

**FUNDACIÓN MAPFRE**

**ADDRESSING CYCLING POLICIES  
AT NATIONAL LEVEL: SPAIN**



**JESÚS MONCLÚS**

**Head of Road Safety Research, MAPFRE FOUNDATION**

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- **FUNDACIÓN MAPFRE was created in 1975 by MAPFRE insurance company with the aim of contributing to the well being of individuals and the society in Spain and other countries by means of activities in the following areas:**
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  - **Improvement of quality of life and the environment**
  - **Dissemination of cultural matters, the arts and literature**
  - **Training and research in insurance sciencies**
  - **Improvement of the economic, social and cultural conditions of sectors and individuals with particular social challenges**

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## GUÍA DEL CICLISTA



FUNDACIÓN MAPFRE

### Bicycle Helmets



MAPFRE

### Estudio Fundación MAPFRE-Ciclistas: Cascos y lesiones en la cabeza



FUNDACIÓNMA

### La Bicicleta y la Seguridad Vial



FUNDA

EL BLOG DE MAPFRE

Utiliza más la bici, tu salud lo agradecerá

02/09/14

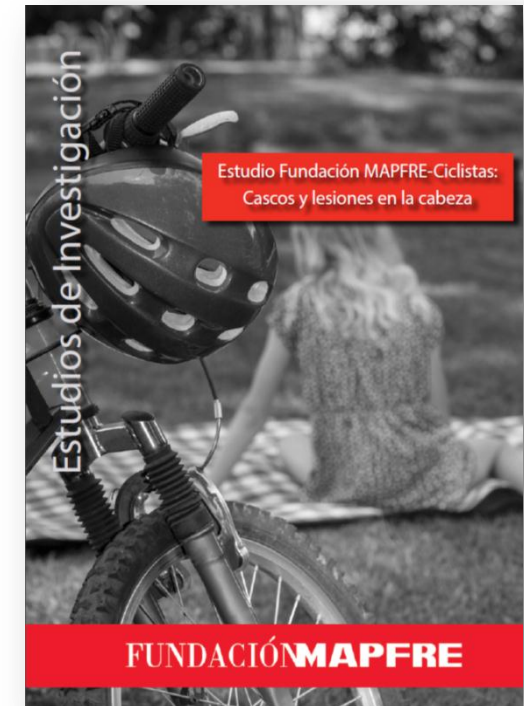
Comparte esta entrada

Salud

Algunos beneficios de andar en bicicleta

- Aunque circulemos en lento, podemos quemar a partir de 100 calorías a la hora. Con un poco más se quemamos incluso hasta 1.000 calorías en una hora.
- Es una actividad beneficiosa para nuestro sistema cardiovascular, pero tiene menor impacto en las articulaciones que otros como el fútbol.
- Ayuda con el control de la glucosa y reduce el riesgo de padecer hipertensión, diabetes o síndrome.
- Las ciudades suelen ser ruidosas y contaminadas, así que incluir una o dos sesiones en las zonas de nuestro país.
- La resistencia física se trabaja con la actividad. Si comparamos suena, pero fuertemente, y hace cosas de él mismo una hora, notable como poco a poco aumenta su resistencia y la cansa más tarde.
- Cambiar de ritmo ayuda a reducir progresivamente la grasa en el cuerpo.
- Fortaleceremos la parte superior, lo que nos ayuda a estar más cómodos en el acto de conducir.

- Spain has reduced the total number of traffic fatalities by around 80% since 2000, but the number of seriously injured cyclists has increased in the last decade (from 202 in year 2003 to 268 in year 2012, +33%)
- Serious head injuries are as frequent in urban areas as in rural areas (on the contrary, there are more fatalities in rural than in urban)
- Head injuries are associated with longer hospital stays, sick-leaves from work, more sequelae...
- Helmet use rate (Jan-March 2013, Castellana-Recoletos axis in Madrid): around 45%
- June 2013: less than 20% of cyclists would stop cycling if the helmet were compulsory for them (same group that believes the helmet is not effective)





## Cyclist Injuries Leading to Permanent Medical Impairment in Sweden and the Effect of Bicycle Helmets

Matteo Rizzi, Helena Stigson, Maria Krafft

**Abstract** Cyclist injuries leading to long-term consequences are common and therefore important to identify in order to design a more sustainable road transport system. The aim of this study was to apply impairment scaling to those injuries to reflect long-term consequences. The Risk of Permanent Medical Impairment (RPMI) was measured for cyclist injuries and compared with the Injury Severity Score (ISS). Type and location of the crash as well as injury distribution were analyzed. The effect of the bicycle helmet was also calculated using induced exposure techniques. The material was Swedish hospital records for the period 2003-2012.

