

X REUNIÓN DE LA RED INTERUNIVERSITARIA DE INNOVACIÓN DOCENTE EN FARMACOLOGÍA

CASOS PRÁCTICOS EN NUTRICIÓN DEPORTIVA

Sergio Pérez Burillo

Departamento de Farmacología y Pediatría, Facultad de Medicina
Universidad de Málaga



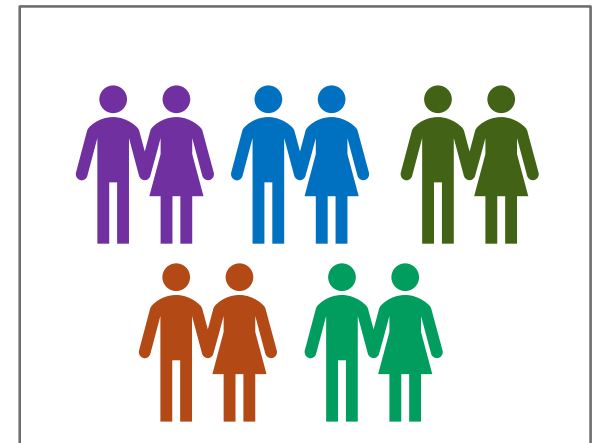
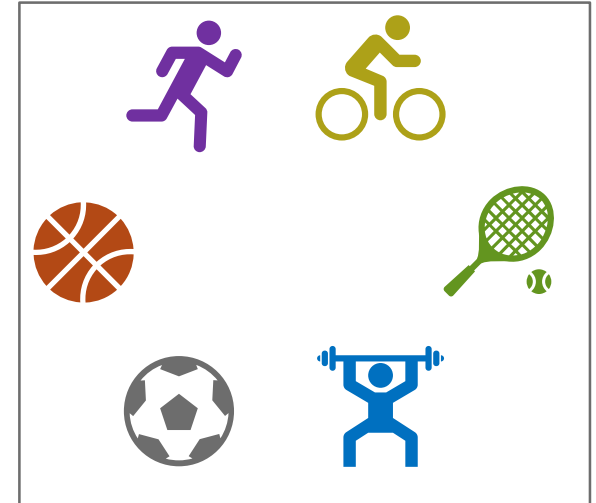
UNIVERSIDAD
DE MÁLAGA

 Facultat de Farmàcia i Ciències de l'Alimentació

UNIVERSITAT
DE VALÈNCIA

Servei de Formació Permanent
i Innovació Educativa (SFPIE)

LA NECESIDAD DE ESTUDIAR CASOS PRÁCTICOS



DIFICULTADES ENCONTRADAS PARA PLANTEAR LOS CASOS PRÁCTICOS



Planificación diaria realista → determina las necesidades energéticas y, por tanto, nutricionales



Necesidades energéticas de distintas actividades



Inteligencia Artificial



PROPONIENDO CASOS PRÁCTICOS

Casos prácticos para una ciclista durante el Tour de Francia y un tenista durante Roland Garros

Personal and race data

Katarzyna Niewiadoma is participating in the Tour de France Femmes. She is 169cm tall, age 30 and weights 60 kg (weight is estimated)

Today is the 5th stage of the Tour with the following characteristics (2024 edition)

- Route: Bastogne (Belgium) to Amnéville (France)
- Distance: 152.5km
- Style: flat stage



She ended up second (although she won the Tour) in 3h and 47 min at an average speed of 40 km/h.

Personal data

Rafael Nadal is participating in Roland Garros. He is 185 cm tall, age 36 and weights 85 kg (2022 data)

Quarter finals match vs Novak Djokovic (Nadal won in 4 sets, ~4 hours)

We need to prepare the nutritional plan for match day and the next (recovery day)



PROPONIENDO CASOS PRÁCTICOS

Programación diaria para el Tour de Francia

Tour de France Schedule

7:00 am → breakfast

8:00 am → bus to race, tactical briefing, material prep

10:00 am → race start

14:00 pm → race end; cool down in bike, go back to hotel

15:00 -16:00 → lunch, physiotherapy session, medical check-up

18:00 pm → free time

19:30 pm → dinner

21:30 – 22:00 pm → sleep



PROPONIENDO CASOS PRÁCTICOS

Programación diaria para Roland Garros



Match day

Activity

7:30 AM – Wake up, light breakfast, hydration
8:30 AM – Mobility + stretching session
10:00 AM – Light hitting session (30–45 min)
12:30 PM – Pre-match meal
2:00 PM – Arrival at venue, warm-up
3:30 PM – Match (2–4 hrs depending on length)
6:30 PM – Cool down, physio, ice bath
7:30 PM – Dinner, press duties
9:00 PM – Stretch, recovery boots, massage
10:30 PM – Sleep

