

This is a self-archived version of an original article. This version may differ from the original in pagination and typographic details.

Author(s): Chan, Derwin King Chung; Tang, Tracy Chor Wai; Yung, Patrick Shu-Hang; Gucciardi, Daniel F; Hagger, Martin

Title: Is unintentional doping real, or just an excuse?

Year: 2019

Version: Accepted version (Final draft)

Copyright: © the Authors, 2019.

Rights: CC BY-NC-ND 4.0

Rights url: <https://creativecommons.org/licenses/by-nc-nd/4.0/>

Please cite the original version:

Chan, D. K. C., Tang, T. C. W., Yung, P.-H., Gucciardi, D. F., & Hagger, M. (2019). Is unintentional doping real, or just an excuse?. *British Journal of Sports Medicine*, 53 (15), 978-979.
doi:10.1136/bjsports-2017-097614

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17

Is Unintentional Doping Real, or Just an Excuse?

Derwin King Chung Chan^{1, 2}

Tracy C. W. Tang¹

Patrick S. H. Yung³

Daniel F. Gucciardi²

Martin S. Hagger²

¹The University of Hong Kong

²Curtin University, Perth, Australia

³The Chinese University of Hong Kong

This project is supported by the World Anti-Doping Agency Social Science Research Grant award to Dr Derwin Chan (University of Hong Kong). The authors do not have conflicts of interests directly relevant to the content of the paper. Correspondence concerning this article should be addressed to Derwin K. C. Chan, School of Public Health, The University of Hong Kong. Email: derwin.chan@hku.hk.

Abstract

19 There has been increased attention on athletes' intentions and motives for doping.
20 However, the majority of studies on doping intentions to date have assumed that
21 doping is a consciously-controlled, goal-directed behaviour, and neglected the
22 possibility that athletes could be unwittingly and unintentionally exposed to doping.
23 Unintentional doping is often regarded as an excuse given by athletes caught doping,
24 but it could happen in circumstances where athletes are unaware that the food,
25 drinks, supplements, or medications they consume contain banned performance-
26 enhancing drugs. Research into unintentional doping is in its infancy, but debates
27 persist about the importance of this controversial topic. In this article we discuss the
28 importance of unintentional doping as an issue in sport. We discuss the relevance of
29 this research area based on statistics, reports, and recommendations (e.g., anti-
30 doping codes) offered by WADA, together with the evidence from recent empirical
31 research. We also outline the importance of formative research on effective
32 interventions to manage unintentional doping.

33 **Keywords:** Doping; prohibited substances; supplements; accident; drug use.

34 Although some athletes who engage in doping do so willingly in order to gain an
35 unfair advantage (i.e., “to cheat”), the possibility of athletes doping inadvertently or
36 unintentionally cannot be discounted. In this article, we aim to address common
37 misconceptions of the notion of “unintentional doping”, and discusses the relevance
38 of this area based on statistics, reports, and recommendations (e.g., anti-doping
39 codes) offered by World Anti-Doping Agency (WADA), together with the evidence
40 from recent empirical research.

41 Unintentional doping (also known as “inadvertent” or “accidental” doping)
42 refers to the accidental consumption of performance-enhancing substances on
43 WADA’s banned list ¹. It often occurs when an athlete uses a product (e.g., nutritional
44 supplements, ‘energy’ drinks or products, medication, herbal or ‘natural’ products)
45 that contains the banned substance or is exposed to the banned substance in routine
46 situations (e.g., drug smoke, hormone-tainted meat), whilst being unaware of the
47 presence of the banned substance ¹⁻⁴. It is acknowledged that unintentional doping is
48 often used as an excuse by athletes to explain adverse analytical findings in doping
49 controls ⁴. WADA has adopted a near zero-tolerance policy when it comes to athletes
50 claiming unintentional use. The relevant WADA statute notes that positive tests
51 claimed to be “... attributed to the misuse of supplements and taking a poorly labelled
52 dietary supplement is not an adequate defence in a doping hearing” ⁵. Only strong,
53 non-circumstantial evidence would be sufficient to exonerate an athlete claiming
54 accidental doping during the post-transgression disciplinary process. Otherwise they
55 would be considered to have violated anti-doping rules and be served with the
56 requisite penalty ². Although WADA does not have an exact figure of the incidence of
57 unintentional doping, their anti-doping rule violation statistics indicated that 6% and
58 10% of cases of doping considered in 2014 eventually led to “no sanction” and

59 “therapeutic use exemption (TUE)” decisions, respectively ⁶. The major reason for a
60 “no sanction” decision is that athletes unwittingly consumed certain products
61 containing the banned substance ⁵. Indeed, unintentional doping could still lead to
62 sanction. Similarly, athletes who take banned substances for therapeutic or medical
63 purposes could also lead to adverse analytical findings in doping controls and would
64 be considered to have breached the anti-doping rule unless a TUE is applied for
65 beforehand (exempt in case of emergency or other exceptional circumstances). Thus,
66 WADA’s percentages of “no sanction” and “TUE” may provide an illustration of the
67 extent of accidental or unintentional doping.