In total 77% of all bicycle crashes in Sweden were single bicycle crashes, most of which were not police-reported. The number of impaired cyclists was more than 3 times larger than those with ISS 9+. Of all impairing injuries, almost 70% were to the upper and lower extremities. Furthermore, almost 10% were head injuries. The most common injuries to the upper extremities were to the shoulder and the wrist (AIS 2). Bicycle helmets were found to reduce head-impairing injuries by 62%, and severe impairing injuries by 68%. The effectiveness in reducing face injuries was lower (37% and 49%, respectively).

Traditional prevention of cyclist injuries has been focused on helmets. However, the findings of the present study indicate a need for other strategies to also prevent other injuries, especially to the upper extremities.

**Keywords** *bicycles, head injury, helmets, motor vehicle collisions, single bicycle crashes*



TRL Report PPR 446  
**FINDINGS**

Department for  
**Transport**

## The Potential for Cycle Helmets to Prevent Injury: A Review of the Evidence

### Abstract

There has been much debate in the literature and elsewhere regarding cycle helmets and their potential to prevent injury. This cycle helmet safety research report was commissioned to provide a comprehensive review of the effectiveness of cycle helmets in preventing road accident, building on previous work (e.g. *et al.*, 2002). The programme of work evaluated cycle helmets from a number of perspectives, including a review of current evidence of their potential limitations; a review of relevant research; and an analysis of casualties that could be prevented if cycle helmets were worn.

### Conclusions

The project concludes that in the event of an on-road accident, cycle helmets would be expected to be effective at reducing the frequency and severity of injury in a range of accident conditions, particularly the most common accidents that do not involve a collision with another vehicle.



### I. DISPOSICIONES GENERALES

#### JEFATURA DEL ESTADO

**3715** *Ley 6/2014, de 7 de abril, por la que se modifica el texto articulado de la Ley sobre Tráfico, Circulación de Vehículos a Motor y Seguridad Vial, aprobado por el Real Decreto Legislativo 339/1990, de 2 de marzo.*

JUAN CARLOS I  
REY DE ESPAÑA

Catorce. El segundo párrafo del apartado 1 del artículo 47 queda redactado del siguiente modo:

«Los conductores y, en su caso, los ocupantes de bicicletas y ciclos en general estarán obligados a utilizar el casco de protección en las vías urbanas, interurbanas y travesías, en los supuestos y con las condiciones que reglamentariamente se determinen, siendo obligatorio su uso por los menores de dieciséis años, y también por quienes circulen en vías interurbanas.»

