



ANSES opinion on the risks associated with the consumption of food supplements for athletes seeking to develop muscle or reduce body fat

30th FP meeting, 8-9 February 2017, Parma

Background and subject of the mandate

Background

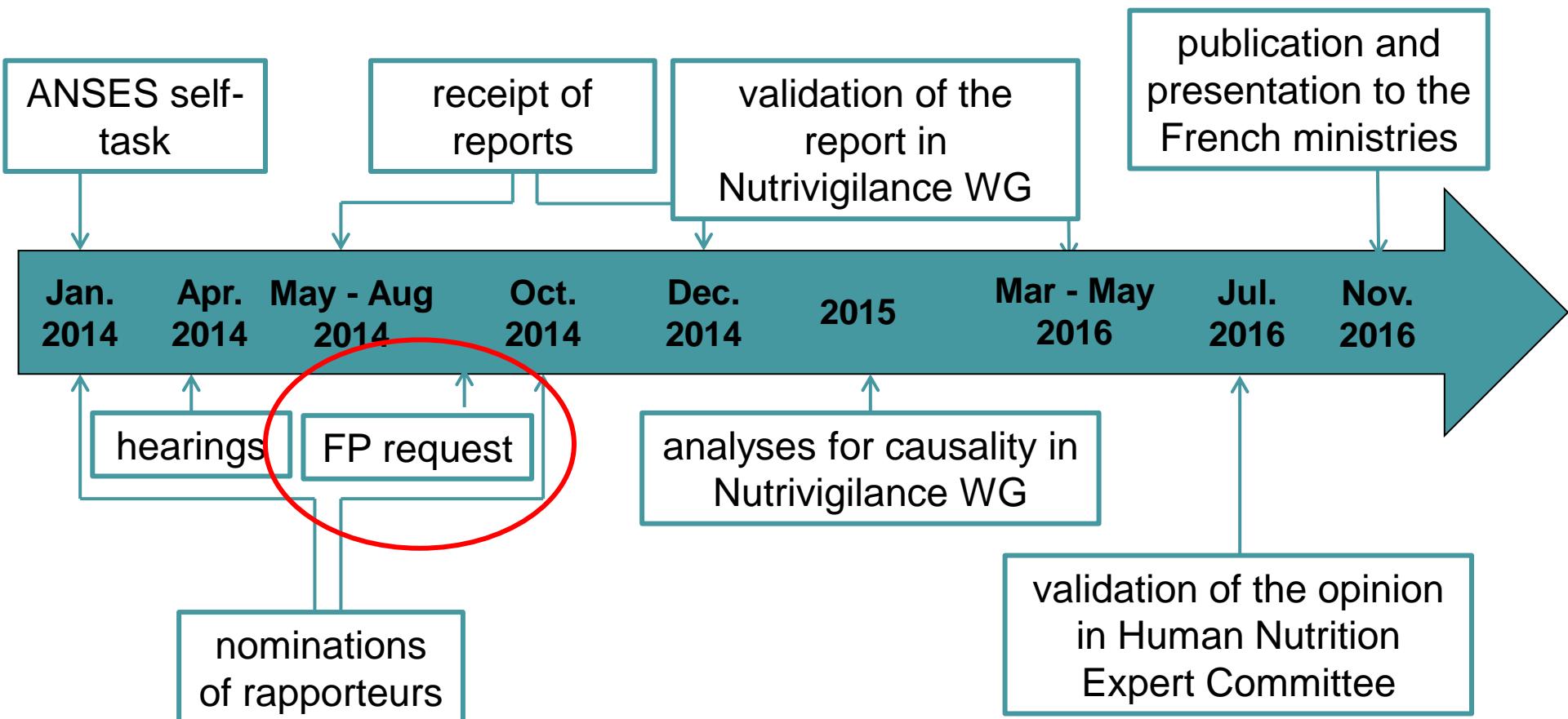
- 49 reports of adverse effects
- Increase of consumption
- Consumption not followed by healthcare professionals