68 Another possible situation where an athlete may consume banned substances
69 is from self-medication and supplement use ^{1, 2}. It is important to note that trained
70 physicians and coaches are not always present to safeguard athletes from
71 consuming medications, supplements, or other food and drink products that may
72 contain banned substances. Analyses of a wide range of dietary supplements
73 available for purchase via the internet found that over 17.4% of the products either
74 contained, or were contaminated with, performance-enhancing substances banned
75 by WADA (e.g., anabolic steroids, metadienone, and hormones/prohormones) ⁷.
76 These prohibited substances could also be present in drugs for medication purposes
77 (e.g. certain common cold and influenza remedies, asthma inhalers) that may be
78 obtained via the internet or in pharmacies and drugstores without a medical
79 prescription.

80 The risk of unintentional doping is omnipresent in an athlete’s daily life, and
81 can be exacerbated by a lack of awareness placing athletes at high risk ³. A recent
82 experimental study on athletes’ awareness of unintentional doping revealed that less
83 than half (40.6%) of adolescent athletes refused to take or eat an unfamiliar food

84 product provided, and only 16.1% read the ingredients table prior to consumption ⁸.
85 Even if athletes do pay attention to the risks, questions remain as to whether or not
86 they receive sufficient and correct information with regards to the banned substances
87 that may be present in food, supplements, and medications. A recent qualitative
88 investigation revealed that athletes tend to seek advice about the use of dietary
89 supplements from either parents or coaches rather than qualified sport physicians or
90 dieticians who have received training from authorised bodies on anti-doping
91 procedures (e.g., WADA and its regional branches) ⁹.

92 The omnipresence of banned substances in the food, drinks, supplements,
93 and medications, that athletes encounter on a daily basis coupled with athletes' low
94 awareness of the risks may lead to unintentional doping, and may be the reason why
95 some high-profile athletes claim that they have tested positive in doping controls due
96 to the presence of banned substances in their diet of which they were unaware ¹⁰.
97 Such anecdotal cases and research findings are consistent with WADA's statement
98 in that a significant number of positive analytic findings have been attributed to the
99 misuse of supplement and medication ⁶. Therefore athletes should be extremely
100 cautious of unintentional doping when using supplements, herbal or natural products,
101 and non-prescription medication, or being in situations where exposure to
102 unintentional doping (e.g., drug smoking, consuming food/ drink products that are
103 contaminated with banned substances) is more likely.

104 In conclusion, unintentional doping should be considered an important
105 consideration in the prevention of doping cases and transgression of WADA rules on
106 banned substances. WADA's policies make it clear that the onus lies largely on
107 athletes and their support teams to be aware of the potential for banned substances
108 to be present in athletes' diets and take appropriate precautions. However, there is a

109 dearth of evidence on how to effectively manage unintentional doping prevention.
110 Formative research is needed to develop effective interventions to safeguard athletes
111 from the risk of unintentional doping. These interventions, ultimately, should involve
112 all stakeholders (e.g., athletes, coaches, sport managers/organisations, practitioners
113 of sport medicine, sport dieticians, and doping control officers/ agencies) to offer a
114 collaborative educational and preventive program for the prevention of unintentional
115 doping^{3, 10}.

116

117

References

- 119 1. Chan DKC, Ntoumanis N, Gucciardi DF, Donovan RJ, Dimmock JA,
120 Hardcastle SJ, et al. What if it really was an accident? The psychology of
121 unintentional doping. *Br J Sports Med*. 2016;50:898-9.
- 122 2. Fuchs P. The sanctioning process for specified substances in the 2015 world
123 anti-doping code-A fresh start?, 8(1), 127. *Australian and New Zealand Sports Law*
124 *Journal*. 2013;8(1):127-42.
- 125 3. Anderson JM. Evaluating the Athlete's Claim of an Unintentional Positive Urine
126 Drug Test. *Curr Sports Med Rep*. 2011;10(4):191-6.
- 127 4. Whitaker L, Backhouse S. Doping in sport: An analysis of sanctioned UK
128 rugby union players between 2009 and 2015. *J Sports Sci*. 2017;35(16):1607-13.
- 129 5. World Anti-Doping Agency. Dietary and nutritional supplements 2016 [updated
130 2016]. Available from: <http://www.wada-ama.org/>.
- 131 6. World Anti-Doping Agency. 2014 Anti-Doping Rule Violations (ADRVs) Report
132 2016. Available from: <http://www.wada-ama.org/>.
- 133 7. Baume N, Mahler N, Kamber M, Mangin P, Saugy M. Research of stimulants
134 and anabolic steroids in dietary supplements. *Scand J Med Sci Sports*.
135 2006;16(1):41-8.
- 136 8. Chan DKC, Donovan RJ, Lentillon-Kaestner V, Hardcastle SJ, Dimmock JA,
137 Keatley D, et al. Young athletes' awareness and monitoring of anti-doping in daily life:
138 Does motivation matter? *Scand J Med Sci Sports*. 2014;25(6):e655-63.
- 139 9. Kim J, Lee N, Lee J, Jung SS, Kang SK, Yoon JD. Dietary Supplementation of
140 high-performance Korean and Japanese judoists. , 23(2). . *Int J Sport Nutr Exerc*
141 *Metab*. 2012;23:2.

142 10. Morente-Sanchez J, Zabala M. Doping in sport: A review of elite athletes'
143 attitudes, beliefs, and knowledge. *Sports Med.* 2013;43(6):395-411.

144