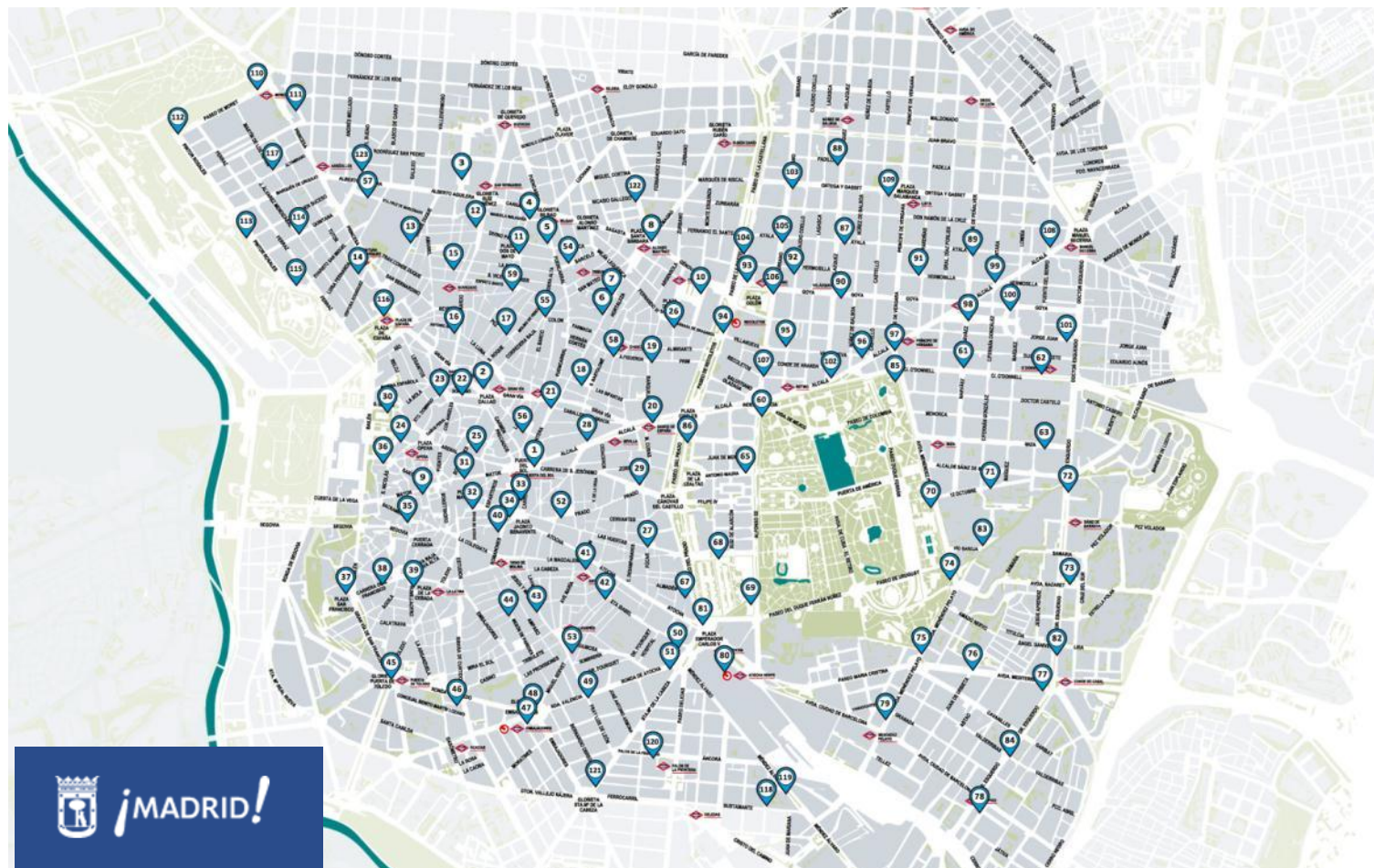
Semana Europea de la Movilidad

## La DGT promociona el uso seguro de la bicicleta como medio de transporte con una nueva campaña informativa

- Se ha editado un video divulgativo "El futuro viaja en bici" que se puede ver en [Internet](#) y en los canales de [Youtube](#), [Facebook](#) y [Twitter](#) de la DGT
- Los ciclistas son los usuarios de la vía más vulnerables y el resto de conductores de vehículos deben ser prudentes con sus conductas.
- Los ciudadanos pueden participar con sus propuestas, opiniones y experiencias con la bicicleta a través del hashtag #futuroenbici

16 de septiembre de 2013.- Con motivo de la celebración de la Semana





**1.560 electric bicycles, 123 stations**



**New “cyclo-lanes” in Madrid**



**Cycling infrastructure in Barcelona**

## El Bicing elèctric es posarà en marxa a finals d'any

- » A finals d'any es posarà en marxa una prova pilot que complementarà el Bicing actual, amb l'objectiu de facilitar els viatges llargs i ascendents
- » Hi hauran 300 bicicletes elèctriques repartides en 45 estacions, que estaran ubicades a diferents aparcaments de la ciutat

A finals d'any es posarà en marxa el Bicing elèctric, que neix com un complement al Bicing amb la voluntat de **millorar l'eficiència** del servei actual, **facilitar els viatges llargs i ascendents** i promocionar l'ús de la bicicleta elèctrica. Aquesta iniciativa pretén **potenciar la imatge de Barcelona com a ciutat capdavantera** i tracta d'una **prova pilot** amb la que es pretén comprovar l'efectivitat del nou model, de cara a consolidar-lo com a un mitjà de transport. L'objectiu del projecte és que actuï com a **multiplicador dels usos de la bicicleta** a la ciutat,



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**OCU** La fuerza de tus decisiones

