

eabderrahma

Analytics // Hydration and Running

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DELIVERABLE: ANALYTICS INSIGHTS

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This document summarizes quantitative insights from scientific research on hydration and athletic performance. It supports the user interviews with factual evidence about dehydration effects, body responses, and best practices.

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2% Body Mass Loss Already Impairs Performance

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Key Figure 1

Quote:

“A loss of just 2% of body mass from sweat reduces endurance and cognitive function.”

Source:

Journal of Athletic Training – Accuracy of Urine Color to Detect $\geq 2\%$ Body Mass Loss (2019)

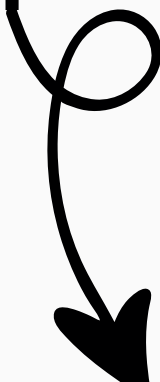
Meaning:

Confirms runners' feedback about fatigue and slower thinking when dehydrated (Nathan, William).

feel free to take notes on me

Dehydration Aerobic Capacity by 10–20%

Reduces



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Key Figure 2

Quote:

“Performance may decline by 10–20% in aerobic sports when fluid loss exceeds 2–3% of body weight.”

Source:

Human Kinetics – Dehydration and its Effects on Performance

Meaning:

Validates Guillaume’s and Joe’s exhaustion after long runs; even minor dehydration matters.

Hydration Should Be Planned Before, During, and After Exercise

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Key Figure 3

Add Text

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Quote:

“Effective hydration strategy begins hours before exercise and continues throughout recovery.”

Source:

The Effects of Hydration on Athletic Performance

Meaning:

Confirms Guillemette’s awareness and others’ tendency to drink only after runs showing the missing 'during' phase.

feel free to take notes on me

Heat Accelerates Fluid and Salt Loss



Key Figure 4

Quote:

“High ambient temperature and humidity increase sweat rate up to 1.5 liters per hour.”

Source:

Fluids and Hydration in Prolonged Endurance Performance – PubMed

Meaning:

Supports Anaëlle’s and William’s heat-related problems and the need for salt management in hot races.

Urine Color and Thirst Are Poor Hydration Indicators

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Key Figure 5

Quote:

“Athletes often misjudge their hydration status; thirst sensation lags behind actual fluid deficit.”

Source:

Harvard School of Public Health – The Importance of Hydration

Meaning:

Explains why runners think they're fine until fatigue hits; supports need for proactive cues.

Sweat Regulates Body Temperature



Insight 6

Quote:

“Sweating is the primary mechanism for maintaining core temperature during exercise.”

Source:

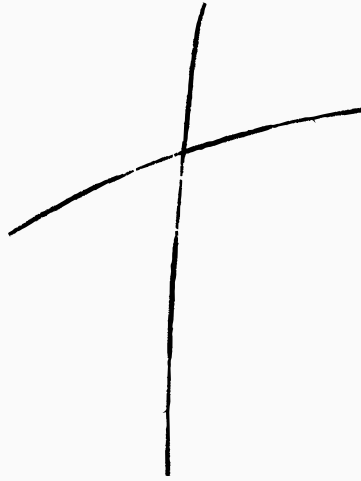
Fluid Replacement for the Physically Active – Journal of Athletic Training

Meaning:

Confirms why Guillaume and Joe suffered from heat when not hydrating early enough.

Conclusion//

These findings validate the runners' real-world experiences with measurable data. Even slight dehydration reduces performance and concentration, especially under heat. The combination of human insight and scientific proof sets the foundation for creating Pierre's persona and mapping his user journey in the next step.



This research confirms that even small hydration losses can limit both physical and mental performance.

The next phase will turn this data into a human story through Pierre's persona

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