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# Health Coaching Triathlon: A Model of Involvement in a Sports Federation

*Gesundheitscoaching Triathlon: dein Modell zur Integration im Sportverband*

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## Summary

- › **Regular physical activity** is now considered as a therapeutic per se for sedentary people or those with chronic diseases, and learned societies of sports medicine have developed the mantra "Exercise is medicine". However, despite the overwhelming evidence of its benefits on health and prevention of non-communicable diseases, there is still a gap between scientific data and development of exercise-based prevention program in the general population, or in clinical setting.
- › **The path for the recognition of sports** as a major contributor to health and wellbeing has been difficult for government authorities, healthcare providers, and federal sports authorities, because of many economical and medical barriers. Awareness and involvement of sports federations may help to reduce those barriers and fill this gap.
- › **Although it's still often mistakenly considered** a superhuman sport, triathlon brings together 3 sports disciplines frequently recommended for people wishing to begin regular physical activity, and thus seems to be an interesting choice as a sport for health for most people/patients. After recalling the national sport and health strategy 2019-2024 developed for Paris Olympics, we report here the four steps of the "Health Triathlon program" implemented by the French Triathlon Federation, to illustrate the main framework, the feasibility, first results and benefits for participants of this initiatives.

## Zusammenfassung

- › **Regelmässige körperliche Aktivität** gilt heute als ein Therapeutikum für Menschen mit sitzender Tätigkeit oder chronischen Krankheiten, und Gesellschaften der Sportmedizin haben das Mantra „Bewegung ist Medizin“ entwickelt. Trotz der überwältigenden Beweise für seinen Nutzen für die Gesundheit und die Prävention nichtübertragbarer Krankheiten besteht jedoch nach wie vor eine Lücke zwischen wissenschaftlichen Daten und der Entwicklung von Präventionsprogrammen, die auf Bewegung basieren, in der Allgemeinbevölkerung oder im klinischen Umfeld.
- › **Der Weg für die Anerkennung des Sports** als wichtiger Beitrag zu Gesundheit und Wohlbefinden war sowohl für Regierungsbehörden, Gesundheitsdienstleister als auch für die Bundessportbehörden aufgrund vieler wirtschaftlicher und medizinischer Hindernisse schwierig. Die Sensibilisierung und Einbeziehung der Sportverbände kann dazu beitragen, diese Barrieren abzubauen und diese Lücke zu füllen.
- › **Obwohl Triathlon immer noch oft fälschlicherweise** als übermenschlicher Sport angesehen wird, vereint er drei Sportdisziplinen, die häufig für die Gesundheit empfohlen werden, und scheint daher für die meisten Menschen/Patienten eine interessante Wahl als gesundheitsfördernde Sportart zu sein. Nach einem Rückblick auf die nationale Sport- und Gesundheitsstrategie 2019-2024, die für die Olympischen Spiele in Paris entwickelt wurde, berichten wir hier über die vier Schritte des „Gesundheitstriathlon-Programms“, das vom französischen Triathlonverband umgesetzt wurde, um den Hauptrahmen, die Machbarkeit, die ersten Ergebnisse und den Nutzen für die Teilnehmer solcher Initiativen zu veranschaulichen.

## KEY WORDS:

Sedentary Behaviour, Chronic Diseases, Evaluation, Prevention

## SCHLÜSSELWÖRTER:

Sitzendes Verhalten, chronische Krankheiten, Auswertung, Prävention



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## Introduction

For several years, France has invested in the field of physical activity for health purposes, which we will refer to as « sports health » throughout this article. However, the path for the recognition of sports health has been difficult both by government authorities and by federal sports authorities.

If physical exercise has been recognized since antiquity as having a positive influence on health, and can be used as a treatment per se, to date, this dimension has been little worn by sports clubs.

Before convincing the sports community, it was necessary to persuade the political authorities of the interest of such a practice, using an evidence-based medicine approach (9), on both health and medico-economic aspects. Many scientific publications have supported the concept of physical activity as a therapeutic for people with chronic diseases (1, 4, 10). In France, the collective expertise of INSERM released in 2008 was decisive in this field (4).



Figure 1

Evolution of physical qualities during 3 tests; left: Force MI=lower limb strength; middle: force MS=upper limb strength; right: vitesse=speed. Source: French Triathlon Federation.

The implementation of a ministry of health and sports also allowed making a real step forward. In 2009, a call for projects on physical activity and chronic diseases prompted sports federations to develop this field for the first time. Since then, the ministry responsible for Sports, the ministry responsible for Health and the French Olympic and National Committee have implemented a series of initiatives that have contributed to a sport health policy required from sports federations (sport-health and well-being regional plans, medico-sport health encyclopaedia).

