



Australian
Competition &
Consumer
Commission

Review of the mandatory safety standard for exercise cycles

Consultation paper

September 2016



Disclaimer

The Australian Competition & Consumer Commission (ACCC) has developed this consultation paper to seek the views of stakeholders about the mandatory safety standard for exercise cycles.

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1. Introduction

The ACCC is reviewing the mandatory safety standard for exercise cycles because:

- exercise cycle designs have changed since the mandatory safety standard was introduced in 1994
- new exercise cycles appear to cause lower injury rates than older exercise cycles that are still in use
- we are considering whether the mandatory safety standard is still needed.

The ACCC seeks stakeholder information that could assist in the review.

The consultation process outlined in this paper may be the only opportunity for you to provide input into this review.

We encourage you to make a submission.

2. Policy options

This consultation paper discusses three policy options:

- Option 1 Keep the current mandatory safety standard (status quo)
- Option 2 Revise the mandatory safety standard to adopt international standards
- Option 3 Revoke the mandatory safety standard

3. Background

3.1 Exercise cycles in Australia

Exercise cycle designs that were common before the mandatory safety standard was introduced were typically chain-driven and used fan-style wheel spokes to create resistance. To comply with the mandatory safety standard, these designs required external guards to prevent body parts such as fingers catching in moving parts. Some of these older design models are likely to remain in circulation, particularly through ad-hoc second-hand sales and between family members. The mandatory safety standard does not apply to second-hand exercise cycles sold privately but does apply to those sold by second-hand dealers.

Exercise cycle designs have improved since 1994. Modern designs are inherently safer with single casings that prevent access to moving parts or that use belts or magnetic resistance technology.

Most exercise cycles sold in Australia are manufactured overseas and imported for retail sale. Exercise cycles are available in a wide range of brands from a diverse range of retailers selling products for home use:

- speciality fitness and gymnasium equipment suppliers
- sporting goods and equipment retailers
- major retail chains

- lease and/or hire providers
- second-hand dealers
- online retailers.

Depending on size, quality and features, and whether they are for upright or recumbent use, exercise cycles retail from around \$90 to over \$2000.

3.2 Injuries and deaths involving exercise cycles

Exercise cycles started injuring children in significant numbers in the early 1990s, with the growing popularity of exercise cycles in the home. Injuries to children included traumatic amputations and crushing caused by accessing the crank and drive train components. Access to the fan-style wheel also injured children's fingers and hands. A study published in the Medical Journal of Australia in September 1991 highlighted that nearly 90 per cent of children injured were of pre-school age and too young to identify the potential hazards.

The injury rate among children has decreased since the mandatory safety standard was introduced in 1994. Although consolidated national injury data on exercise cycles is not available, Victorian injury data provides some guidance.¹ Young children aged 0–4 years accounted for 42 per cent (59 injuries) of exercise cycle emergency department presentations in Victoria between 1995 and 2000, compared with 29 per cent (40 injuries) from 2006 to 2010. Similarly, presentations for children aged 5–9 years decreased from 29 to 21 per cent (from 51 to 37 injuries) in the same timeframe.

Some kinds of serious injuries that were associated with older design models have been largely eliminated since the introduction of the mandatory safety standard. Traumatic amputations, which represented almost eight per cent of injuries five years after the standard commenced, are no longer reported in Victorian injury statistics.

Based on recent compliance surveillance, it is likely that most injuries currently reported as a result of exposure to exercise cycles are related to use of older design models.

No children have died from accessing the moving parts of exercise cycles.

3.3 The mandatory safety standard

The mandatory safety standard was introduced in 1994 and was updated in 1997. It prescribes the key safety requirements and testing methods from the voluntary Australian standard AS 4092:1993 *Exercise cycles – safety requirements*.² The voluntary Australian standard has not been updated since 1993.

Key requirements of the mandatory safety standard include:

- protective guards to prevent a child's fingers and toes reaching hazardous moving parts
- testing to prevent entrapment hazards
- testing for the seat and its support to resist failure which could impale or injure the user
- user instructions to outline assembly, maintenance and correct seat adjustment.

¹ Victorian Injury Surveillance Unit (VISU), Exercise bike-related injury: Victorian Emergency Minimum Dataset (VEMD) from January 2006 to December 2010, Melbourne, August 2012, viewed 19 August 2016, https://www.monash.edu/_data/assets/pdf_file/0011/218567/exercise-bike.pdf (compared with VEMD injury data from October 1995 to December 2000).

² [Consumer Protection Notice No. 9 of 1997](#) (Cth).

3.4 Compliance with the mandatory safety standard

The ACCC has comprehensively surveyed retail and online stores over many years and compliance with the mandatory safety standard has been consistently high. The last survey was in 2015 and all of the surveyed exercise cycles complied with the mandatory safety standard. Recent online research also indicates that all of the exercise cycles available online from overseas suppliers are likely to comply with the mandatory safety standard.

During an earlier 2013 survey, the ACCC observed a minor re-emergence of some older designs in the first-hand market. However, those products had safe design features and complied with the mandatory safety standard.