Alimentación **Coches** Dinero Electrodomésticos Salud Tecnología

Estás aquí: > Home > Coches > Bicicletas > La bici triunfa en la ciudad

**NOTICIAS**

## La bici triunfa en la ciudad

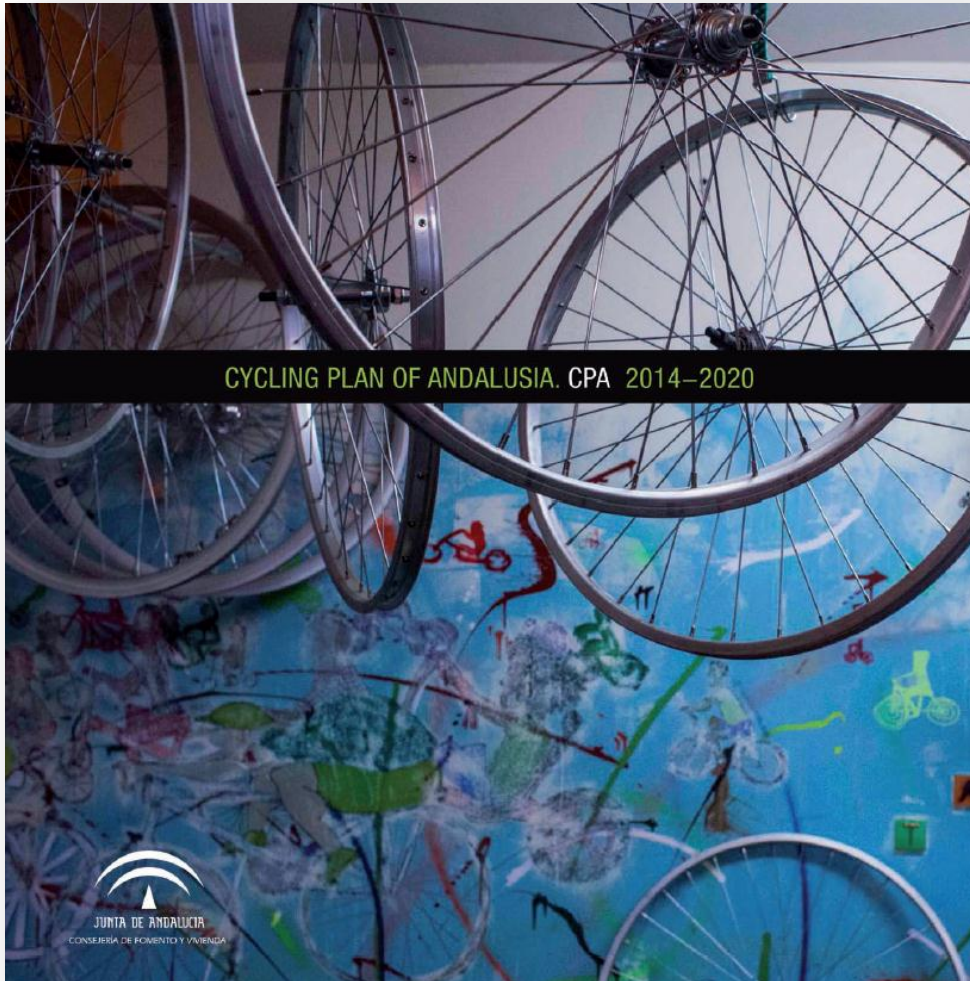
3 julio 2014

Uno de cada tres... bicicleta, al menos... de carriles bici, de... aparcamientos es... transporte alterna...