### The Current Context of Sports Health in France: the National Sport and Health Strategy

The national sport and health strategy (2019-2024) is a public policy that is part of the legacy of the 2024 Olympic and Paralympic Games, aiming to replace the national sport-health and well-being plan (2016). This national strategy is driven by the ministry of Sports and the ministry of Solidarity and Health and is based on strong collaboration with other ministries.

In order to improve health of the population by promoting physical and sports activity for everyone, on a daily basis, with or without pathology, at all times of life, it offers solutions that allow this activity to be deployed in safe conditions, based on suitable, accessible and even labelled practices, with competent supervision.

This strategy develops 4 axes: the promotion of health and well-being through physical activity and sport ; the development and use of adapted physical activity for therapeutic purposes ; protecting the health of athletes and strengthening the

safety of practitioners and practitioners ; reinforcement and dissemination of knowledge.

Axis 1 encourages the practice of physical activity and sport at all ages of life, in a regular, sustainable and appropriate way, and fight against sedentary behaviours in daily life. Axis 2 recognizes the major role of physical activity in a care pathway for the treatment of chronic diseases. The decree of December 30th, 2016 lays down the conditions for dispensing adapted physical activity prescribed by a doctor to patients with a chronic disease. Thus, on the basis of these findings, physical activity, or exercise, should be offered as well as medication, surgery, etc. Today, the French National Authority for Health recommends the prescription of physical activity as a non-drug intervention.

### Health Triathlon Program: Example of the French Triathlon Federation

According to the report of INSERM (2008), many scientific articles support sport as an efficient way to prevent chronic diseases and promote health. This report points that doing regular physical activity improve emotional, physical wellness, quality of life and self-perception. This positive role has been observed with young and old people. Even when aged people begin physical activity, benefits are really interesting and clinically meaningful (4).

The report also enhance that swimming, cycling and fast walking could be the most beneficial activities for health. Thus triathlon which includes swim, bike and run could be the sports health number one, despite still often being considered as a "superhuman" sport. >

Table 1

Balance sheet of the physical condition for each person; number of repetitions performed; score by age group and gender for the lower body strength test.

	20-29 YEARS	30-39 YEARS	40-49 YEARS	50-59 YEARS	>60 YEARS	POINTS
Male	0	0	0	0	0	1
Female	0	0	0	0	0	
Male	23	24	23	22	20	2
Female	23	23	23	20	17	
Male	28	28	27	26	24	3
Female	27	27	26	24	20	
Male	31	31	30	29	27	4
Female	31	29	29	27	24	
Male	36	35	34	33	31	5
Female	35	33	33	31	28	



Figure 2

Evolution of physical qualities during 3 tests; left: coordination=coordination; right: endurance=aerobic capacity. Source: French Triathlon Federation.

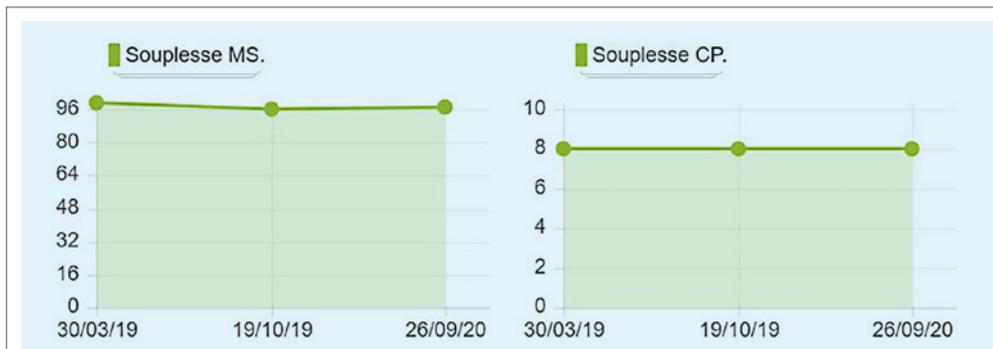


Figure 3

Evolution of physical qualities during 3 tests; left: souplesse MS=flexibility of the upper limbs; right: souplesse CP=lower body test. Source: French Triathlon Federation.

As public policies try to demonstrate that regular physical activity is a key factor for the mental, social and physical health and above all the fight against chronic diseases, this was an opportunity to illustrate the positive effects on health of triathlon. Thus, French Sport ministry and the French triathlon federation decided to invest this domain for the general interest of the French population (OBEPI and ONAPS reports) (7, 8).

