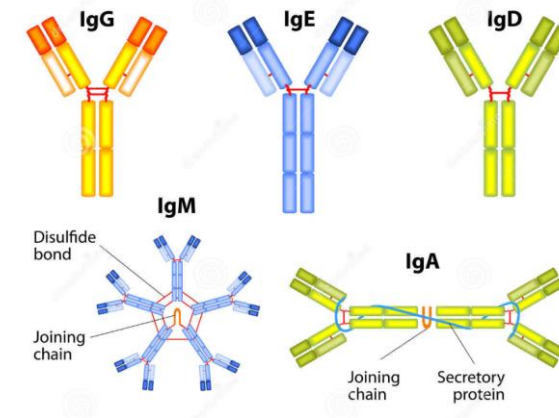
Enzyme structure

Proteins that work as a catalyst.
Speed up chemical reactions without being altered themselves.



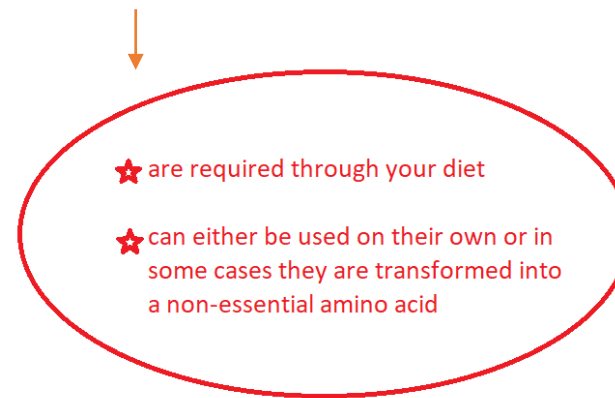
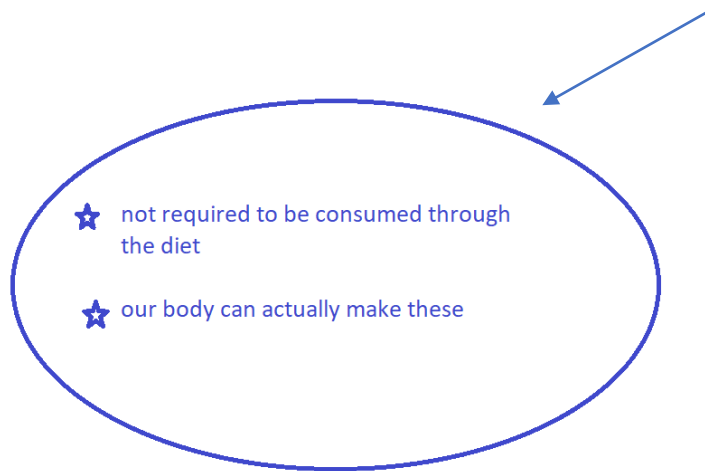
antibody in the immune system

ANTIBODY CLASSIFICATION



1) PROTEIN

- allows your body to grow, build and repair tissues, and protect lean body mass (your muscle mass)
- is composed of amino acids (building blocks of protein)
- 2 types of amino acids: **non-essential** and **essential**



1) PROTEIN

**1 to 1,5 gram
per kg of body weight**



For example 50 kilo; 50-75 gram; you all 75 gram

1 egg = 10 gram
100 gram fish = 20 gram
100 gram meat = 20 gram
100 gram greek yoghurt = 7-10 gram
100 gram nuts = 15 gram
100 gram legumes = 4-10 gram

HIGH-PROTEIN FOODS:

- Meat
- Fish and seafood
- Milk and dairy products
- Eggs
- Legumes
- Grain products
- Nuts
- Soy products



Consuming **protein after exercise** helps the muscles to heal and prevents the loss of lean mass.

1) WHAT ABOUT ANNE?

EXAMPLE

Was Anne protein intake sufficient?



Anne is 1,62 m and weighs 53 kilo,
very active in sports, so we'll take 1,5 gr per kg body weight =
79.5 gram protein per day!!!

Anne, girl, 14 years old, 9th grader
hockey and dance

Breakfast: 1 glass orange juice, 1 slice of bread with cheese/banana

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cheese 15 gram = 4 gram protein
Bologna meat 15 gram = 2 gram protein
milk 200 ml = 7 gram protein
minced meat 100 gram = 17.5 gram protein
Greek yoghurt 150 gram = 18 gram protein
Totaal = **48,5 gram**



What about you based on your daily food sample?