**VALORACIÓN POR CIUDADES**

|               | Carriles bici | Contaminación | Tráfico | Distancias y orografía | Meteorología | Combinación transporte público/bici | Aparcabicis | SATISFACCIÓN GLOBAL |
|---------------|---------------|---------------|---------|------------------------|--------------|-------------------------------------|-------------|---------------------|
| SEVILLA       | 63            | 60            | 51      | 85                     | 78           | 40                                  | 50          | 78                  |
| SAN SEBASTIÁN | 67            | 62            | 54      | 61                     | 47           | 45                                  | 57          | 72                  |
| VITORIA       | 57            | 58            | 49      | 79                     | 39           | 36                                  | 61          | 71                  |
| VALENCIA      | 42            | 56            | 35      | 88                     | 83           | 28                                  | 40          | 65                  |
| ALBACETE      | 43            | 60            | 42      | 81                     | 53           | 19                                  | 37          | 64                  |
| ZARAGOZA      | 54            | 55            | 44      | 69                     | 46           | 31                                  | 46          | 64                  |
| CÓRDOBA       | 45            | 53            | 38      | 77                     | 67           | 22                                  | 38          | 63                  |
| PALMA         | 46            | 57            | 39      | 73                     | 76           | 21                                  | 38          | 62                  |
| CASTELLÓN     | 44            | 62            | 39      | 80                     | 82           | 29                                  | 42          | 60                  |
| BARCELONA     | 49            | 49            | 40      | 59                     | 72           | 42                                  | 42          | 59                  |
| MÁLAGA        | 37            | 57            | 32      | 68                     | 80           | 20                                  | 27          | 56                  |
| BILBAO        | 45            | 52            | 41      | 43                     | 35           | 42                                  | 41          | 50                  |
| MURCIA        | 33            | 55            | 37      | 81                     | 82           | 28                                  | 29          | 50                  |
| PAMPLONA      | 32            | 60            | 36      | 58                     | 38           | 16                                  | 36          | 47                  |
| LAS PALMAS    | 35            | 61            | 33      | 47                     | 85           | 17                                  | 30          | 46                  |
| MADRID        | 35            | 32            | 25      | 43                     | 51           | 33                                  | 27          | 36                  |

Mejor valorados Peor valorados





**U2**



**WITH OR WITHOUT YOU**



## Communiqué de presse

8 juillet 2014/Mor/Ddu

### 43% des cyclistes portent un casque de leur plein gré

Relevé 2014 du bpa: recul chez les moins de 14 ans

Le résultat du comptage 2014 du bpa – Bureau de prévention des accidents est similaire à celui des années précédentes: 43% des cyclistes coiffent un casque sur une base volontaire. Le taux de port a toutefois continué à reculer chez les enfants. Il est déjà de 89% chez les usagers de vélos électriques rapides, deux ans après l'introduction de l'obligation.

En 2014, le taux de port du casque cycliste (43%) est légèrement inférieur à celui de l'année précédente, qui avait atteint le niveau record de 46% (2012: 43% / 2011: 40%). Le recul est dû en particulier aux hommes entre 33 et 44 ans, qui portent moins le casque pendant leurs trajets liés aux loisirs.



## THINK safety tips for drivers and cyclists

THINK! is working in partnership with Transport for London (TfL) to extend TFL's 'Tips' campaign to other cities in the UK.

The campaign consists of a series of tips, developed to educate and remind drivers and cyclists about the correct way to drive and ride, and reduce the number of collisions on the road.



## Muere tras chocar su bici con la puerta de un coche

FRAGA. Un hombre de 81 años de edad y vecino de Fraga falleció el pasado sábado tras verse implicado en un accidente fortuito cuando transitaba con una bicicleta eléctrica por una de las principales calles de la capital del Bajo Cinca.

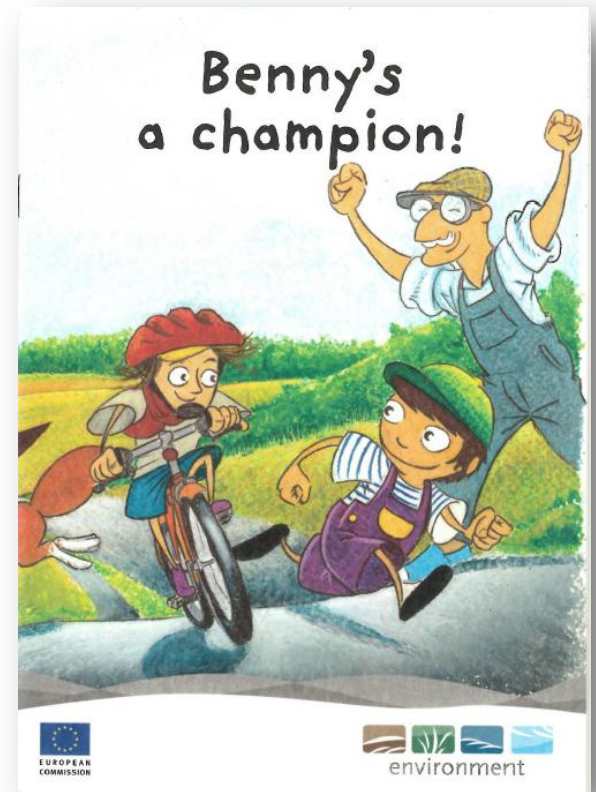
Al parecer, el hombre, que responde a las iniciales F. L., se desplazaba por la avenida Aragón cuando el ocupante de un vehículo, que estaba parado y estacionado en la misma vía, abrió la puerta del turismo golpeándole de forma accidental. A consecuencia del impacto, el hombre cayó al suelo y se golpeó en la cabeza.