Triathlon has a lot of benefits on health. First of all, it is an aerobic endurance sport which can help to improve physical condition, and, if associated with a balance diet can prevent chronic and metabolic diseases such as diabetes, myocardial infarction, high blood pressure. It can thus reduce the risk of musculoskeletal pathologies like tendinitis or joint problem as 2 of the 3 disciplines (swim and bike) are non-weight bearing. Moreover, triathlon enables to train the upper and lower body to have a well-balanced musculature.

Thus, the French triathlon federation has designed the "health triathlon coaching". This program includes 4 steps to implement a personalised training program. The first step is a questionnaire that people fill in online (figure 4; see supplemental material online). It is based on the French Sports and exercise medicine society questionnaire recommended for sports aptitude check-up. It has been validated by the French triathlon federation national medical committee. It collects data on the participant's lifestyle and state of health.

The second step consists in performing some physical tests in a club affiliated to the French triathlon federation, with a trained "health triathlon coach". Today, 250 coaches have been trained and recognized by the French triathlon federation. Only these coaches can access the health triathlon program and administer the tests. A maximum of 7 tests, scientifically validated, are achieved: an endurance test over 6 minutes

(walk or run) (2), a coordination test where participants have to perform a maximum score hopping one foot before the other in the boxes respecting the following order (0/1/0/2/0/3/0/4/0/1/0,...) (6), a speed test (30 m start launched), two strength tests (the upper body test is a maximal 90° push-ups test (3) and the lower body test consists of doing a maximum chair lift in 30 seconds (5), and two flexibility tests (the upper body test consists of stretching the shoulders with a stick and the lower body test is a flexibility test of the body).

The program determines, according to the state of health of the people, the number of tests the people can realise. For instance, obese people cannot access to all tests the first time. figure 5 and 6 illustrate an example of the protocol for the coordination test (see figure 5 and 6, supplemental material online).

In the third step, the health triathlon program will generate a balance sheet of the physical condition for each person (table 1). We have built our own scores (from 1: lowest to 5: highest score) for each test and different age groups (20 to 29 years old; 30 to 39 years old; 40 to 49 years old; 50 to 59 years old, and more than 60 years old). Considering the scores of the person, the program also give some advices. This balance sheet also enables coaches to characterise the physical condition of the participant and helps the subject to follow his progress from one test session to another. Each participant can also compare himself with others of the same age-group. A mean performance for each test and each class of age is also calculated. The program also calculates and indicates on the balance sheet the average performance of each class of age. Whenever a new test is performed, the average performance of the class of age is updated. Below is an example of our balance sheet of the physical condition.

During the last step, the coach can access to adapted and individualized training programs. Indeed, these programs take in consideration the answers of the questionnaire (first step) and the scores obtained at the different tests. These training programs have been medically validated by the medical commission of the FFTRI. Only trained health triathlon coaches can use them.

### What Do the 5 First Years of the Program Tell Us?

We will now present some data from our health triathlon program and above all the data of the scales of the tests according to the class of ages. After 5 years of development, from 2014 to 2019 (we will not present the data from 2020 because of the Covid-19 pandemic), 1906 participated in physical

tests, with a balanced sex ratio (945 women versus 961 men). About half of them (1025) were not affiliated to the French triathlon federation.

After some tests, participants can see the evolution of their scores for each test as shown in figures 1, 2 and 3: Force MI (lower limb strength), force MS (upper limb strength), vitesse (speed), coordination, endurance (aerobic capacity), souplesse MS (flexibility of the upper limbs), souplesse CP (lower body test).

This population has allowed us to construct our own scales and scores. That means we have enough people to have statistically significant scores for each class of age. Table 1 displays an example for the lower body strength test.

Force membres inférieurs (lower limb strength), nombre de répétitions effectuées (number of repetitions), points (score).

## Conclusion

In conclusion, even if it is still hard to appreciate the real impact of this program on the number of affiliated practitioners at the French triathlon federation, this program has launched a real sports health dynamic within French triathlon. Thus, among the 200 triathlon clubs that used this program, almost all have opened a “health triathlon” section with an adapted practise of triathlon. The French triathlon federation has developed a new training programs that enables triathlon coaches to deal with people with stable chronic diseases during their sessions. This shows that triathlon could be used and adapted to become a real healthy activity. We hope that this will inspire other French sports federations, or triathlon federations of other countries. ■

## Conflict of Interest

*The authors have no conflict of interest.*

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