There has only been one exercise cycle recall in Australia. In 2001, Leisure World Australia recalled the Lifestyler DT900 exercise cycles because a design fault exposed the chain components. The supplier also agreed to an enforceable undertaking to provide full refunds to consumers and implement a compliance program.

4. Adopting international standards

The most widely used international standards for exercise cycles include:

- Europe: EN 957-5:2009: Stationary training equipment – Part 5: Stationary exercise bicycles and upper body crank training equipment, additional specific safety requirements and test methods
- Europe: EN 957-10:2005: Stationary training equipment- Part 10: Exercise bicycles with a fixed wheel or without freewheel, additional specific safety requirements and test methods
- International: ISO 20957-1:2013: Stationary training equipment – Part 1: General safety requirements and test methods, supplemented and amended by ISO 20957-10:2007: Stationary training equipment- Part 10: Exercise bicycles with a fixed wheel or without freewheel, additional specific safety requirements and test methods
- USA: ASTM F1250-13: Standard specification for stationary upright and recumbent exercise bicycles and upper body ergometers.

The ACCC uses the following criteria when assessing international standards for use in Australia:³

- 1) Addressing safety concerns: Is there evidence that the international standard provides an acceptable level of consumer safety?
- 2) Comparable jurisdiction to Australia: Is the international standard published or developed by a legitimate standards body or government agency from an economy or nation with comparable economic and regulatory processes to Australia?
- 3) Applicability to the Australian context: Is the international standard applicable and sufficient in the Australian context?

The ACCC considers the international standards referred to above to meet these criteria.

The voluntary Australian standard and the international standards referred to above have broadly similar approaches to safety requirements and testing methods that address safety concerns; in particular the hazards to children. Key differences include:

³ ACCC, International standards for the safety of consumer products - criteria for acceptance, ACCC policy principles, viewed 22 July 2015, www.productsafety.gov.au/content/index.phtml/itemId/1014180.

- The voluntary Australian standard is outdated and does not address newer design technology like fan belts or recumbent exercise cycles, which are covered in the international standards.
- The voluntary Australian standard is more prescriptive in some areas:
 - EN 957-5:2009 does not explicitly specify the edges and parts directly accessible to the product to be free from burrs
 - The international standards do not explicitly require external guards to be securely and permanently fixed to the cycle frame, that can only be removed with a tool
 - ASTM F1250-13 only requires the drive train elements to be guarded, without specifying whether the flywheel and spokes are to be guarded or whether the flywheel is to have a smooth surface
 - Unlike the voluntary Australian standard, international standards reference other standards for safety and testing requirements.
- The voluntary Australian standard requires a minimum test probe size of 5.6 mm compared with 9.5 mm under ISO 20957-1:2013 and 9.3 mm under ASTM F1250-13. The minimum test probe size in the voluntary Australian standard was based on anthropometric data on children's finger sizes at the time. It is unclear whether this data is still relevant.
- The voluntary Australian standard is less prescriptive in some areas:
 - EN 957-5:2009, EN 957-10:2005 and ISO 20957-10:2007 specify a 10 mm pedal crank clearance from the stationary parts of exercise cycle. The voluntary Australian standard suggests a clearance between 12-20 mm where practicable. ASTM F1250 only prescribes a minimum clearance of 60 mm below the pedals when they are at the lowest level.
 - EN 957-10:2005 and ISO 20957-1:2013 prescribe a minimum radius for the edges and corners of the surface supporting bodies. The voluntary Australian standard does not.
 - ISO 20957-1:2013 explicitly covers pull-in points for rope and belt drives with safety and testing requirements.
 - ISO 20957-1:2013 covers safety and testing requirements for moving parts during folding and unfolding. Folding exercise cycles have become common in the market since 1994.
 - ISO 20957-1:2013 and ISO 20957-10:2007 prescribe safety features for locking mechanisms and an emergency braking system. The voluntary Australian standard does not provide for this but the foreword encourages manufacturers to include a locking mechanism.

Given that the international standards are more recent and provide a comparable level of safety, they are appropriate for application in Australia if there is a need for continued regulation.

5. Detailed description of policy options

Option 1 - Keep the current mandatory safety standard (status quo)

Description

Maintaining the status quo would mean no changes to the mandatory safety standard for exercise cycles. Exercise cycles would remain subject to the long-standing mandatory safety requirements that currently apply.

Benefits

The penalties associated with breaching the mandatory safety standard would continue to apply and provide an incentive to suppliers to supply exercise cycles in compliance with the requirements of the mandatory safety standard.

There would be no additional compliance and regulatory costs.

Limitations

The mandatory safety standard predates contemporary industry practices and technological advancements, such as the use of belts, magnetic resistance technology and recumbent designs. The mandatory safety standard may therefore be redundant and impose unnecessary compliance and regulatory costs.

Option 2 – Revise the mandatory safety standard to adopt international standards

Description

This option would involve revising the mandatory safety standard to adopt the relevant sections of international standards EN 957-5:2009, EN 957-10:2005, ISO 20957-1:2013 and ASTM F1250-13. These are the most widely accepted safety standards for exercise cycles in the world. Suppliers would need to become familiar with the terms of the revised mandatory safety standard and ensure products are compliant.