A la zona del accidente, que tuvo lugar sobre las 18.00, acudieron de inmediato varios profesionales del Centro de Salud de Fraga, que asistieron a la víctima en el lugar de los hechos e, incluso, llegaron a trasladarlo al centro sanitario si bien nada se pudo hacer por salvarle la vida.

El hombre murió en el propio lugar del accidente, situado a la altura de la calle Alcabón y la rotonda de Mequinena, según explicaron ayer fuentes municipales. La Policía Local de Fraga fue la encargada de instruir las diligencias.

P. PUÉRTOLAS

Heraldo de Aragón | Martes 6 de mayo de 2014







**INLINE SKATE**  
Instructions  
**ROLLERS EN LIGNE**  
Instructions  
**INLINE SKATE**  
Anleitung  
**PATIN EN LÍNEA**  
Instrucciones  
**PATIM EM LINHA**  
Instruções



**INSTRUCTIONS**

**IN-LINE SKATE SAFETY CODE**

**USERS:** Read advice before use and be sure to keep for future reference.

**WARNING!** PROTECTIVE EQUIPMENT SHOULD BE WORN WHEN USING THIS ITEM.

1. Skating requires skill so **USE WITH CAUTION** to avoid falls collisions or injury to the user and third parties.
2. Please try the skates indoors before skating outdoors. For your safety and comfort it is important that you do this to ensure you have purchased the correct size.
3. Skates should not be used on roads. Choose to skate on smooth, clean, dry surfaces as free as possible from other traffic. Always obey traffic rules and signals. Skating lessons at your local leisure centre, roller rinks or by a qualified instructor are beneficial.
4. Learn to stop safely. Avoid falls until you have master stopping techniques. Do not skate in poor visibility When skating be alert at all times and be considerate to others.
5. Children under 8 years of age should be supervised at all times when skating.
6. When skating always wear an EN1078 (European Standard Approved) safety helmet and preferably one offering extra protection at the back of the head.
7. When skating always wear knee and elbow pads, gloves, hand/wrist protectors. Long sleeves and trousers will help prevent grazing. Adult supervision is recommended when fitting safety equipment.
8. Check the skates before they are used ensuring that the steering setting is correct, if fitted, and that all fasteners are secure.

**TESTING STANDARD:**  
EN13843:2009 Class A(20-100kgs)

**TESTING STANDARD:**  
EN13899:2003 Class B(20-60kgs)

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## Programa Bicicletas de Buenos Aires



**Novedades**

Calculá tu huella ecológica

Curso de formación de Auxiliar de Mecánico para Bicicletas

Prueba piloto: Señalética para ciclovías

▾ Sistema de Transporte Público en bicicletas

▾ La ciudad es mejor en bici

Red de Ciclovías Protegidas

▾ Todo lo que la bici hace por vos

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¡Seguimos sumando beneficios para vos!

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CUPONES DE DESCUENTO

[Más información »](#)