Subject of the mandate

- Food supplements:
 - exclusively food supplements seeking to develop muscle mass or reduce body fat
 - **intended specifically for athletes**
- No assessment of possible effectiveness of food supplements for athletes

Assessment



Methodology of expertise (1)

• Nutrивigilance reports

- 49 reports of adverse effects, 17 underwent a causality analysis
- Adverse effects: cardiovascular & psychological ++, hepatic, renal, neurological, dermatological, gastroenterological

• Consultation of the Toxicovigilance Coordination Committee (CCTV)

- Summary of the cases notified to the poison control centres

• Contact with European & International counterparts

- Multilateral request to the **Focal points**, 17 answers:
 - Reported cases in Spain, Finland, Italy
 - Adverse effects: hepatic, cardiovascular, renal, dermatological & et psychological
- Request to USA & Canada

 European Food Safety Authority Advisory Forum & Scientific Cooperation Unit	 Advisory Forum & Scientific Cooperation Unit
PART III – SUMMARY OF RESPONSES TO ORIGINAL REQUEST⁷	
Replying Institution: ANSES Country: France Date of summary: 18/12/2014	
<p>Most countries do not have information related to the consumption of bodybuilders's food supplements:</p> <ul style="list-style-type: none">- Portugal- Czech Republic- Slovenia- Belgium- Estonia- Poland- Cyprus- Slovak Republic- Iceland - but discussions that it is of interest and important to gather such information- Hungary	
Requesting Institution Country: FRANCE Date of request: 30/09/2014 Request Number²: 13/2	
Title of request	
Description of request (including background)	<p>In Spain: Recently there has been a case of severe hepatitis after the consumption of HAVOC capsules, sold as food supplements. The case was notified via RASFF and the analysis of composition revealed the product contained 2a,3a-epithio-17a-methyl-5a-androstan-17b-ol, a prohormone. Since the substance is a medicine, the product was withdrawn by the Spanish Agency for Medicines and Sanitary products. The link to the notification, as well as to some other related earlier cases, is provided below (in Spanish): http://www.aemps.gob.es/informa/notasInformativas/medicamentosUsoHumano/medIlegales/2014/ICM_MI_14-14-havoc.htm http://www.aemps.gob.es/informa/notasInformativas/medicamentosUsoHumano/medIlegales/2013/docs/ICM_MI_15-2013-epistane18.pdf http://www.rfeda.es/docs/noticias/metilepitostanol.pdf</p>
Addressee(s) of request	
Reply to request to be seen	
Timeline for submission replies	

⁷ This III Part of the form is to be filled in by the Institution responsible for the original request.

The information provided in this form is not comprehensive and is intended as a quick summary of the request.

Methodology of expertise (2)

- **Hearings**

- French Federation of Weightlifting, Weight Training, Athletic Strength and Bodybuilding (FFHMFAC)
- French Society for Exercise and Sport Medicine (SFMES)
- French Association of Dieticians-Nutritionists (AFDN)



- **Literature review**



Results from the literature review



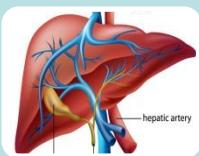
Cardiovascular effects

caffeine or other sympathomimetic substances (ephedrine, *p*-synephrine, DMAA, clenbuterol, sibutramine) or in association; anabolic androgenic steroids; 2,4-DNP; evodiamine



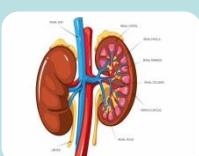
Neuropsychological effects

caffeine; anabolic androgenic steroids; clenbuterol; 2-phenylethylamine (PEA); β -alanine; 2,4-DNP



Hepatic effects

Garcinia cambogia; DMAA; anabolic androgenic steroids; sibutramine



Renal effects

creatine; *Garcinia cambogia*; 2,4-DNP



Dermatological effects

sibutramine; theobromine; 2,4-DNP



Other effects

creatine (cramps); anabolic androgenic steroids (hormonal disturbance)

- Causality link not always established.
- Absence of data in literature / potential adverse effects of a substance in humans does not guarantee its safety.