Day after match

Activity

8:30 AM – Wake, breakfast
10:00 AM – Light practice (1 hr), mostly feel + footwork
11:30 AM – Recovery (bike, massage, stretching)
1:00 PM – Lunch
3:00 PM – Strategy session with coach (next opponent)
4:00 PM – Mental prep / visualization
6:00 PM – Dinner
9:30 PM – Sleep

PROPONIENDO CASOS PRÁCTICOS

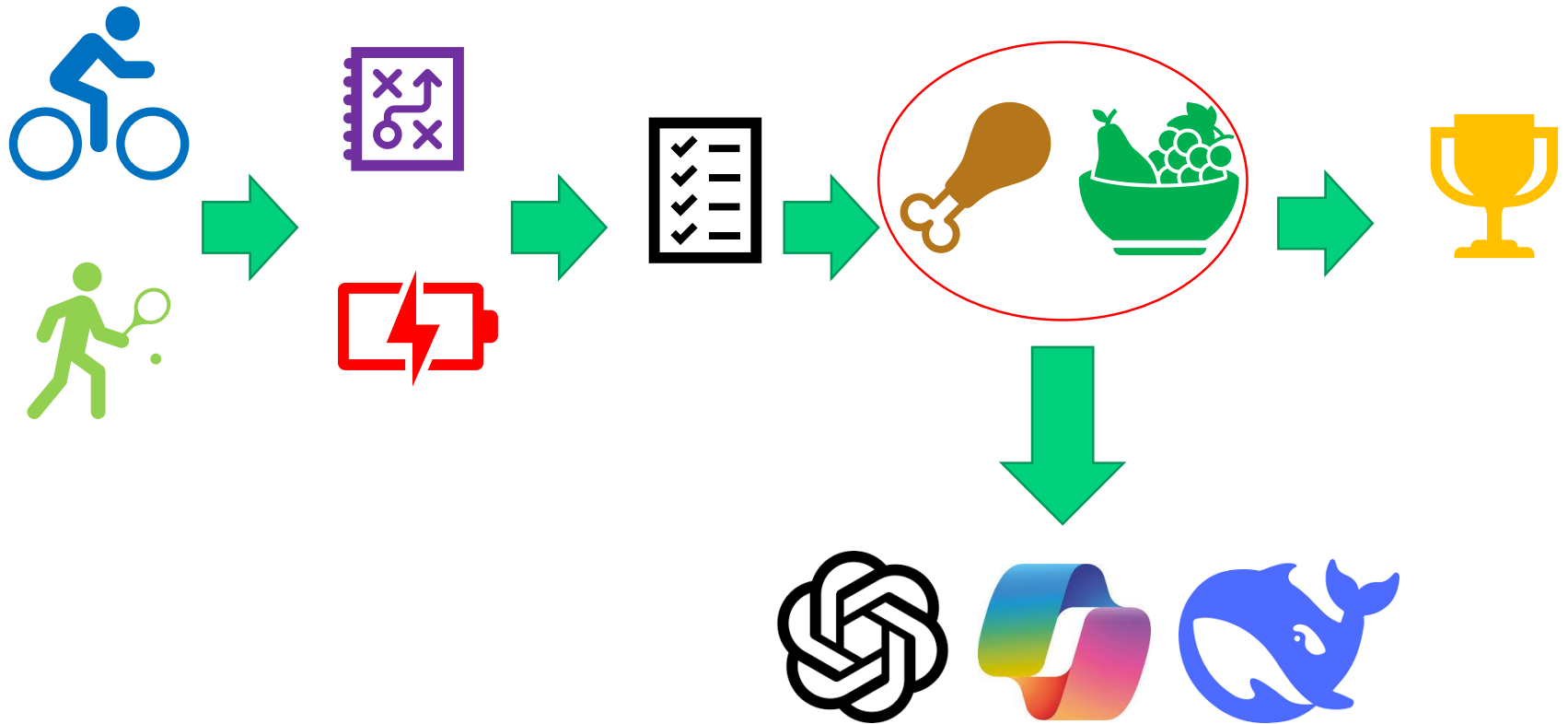
Ejemplo de estimación de requerimientos energéticos



Training Type	kcal/h (approx), lower limit	kcal/h (approx), upper limit	Estimated MET, lower limit	Estimated MET, upper limit	Mean MET
Recovery session - Stationary bike (light pace)	300	400	4.0	4.9	4.5
Recovery session - Stretching & mobility	150	210	2.0	2.6	2.3
Recovery session - Massage therapy (passive)	40	60	0.5	1.0	1.0
Light practice (drills, short rallies)	400	600	5.3	7.4	6.4
Moderate session (normal hitting, movement)	600	800	8.0	9.8	8.9
High-intensity session (match-level hitting, footwork drills)	800	1200	10.7	14.8	12.7
Match play (clay court, 2–4 hours)	600	650	8	8	8.0
Warm-up	300	500	4.0	6.2	5.1

PROPONIENDO CASOS PRÁCTICOS

Resolución casos prácticos





**Muchas gracias por
su atención!**