2) CARBOHYDRATES

- All carbohydrates are eventually broken down into **glucose**, which is the main **energy source** for your body
- In fact, specific organs, such as your brain, need glucose in order to function properly
- 2 types:
 - ✓ SIMPLE CARBOHYDRATES
 - ✓ COMPLEX CARBOHYDRATES



2) CARBOHYDRATES

SIMPLE CARBOHYDRATES

- are broken down fairly quickly in the body.
- have a quick and fleeting impact on blood sugar levels
- blood sugar (and energy) levels typically rise quickly then drop after consuming simple carbs



COMPLEX CARBOHYDRATES

- take longer to break down for use in the body
- have a steady impact on blood glucose levels
- particularly fiber, can help the body to maintain healthy digestive function and cholesterol levels

Don't forget to eat ideally 2-2 1/2 cups of VEGGIES a day and 2-3 pcs of FRUIT a day.

2) WHAT ABOUT ANNE?

EXAMPLE

Anne, girl, 14 years old, 9th grader
hockey and dance

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Let's have a look at her daily carbs intake:



Anne is 1,62 m en weighs 53 kilo,
plays lots of, so we'll take 4 gr per kg body weight
= **212** gram carbohydrates per day!!!

fresh orange juice 200 ml = 18 gram KH
3 slices of bread = 45 gram KH
1 rice cake = 6 gram KH
2 pieces of fruit = 50 gram KH
250 gram spaghetti = 80 gram KH
Greek yoghurt 100 gram = 19 gram KH
1 cinnamon biscuit = 10 gram KH
Total **228** gram



Now is your turn to look at how much carbohydrates do you consume a day.

And don't forget to also check which type of carbs you choose 😊.

3) FATS

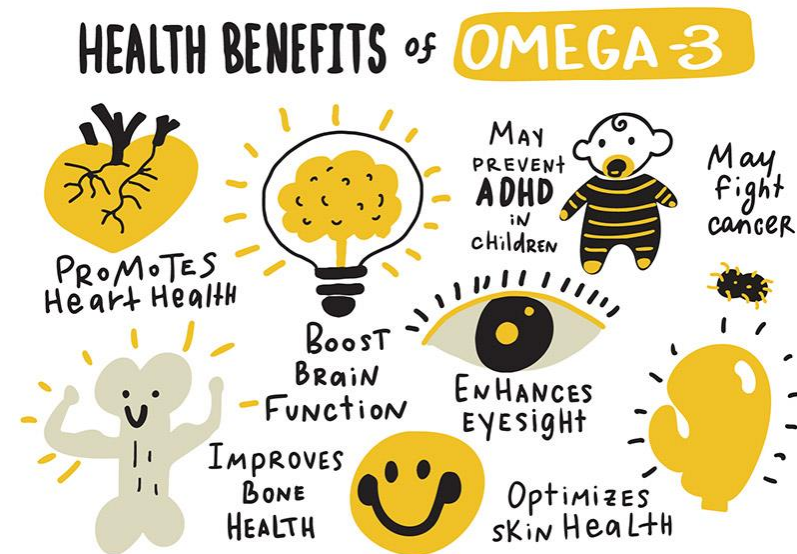
- are nutrients in food that the body uses to build nerve tissue (including the brain and nerves)
- makes certain hormones
- absorbs fat soluble vitamins
- helps with [cell membrane integrity](#)
- are used as a fuel for the body
- gives food flavor and texture



3) FATS

Fatty acids are classified in the following 3 categories. Some are much more healthful than others.

	SOURCES
SATURATED FAT	Meat products, dairy products, butter, coconut butter
MONO- AND POLY-UNSATURATED FAT	Olive oil, flaxseed oil, canola oil, safflower oil, wheat germ oil, coldwater fish, nuts, avocados
TRANS FAT	Baked goods, fried foods, some types of margarine



Getting enough healthy fats is **essential for growth and development**. Young kids, in particular, need enough of them in their diet to help the brain and nervous system develop normally.

3) FATS

TIPS FOR GOOD CHOICES:

- Olive oil – add it to your salads, 2 tsp/day, good as an energy source, for skin and flexibility
- Avocado
- Fish – 2 a week, 1 a week choose an oily fish (salmon, macrel)
- As a spread on bread – consider butter instead of margarine

Around 30g/per day is recommended

American Heart Association | Healthy For Good™

FOUR WAYS TO GET GOOD FATS

Replace saturated fats with unsaturated fats as part of a healthy eating pattern. Unsaturated fats can help lower bad cholesterol and triglyceride levels, and they provide essential nutrients your body needs. Here are four easy and delicious ways to get more of the good fats.

