

Simple



Slips

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my thanks to...

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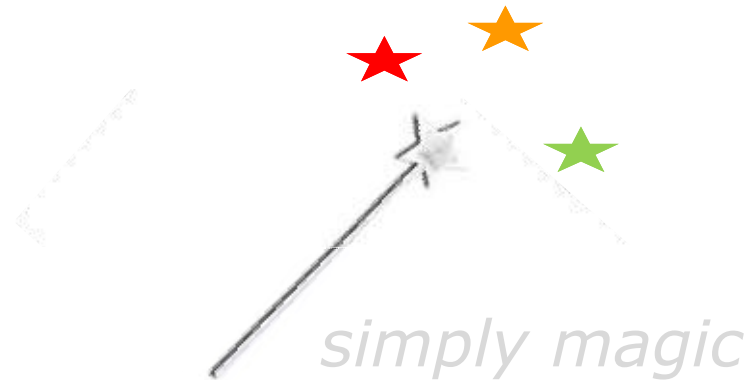
invented by Dr Malcolm Bailey... designed to be simple



If you could easily measure slip risks...

- If you had a *magic* slip test...

- ❖ Portable + Easy
- ❖ Consistent + Reliable
- ❖ Fast + Accurate



- Mimics the physics of a real slip

- ❖ Range of speed, down force, + length of a real slip
- ❖ Correlates with TRL Pendulum + real slip incidents



What would you do?

We tested hundreds of floors...

In search of the silver bullet...



Silver Bullet

Not just a great **measure**

But a **cure** for slips



Something **simple...** people can do

Can we **stop slips**?

- If we have a magic slip test...
 - ❖ can we ***educate people?***
 - ❖ can we ***improve floor cleaning?***
 - ❖ can we ***make floors safer?***



Can we define... **simple steps**



If they really understood the risks...

- If you know a floor is half a million times more dangerous than it could be?...

❖ then of course you would take action

Duty holders should understand slip risks...



Understanding Slips

- Slipping: like winning the lottery
 - ❖ But like the lottery someone will **"win"**
 - ❖ A "winner" every 3 minutes
- If you slip and fall...
 - ❖ 3 things will probably happen
 - ❖ Jessica's story
- Have **you** slipped recently?
 - ❖ How did you feel?



Too many people ignore slips...

Slip statistics can be misleading...



- There are 9 million slip and fall accidents in North America every year

❖ About 25,000 people a day are hospitalized as a result of these accidents

Do the math...



UK statistics can be equally confusing

People are confused...



- Should I measure slip risk?
 - ❖ **How** do I measure slip risk?
 - ❖ **Why...** will measuring it increase my liability?
- **When** should I measure slip risk?
 - ❖ Only when the floor is laid?
 - ❖ Once a year, or every day?
- **What** can I do if floors are slippery?



Are slips really a problem?
It seems easier to **do nothing**

Reasons managers don't test floors

- Fear of litigation...
 - ❖ I already know some floors are not perfectly safe
 - ❖ If I officially know my floor isn't safe they will sue me!
- Not sure when, why or how...
 - ❖ Not sure when, why or how to test AND
 - ❖ Not sure it is a big problem (*like common cold*)
 - ❖ Not sure that anything can be done
- I'm not **required** to test
 - ❖ "I don't need a magic slip test"



Other H&S areas have clearer **actions**

Wrong actions...

- Do nothing
- Only specify dry slip resistance
 - ❖ Most floors have **good** dry slip resistance
- Only measure clean dry slip risk
 - ❖ Many floors won't have **adequate** wet/contaminated slip resistance.



I don't want **problems**

A single measure may not help...

- Clean + dry slip resistance
 - ❖ Dry slip risk won't predict wet slip risk
- The wrong type of measure
 - ❖ Trundle tests don't measure wet slip risk
- A measure with 1 rubber slider
 - ❖ TRL and Four S may not give same result



Given a choice

a single measure...

One that makes me look good

Understanding floor slip risks...

seconds to measure... a lifetime to understand



Low Risk



Less than 1: 1 million people might slip

Medium



All it takes is a drop of water

High Risk

Most of us need more grip



500,000 times more dangerous

Many people don't understand...