Ajuntament de Barcelona

La Ciutat | L'Ajuntament | Turisme | Negocis | Tràmits | Més

Mou-te en Bicing, cuida de tu i de Bar

**Vodafone** | **kicic** | **Viu BiCiNg**

Inici | **Informació Bicing** | Mapa de disponibilitat | Contacte

Què és Bicing?  
Com abonar-se  
Tarifes  
Com funciona  
Informació del Sistema

**Zona d'Abonats**

Usuari: \*

Contrasenya: \*

Has oblidat el teu usuari i/o contrasenya

**Entrar**

**Bústia Bicing**  
Erva'n els teus

**Altes**  
Per gaudir de tots els nostres serveis registrat.

**ABONA'T ARA PER MENYS DE 4€ AL MES**

Ajuntament de Barcelona

La Ciutat | L'Ajuntament | Turisme | Negocis | Tràmits | Més

**Mobilitat i transports**

Tràmits | Plànol BCN | Dades bàsiques de mobilitat | Directoris

**Mobilitat**  
A peu  
Moto

**Bicicleta**  
Mou-te en bicicleta

Envia a un amic/ga

**Mou-te amb seguretat**

Mobilitat i Transports > Bicicleta > Mou-te en bicicleta

No circulis mai recolzat només en una roda ni agafat cap altre vehicle en marxa. Tot i no ser obligatori portar casc per a circular en bicicleta a la ciutat, et recomanem per a la teva seguretat, que te'l posis.

Lloguer de bicicletes


d'edat i sota la teva responsabilitat.

No circulis mai recolzat només en una roda ni agafat cap altre vehicle en marxa. Tot i no ser obligatori portar casc per a circular en bicicleta a la ciutat, et recomanem per a la teva seguretat, que te'l posis.

Recorda que la bicicleta és un vehicle i, tot i no ser obligatori, és recomanable contractar una assegurança de responsabilitat civil. Et pots informar a les entitats i clubs d'usuaris de la bicicleta, a la Federació Catalana de Ciclisme, a les botigues associades al Gremi de Comerciants de Bicicletes de Catalunya o a l'Oficina de la Bicicleta de l'Ajuntament de Barcelona.

Guia de la bicicleta  
Publicacions i documents



Visiting NYC? Find events, attractions, deals, and more at [nycgo.com](http://nycgo.com) 

The Official Website of the City of New York



Seleccionar idioma  Text-size



NYC Resources

311

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Events

Connect

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# Bike Share



Share



Print

Citi Bike is New York City's bike sharing system. It provides hundreds of bicycle stations located within the service area.

Bikes are available 24/7, 365 days a year.

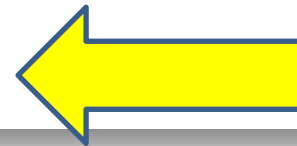
To participate you must:

- Be 16 years or older
- Obtain annual membership or an access pass

Each bike station has:

- A touch-screen kiosk
- A system map
- Docks where bikes are stored

During your ride, helmets are encouraged.







# Cycle safety

Our Cycle Safety Action Plan is designed to encourage people making London's roads as safe as possible for cyclists. It covers building cycle-friendly roads to developing new technology to pro

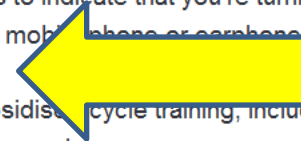
## Safety tips for Barclays Cycle Hire

Learn how to stay safe on your bike



### Cycling safety tips

- **Stop at red lights.** It's safer and could save you a £50 fine
- **Stay central on narrow roads.** Try to ride away from the gutter. If the road is too narrow for vehicles to pass you safely, it might be safer to ride towards the middle of the lane to prevent dangerous overtaking by other vehicles
- **Stay away from parked cars.** Ideally, keep a door's width away in case the door opens suddenly. Also, try to ride in a straight line past parked cars rather than dodging between them
- **Stay back from HGVs.** Lorries and other large vehicles might not be able to see you clearly, so stay well back behind them
- **Always pay attention.** Stay focused on what's going on around you so you can see what other road users might do
- **Make eye contact.** Try to make eye contact with drivers so you're sure that they have seen you
- **Don't pavement cycle.** Don't cycle on the pavement or up a one-way street (unless clearly marked for cyclists)
- **Wear bright clothes.** Stay safe by wearing bright clothes during the day and reflective clothing/accessories at night
- **Night lights.** Use lights after dark - white at the front and red at the rear. You may be fined £50 if you don't have them
- **Signal.** Use appropriate hand signals to indicate that you're turning left or right
- **No phones or devices.** Don't use a mobile phone or earphones
- **Helmet.** Consider wearing a helmet
- **Cycle training.** There is free, or subsidised, cycle training, including commuter skills, for adults and children in most London boroughs





Por reducir la velocidad al compartir el carril con el ciclista  
**¡Gracias, conductor!**

Por respetar las vías de los ciclistas  
**¡Gracias, peatón!**

Por no invadir los espacios para peatones  
**¡Gracias, ciclista!**



Giro izquierda  
Turn left



STOP



Giro derecha  
Turn right

### RECOMENDACIONES PARA CICLISTAS

Procura analizar y elegir una ruta con poco tráfico.