Benefits

The penalties associated with breaching the mandatory safety standard would continue to apply as an incentive to suppliers to supply compliant exercise cycles.

Suppliers are already familiar with these international standards and exercise cycles surveyed by the ACCC already claim compliance with these standards, particularly ASTM F1250 (although the products did not specify which version of the standard).

Suppliers and consumers may also benefit from a mandatory safety standard that references new design technology.

Limitations

Contemporary industry practices and technological advancements, such as the use of belts, magnetic resistance technology and recumbent designs suggest a mandatory safety standard may no longer be required and could therefore impose unnecessary compliance and regulatory costs.

Option 3 - Revoke the mandatory safety standard

Description

If the mandatory safety standard is revoked, the general provisions of the Australian Consumer Law (ACL) continue to apply. These provisions apply to all consumer goods, including the majority of consumer goods for which there is no mandatory safety standard.

The ACL provides consumer guarantees, one of which requires goods to be of acceptable quality including that they are safe. The remedy for the supply of an unsafe product under the consumer guarantees regime is a refund, repair or replacement of the product. Consumer protections also exist to safeguard against suppliers engaging in conduct that is likely to be misleading or deceptive.

Additionally, there are general product safety provisions for mandatory injury reporting, recalls and product liability, and the ACCC would still be able to take safety action against suppliers of unsafe exercise cycles, for example, through compulsory recalls.

These provisions give suppliers an incentive to ensure that the goods they supply are safe.

Benefits

Compliance costs for suppliers would be reduced, particularly costs associated with maintaining awareness of the mandatory safety standard and the costs associated with unnecessary testing against safety requirements that are already part of the inherent design of the product. Revocation would remove the regulatory burden of complying with a 23 year-old voluntary Australian standard that was drafted to regulate product design that has now been superseded.

Governments would no longer incur costs associated with maintaining the mandatory safety standard for exercise cycles.

Limitations

Although unlikely given the outdated safety standard for exercise cycles, revoking the standard could potentially reduce consumer and retailer confidence in the safety of exercise cycles.

6. Preliminary position

The ACCC is currently of the view that Option 3 provides the greatest net benefit for consumers, suppliers and government. Stakeholder submissions to this consultation will help us test this position.

The Office of Best Practice Regulation (OBPR) has advised that a Regulation Impact Statement (RIS) is not required as the current proposal will have a minor regulatory impact on business, community organisations and individuals.

7. Consultation questions

Please consider the following questions when making a submission:

1. Do you agree with the ACCC's assessment of the hazard and injury data?
2. Do you support the ACCC's preliminary position?
 - if so, why?
 - if not, do you support the other options? Why?
3. Do you have information or views about international standards for exercise cycles?
4. Are there any other policy options that the ACCC should consider?
5. Do you have any other comments?

8. Have your say

The ACCC invites stakeholders and interested parties to comment on these policy options.

Consultation is open from 28th September to 18th November 2016.

The ACCC prefers submissions via the ACCC consultation hub at consultation.accc.gov.au/.

The ACCC will alert stakeholders and interested parties to the consultation through the Product Safety Australia website www.productsafety.gov.au/ and www.business.gov.au/.

Alternatively, email submissions to productsafety.regulation@acc.gov.au or via post:

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Submissions will be published on the ACCC website at the end of the consultation period.

Please note any information that you believe to be of a confidential nature should be clearly marked or identified as confidential. The ACCC will not disclose the confidential information to third parties, other than advisors or consultants engaged directly by the ACCC, without first providing you with notice of its intention to do so, such as where it is compelled to do so by law.

Glossary

Term	Definition
Australian Consumer Law (ACL)	Legislation enacted in Schedule 2 of the <i>Competition and Consumer Act 2010</i> (Cth) and applied nationally through State and Territory legislation in accordance with the Intergovernmental Agreement of July 2009.
Exercise cycles	Stationary devices designed to be used for personal physical exercise by means of an activity simulating bicycle riding. Also commonly known as an exercise bicycles or exercise bikes.
International standards	<p>EN 957-5:2009: Stationary training equipment – Part 5: Stationary exercise bicycles and upper body crank training equipment, additional specific safety requirements and test methods</p> <p>EN 957-10:2005: Stationary training equipment – Part 10: Exercise bicycles with a fixed wheel or without freewheel, additional specific safety requirements and test methods</p> <p>ISO 20957-1:2013: Stationary training equipment – Part 1: General safety requirements and test methods, supplemented and amended by ISO 20957-10:2007: Stationary training equipment- Part 10: Exercise bicycles with a fixed wheel or without freewheel, additional specific safety requirements and test methods</p> <p>ASTM F1250-13: Standard specification for stationary upright and recumbent exercise bicycles and upper body ergometers.</p>
Mandatory safety standard	The Australian safety standard for exercise cycles (Consumer Protection Notice No. 9 of 1997)
Voluntary Australian standard	Australian Standard AS 4092: 1993 Exercise cycles- safety requirements.