Problems identified



Adverse effects sometimes important +
Widespread consumption +
Large diversity of ingredients

} health risks



Absence of specific advices by healthcare professionals
despite inter- & intra-individual variability



Insufficient training of healthcare professionals in athlete
nutrition +
lack of multidisciplinary approach involving sports managers
& healthcare professionals



Extremely hypothetical benefits expected



Widespread practice, even cultural



Lack of efficient information for practitioners



Recommendations

For consumers

- ANSES **strongly advises against** the consumption of food supplements aiming to develop muscle or reduce body fat:
 - for people with cardiovascular risk factors or suffering from heart disease, impaired kidney or liver function, or neuropsychiatric disorders;
 - for children and adolescents;
 - for pregnant or breastfeeding women.
- The consumption of food supplements containing caffeine should be **avoided before and during any sporting activity**, as well as by any individuals susceptible to the effects of this substance.
- The **concomitant consumption** of several food supplements or their combined consumption with medicinal products **should be avoided**.
- The consumption objectives of the food supplements should be discussed with a **healthcare professional**.
- The individual's doctor and pharmacist should be **informed** that he/she is taking food supplements.
- Athletes should pay attention to the **composition** of the products consumed, and favour products complying with AFNOR standard **NF v94-001** as well as supply channels with the best oversight by the public authorities.



Recommendations

For sport managers

- The use of food supplements should only be considered as part of a **multidisciplinary approach** involving both sports managers and healthcare professionals;
- **Efficient information** for practitioners, especially targeting young athletes, should be provided.



Recommendations

For public authorities

- Considering the **widespread** consumption of these food supplements, the Agency recommends that the public authorities conduct a debate on the **appropriateness of distributing these products** at sites where sports are practised
- ANSES considers useful to undertake:
 - **Consumption** surveys;
 - Additional studies on the **interactions** between the multiple ingredients found in the same food supplement;
 - Additional studies on the **fate in the body and the long-term toxicity** of the plant extracts and certain substances found in food supplements for athletes



Recommendations

For healthcare professionals

ANSES reminds healthcare professionals of the importance of **reporting** to its nutrивigilance scheme any adverse effects likely to be related to the consumption of food supplements for athletes about which they become aware



Anses Agence nationale de sécurité sanitaire Alimentation Environnement Travail

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anses alimentation, environnement, travail

Nutrивigilance

Télédéclaration d'effet indésirable susceptible d'être lié à la consommation de complément(s) alimentaire(s) ou de certains produits alimentaires

Dispositif national de nutrивigilance sur les produits alimentaires - Art. L. 1313-1 du Code de la Santé Publique

Vous recevez un accusé de réception par courriel après validation finale de votre déclaration (sous réserve d'un courriel valide).

FICHE DE NOTIFICATION D'EFFET(S) INDESSIRABLE(S) SUITE A LA CONSOMMATION D'UN PRODUIT ALIMENTAIRE

A - Déclarant
Les coordonnées du déclarant sont requises pour permettre, si nécessaire, de compléter l'information

Profession
 Médecin Pharmacien Autre

Autre, précisez

Nom *

Adresse *

Code postal *

Ville

Téléphone

Telexcopie

Courriel

B - Données relatives au consommateur

Nom * (2 premières lettres)

<https://pro.anses.fr/nutrивigilance/>

19/01/2017

Thanks for your answer to our multilateral request in the context of this ANSES self task

For more information:

Press news:

<https://www.anses.fr/en/content/food-supplements-athletes-risks-health-and-uncertain-benefits>

ANSES Opinion in English:

<https://www.anses.fr/en/system/files/NUT2014SA0008EN.pdf>

ANSES Opinion and collective expertise report in French:

<https://www.anses.fr/fr/system/files/NUT2014SA0008Ra.pdf>