Hazte visible con elementos reflectantes y posíciónate en el centro del carril.

Cuando realices una maniobra no olvides sus tres etapas: mirar, señalar y ejecutar

Señaliza las maniobras y giros con la antelación suficiente.

### RECOMMENDATIONS FOR CYCLISTS

*Try to analyze and choose a low traffic route.*

*Make yourself more visible to other drivers by using reflective gear and by driving in the center of the lane.*

*When maneuvering, remember the three steps: look, give a signal, and carry out the maneuver.*

*Signal maneuvers and turns in advance.*



## RESEARCH AND PRACTICE

e106 | Research and Practice | Peer Reviewed | Graves et al.

American Journal of Public Health | August 2014, Vol 104, No. 8

# Public Bicycle Share Programs and Head Injuries

Janessa M. Graves, PhD, MPH, Barry Pless, MD, Lynne Moore, PhD, Avery B. Nathens, MD, PhD, Garth Hunte, MD, PhD, and Frederick P. Rivara, MD, MPH

In the past decade, public bicycle share programs (PBSPs) have become increasingly common in North American cities.<sup>1</sup> Often implemented by government agencies, either independently or through a public–private partnership, these networks of bicycles are available for shared use to individuals at some nominal cost relative to the duration of the rental. Such programs are commonly referred to as BIXI programs in Canada (Bicycle-Taxi), and programs in the United States include B-cycle, DecoBike, and CaBi (Capitol Bikeshare in Washington, DC).

Traumatic brain injuries (TBIs) account for the majority of bicycle-related deaths and one third of bicycle-related injuries.<sup>2</sup> In 2012, an estimated 81 909 bicycle-related head injuries were treated in US emergency departments.<sup>3</sup> Bicycle helmets have been shown to reduce the risk of head, brain, and severe brain injury by

*Objectives.* We evaluated the effect of North American public bicycle share programs (PBSPs), which typically do not offer helmets with rentals, on the occurrence of bicycle-related head injuries.

*Methods.* We analyzed trauma center data for bicycle-related injuries from 5 cities with PBSPs and 5 comparison cities. We used logistic regression models to compare the odds that admission for a bicycle-related injury would involve a head injury 24 months before PBSP implementation and 12 months afterward.

*Results.* In PBSP cities, the proportion of head injuries among bicycle-related injuries increased from 42.3% before PBSP implementation to 50.1% after ( $P < .01$ ). This proportion in comparison cities remained similar before (38.2%) and after (35.9%) implementation ( $P = .23$ ). Odds ratios for head injury were 1.30 (95% confidence interval = 1.13, 1.67) in PBSP cities and 0.94 (95% confidence interval = 0.79, 1.11) in control cities (adjusted for age and city) when we compared the period after implementation to the period before.

*Conclusions.* Results suggest that steps should be taken to make helmets available with PBSPs. Helmet availability should be incorporated into PBSP planning and funding, not considered an afterthought following implementation. (*Am J Public Health.* 2014;104:e106–e111. doi:10.2105/AJPH.2014.302012)



TRAFIKVERKET  
SWEDISH TRANSPORT ADMINISTRATION

## Safer cycling

- a common strategy for the period 2014-2020, Version 1.0



## 4. Priority action areas

In view of the challenges and measures that we presented earlier, we propose that priority be given to the following five action areas:

1. Improve operation and maintenance in both winter and summer
2. Design cycling infrastructure based on the needs of cyclists
3. Start development processes for safer cycles and better equipment
4. Promote safe behaviour and increase the use of helmets and studded tyres
5. Develop knowledge on primarily the risks of accidents and cost-benefit status







- **NO to compulsion? Maybe, but YES to persuasion**
- ***Lead with example (example save lives... and is cheap):***
  - ***Police officers***
  - ***Workers on bicycles***
  - ***Bicycle clubs***
  - ***Your websites, your brochures***
  - ***Make helmets available: to workers, clients...***
  - ***Give away programmes***



- **Please recommend the use of bicycles**

***BUT***

- **Please recommend also the use of helmets**



Thanks for you time and your attention!



**jmonclu (at) fundacionmapfre.org**

***www.fundacionmapfre.org***