

# International Bicycle Fund

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A non-governmental, nonprofit organization promoting bicycle transport, economic development and international understanding worldwide.

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IBF-9/8/85

Pre-Lesson #2  
Preventing Head Injuries

## Objection:

To teach students and parents the importance of wearing a helmet during all bicycling activities.

## Introduction:

A mind is a terrible thing to lose. A blow to the head from a fall of as little as four feet can do just that. It can happen as simple as an unexpected stop and a quick header over the handlebars of a bike. No one ever expects to have an accident. In fact they are always unexpected, that's why there "accidents". Whether a bicyclist is on a ride of one block or 100 miles they should always wear a helmet. Wearing a helmet can eliminate or reduce many of the serious injuries sustained by bicyclists in the most common kinds of accidents..

It is difficult to convey the seriousness of this to students. One tack is to tie the idea into role-models. If the students saw the 1984 Olympics or watch the sports cable channels, they might remember the helmets of Mark Gorsky, Nelson Veils, Connie Carpenter or Rebecca Twigg. For students not familiar with competitive bicycling draw parallels from other sporting activities or movie heroes where helmets are worn.

This lesson is one of the easily measured for success -- how many helmets are on head? Success depends on two factors in combination: 1.) creating a peer environment where helmets are prestigious, and 2.) educating parents on the importance of spending the money to protect their children from far more serious consequence. Those students arriving already wearing helmets should be complimented on their toughness, intelligence or whatever else seems appropriate at the time. For parents, a major problem is getting the information to them. In school programs assistance can be sought from the PTA. Realistically, once the information is in their hands it is problematic whether they will read it or see it as a serious activity.

## Activity:

- 1) Send pamphlets on helmets home with each student.

## WHAT ABOUT BICYCLE HELMETS

Do You Need One? Yes.

It is common to see people involved in sports wearing head protection. Football players wear helmets. Rock climbers wear helmets. River rafters wear helmets. Hockey players wear helmets. And for good reason--each sport presents a risk of head injury. Bicycling presents a similar hazard and requires similar precautions. About 80% of all bicyclist deaths each year result from head injuries. Many more cyclists are permanently impaired by riding their heads into curbs, poles and the pavement. Scrapes and broken bones heal, but scrambled brains may not. Much of this tragedy is preventable. The simple precaution of wearing a bicycle helmet may prevent severe injury or save a life--yours.

Many serious bicycle accidents happen on "quiet" residential streets, in parking lots and on bike paths. A large number (95%) of bicycle accidents don't even involve automobiles. Accidents also aren't a scourge of just beginner riders, or just experienced riders, or just young riders, or just older riders. Every bicyclist needs to wear a helmet, regardless of age, and whether riding across the street or across the continent.

There are other benefits. Most helmets are brightly colored so drivers can see you better and will take you more seriously. A helmet also provides protection from weather, including sun, rain and hailstones. But the main reason to wear a helmet is to protect your brains from damage in an unexpected impact.

Compared to the lifetime cost of a head injury the cost of a bike helmet is cheap. Think about tomorrow, buy and wear a helmet today.

What to Look For.

A good bicycle helmet must be able to absorb impact energy (just as motorcycle helmets do) to prevent brain injury. Research shows that this requires three elements:

First, a full-cover hard shell is required to spread impact energy in a collision with a sharp or pointed object. The shell can have some vents and still be strong enough. Fiberglass, Lexan and ABS plastic are all good shell materials.

Second, a good helmet must have a stiff polystyrene (Styrofoam) liner. This is a non-springy foam that absorbs shock and doesn't bounce back at your head. All top rated bicycle helmets use expanded polystyrene (EPS)--a slightly harder version of the familiar white ice-chest foam and the packing material used to protect stereo equipment during shipping. Spongy foam can be added for comfort, but it absorbs very little shock in a life-threatening crash. The stiffer polystyrene must be included in the construction to absorb the energy of a blunt impact. Note: The thickness of the liner is an important factor in the amount of energy it will be able to absorb.

Third, the helmet must stay on your head even if you hit hard surfaces more than once--a car, perhaps, and then a curb. The helmet needs a strong strap and fastener or top quality buckle.

For more information on bicycling and safety call the "Bicycle Hotline", (206) 522-BIKE.

Crash Testing.

The Snell Memorial Foundation, A non-profit foundation which conducts helmet research and promotes improvements in head protection, crash-tests bicycle helmets in their laboratories, using dummy headforms and calibrated drops to simulate actual street accidents. Snell also tests the strap and fasteners for strength. The following summarize the results.

<u>Protection</u>	<u>Model</u>	<u>Comments</u>
EXCELLENT	Fury	Heavy and hot
VERY GOOD	Bell Prime Bell Biker	Little ventilation Proven all-around
combination	Bell Biker II	Replacement for
Bell Biker	Bell Mark I	Very cool and
comfortable	Bailen	Some problems
with fit	Bell Tourlite	Early buckle
problems	Bell V-1 Pro	Cut high, black
model has low visibility	Kiwi Vetta L'il Bell Shell	Special for
toddlers		
GOOD Hanna Pro	New model only, with polystyrene liner Hanna Pro HP1 Nava Supergo Premier Ultra Lite NJL Tourrite MSR	Reasonably cool
well made and durable.	Nava Land Tool Co, Maxon OGK AC Targa Sport	One of the first,  Bell look-a-like
FAIR Cooper SK2000	Hot, made for hockey	
POOR (but better than a bare head)	Cooper Sk600 Cortina Brancale Brancale Sport Brancale Giro ETTO Hanna Pro (old) Griffin	

Kucharik  
Monarch  
Pro-tec Firefly  
Pro-tec PTH3000  
Pro-tec PTH4000  
Schwinn  
Skid Lid  
Skid Lid II