- GO FISH**
Eat fish at least twice a week. Choose fatty or oily fish like albacore tuna, herring, lake trout, mackerel, sardines and salmon to get essential omega-3 fatty acids.
- BE NUTTY**
Munch on a small handful (about 1 oz.) of unsalted nuts and seeds for good fats, energy, protein and fiber. Good choices include almonds, hazelnuts, peanuts, pistachios, pumpkin seeds, sunflower seeds and walnuts.
- ADD AVOCADO**
Snack, cook and bake with avocado to add healthy fats, fiber and essential vitamins and minerals.
- CHECK THE OILS**
Use cooking and dressing oils that are lower in saturated fat. Good choices include avocado, canola, corn, grapeseed, olive, peanut, safflower, sesame, soybean and sunflower oils.

EAT SMART ADD COLOR MOVE MORE BE WELL | LEARN MORE AT HEART.ORG/HEALTHYFORGOOD

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Did you know that omega-3 reduce inflammation?

3) WHAT ABOUT ANNE?

EXAMPLE

Time to look at fat intake:



Anne is 1,62 m and weighs 53 kilo,
fat needs to be spread over the day ...
3 times about **30** gram

"good"
non

"in between"
cheese
Bologna sausage

"bad"
cookie

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1st meal 10 gram cheese = 2 gram fat
2nd meal 10 gram sausage = 4 gram fat
3rd meal none.

total **6** gram....



And where are you standing when looking at fat consumption per day?

Try to take smart choices and reach for the healthier fats.

NUTRITION IN SPORT

EVALUATION OF AN EXAMPLE OF A FOOD DIARY

Anne – enough CARBS, low on PROTEIN and FAT



solution:
eat more healthy fats and more protein



TIME TO EVALUATE YOUR FOOD CHOICES

- Are you getting enough nutrients?
- What could you change?

NUTRITION IN SPORT

Remember the **food** you eat have big effects on your **health and performance**

For children/athletes:

- ✓ **Eat plenty of vegetables and 2-3 pics of fruit plus the „in between“ carbohydrates best before training/game (2 hours) and directly after**
- ✓ **Make sure you get enough protein – 1,5g/per kg and as quick as possible after training/game (like handfull of nuts)**
- ✓ **Make smart choices when it comes to fat and try to spread it through the day (with your every meal – for example 3 x day)**

If your food is balanced, is there anything else that can be effecting your performance?
....SLEEP, STRESS, SCHOOL, WORK, REGENERATION



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HOW TO HELP YOUR TEAM ?

- How is your team doing in the area of nutrition?
- How can you help your team to make better choices?

NUTRITION IN SPORT

- Pre Sport Snacks Tips

<https://halsanutrition.com/wp-content/uploads/2019/09/Pre-Sport-Snacks-For-Teens-Halsanutrition.pdf>

<https://www.stack.com/a/pre-game-snacks-for-athletes>

<https://www.eatright.org/fitness/sports-and-performance/tips-for-athletes/gameday-nutrition-tips-for-young-athletes>

- Tips for wellbeing applications
- <https://healthy-kids.com.au/kids/high-school-2/apps-for-wellbeing/>



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Key messages

- Every part around **YOU** is important and plays role in your performance
- Holistic approach – exercises, stress, health and **NUTRITION**
- Food should be your medicine, make the right choices
- Educate young athletes to understand and be aware that they can start making healthy choices and influence their own wellbeing and performance



Reference materials

- Session with Sascha van Lith – Erasmus Programme
- <https://www.runtastic.com/blog/en/what-are-macronutrients/>
- <https://mynutrition.wsu.edu/nutrition-basics>
- <https://healthy-kids.com.au/kids/high-school-2/macronutrients/>
- <https://www.verywellfit.com/macronutrients-2242006>
- <https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/fats/4-ways-to-get-good-fats-infographic>
- Find all presentations from this program on :



Thanks

This ready-to-share-presentation is a joint result of cooperation between 6 hockey coaches from Poland, Austria and Czech Republic, Hockey Club Den Bosch, the Dutch Hockey Federation and the EHF. This program is supported by the Erasmus+ program.

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What is more pure then giving without expecting something in return ?



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Thank you

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