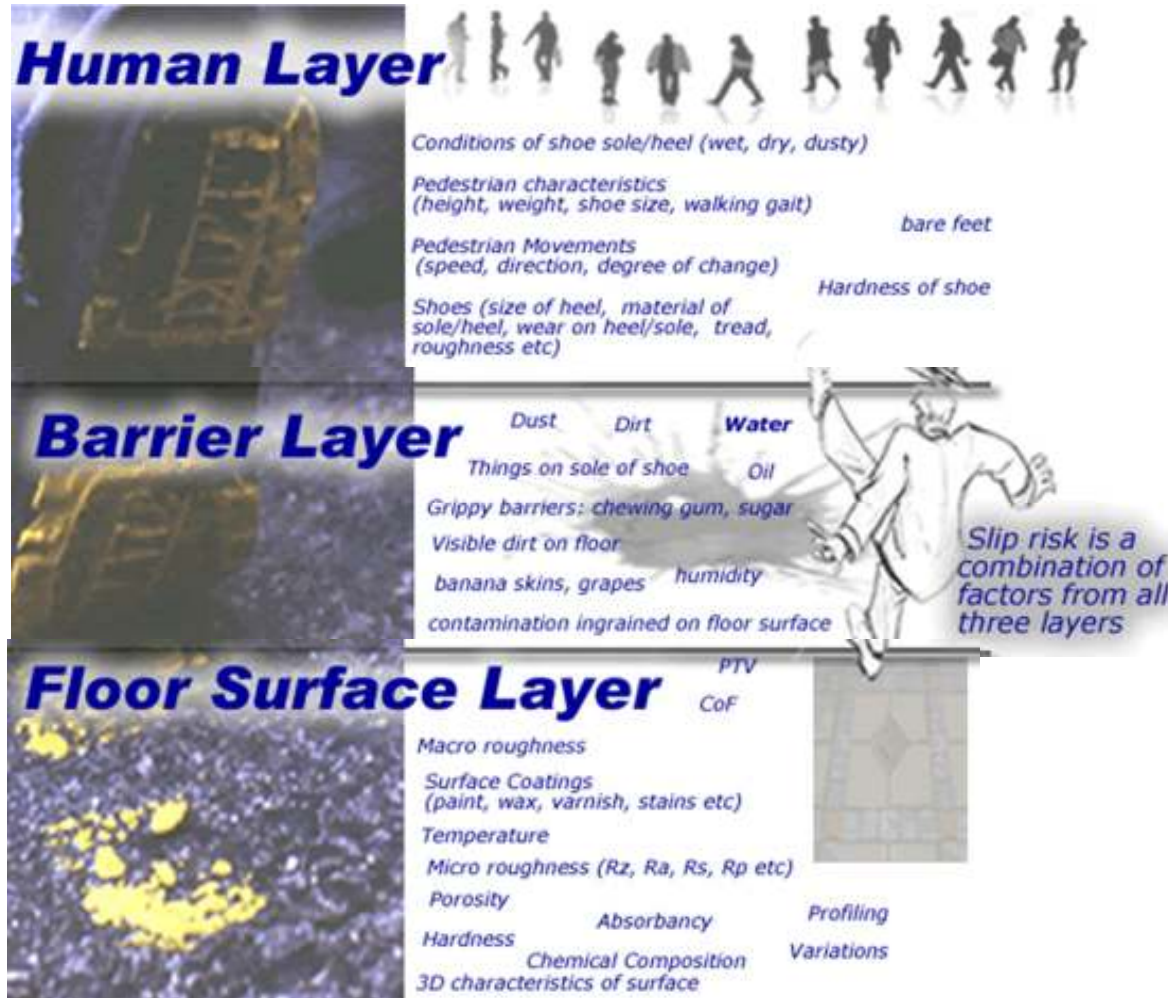


- Risk depends on the **use** of the floor
 - ❖ Shopping mall floors usually dry (except near entrance)
 - ❖ Station floor: may be wet, can have 200,000 people
 - ❖ Swimming pool surround: bare foot users
- **“As found”** slip risk may vary
 - ❖ Slip risk varies as the contamination changes
 - ❖ Wet slip risk differs from dry slip risk
- New floors may lose slip resistance
 - ❖ the specified slip resistance may not reflect the real slip resistance of the floor



We need to help people **to understand.**

Three Layer Model...



An easy way to help people understand slip risk and... **how to measure and manage the risk**

3 interdependent layers that **can change** or **be changed**



Different flooring situations

- Different **uses** of the floor
 - ❖ shower room, kitchen, shopping mall...
 - ❖ indoors, outdoors, footfall + footwear
- Different types of **contamination**
 - ❖ water, oil, silicon, dust, condensation, algae...
- Different **flooring** materials
 - ❖ tiles, decking, concrete, vinyl, marble, resin
 - ❖ treated, polished, coated, uncoated...



Each situation requires different **actions**

Human Layer...



- Different uses for the floor
 - ❖ Shower room: body fat may build up
 - ❖ Kitchen: **slip risk changes several times per day**
 - ❖ Shopping Mall: Rainy days and water ingress

- Different Footfall
 - ❖ Different people, how many people and what they wear
 - ❖ Walk, run, turn, twist, carry, push...

- Different Footwear
 - ❖ Type of shoe
 - ❖ Size and material of sole and heel



People changes will change the **slip risk**

Barrier Layer...

- Indoor contaminants
 - ❖ Water, oil, body fat, condensation
 - ❖ Dust, flour, dry contaminants
- Outdoor contaminants
 - ❖ Rain, dust, algae, dew
 - ❖ Leaves, mud
- Cleaning
 - ❖ May not remove contaminants
 - ❖ Cleaning methods change, mistakes are made



Level/type of contamination affects **slip risk**

Floor Layer...

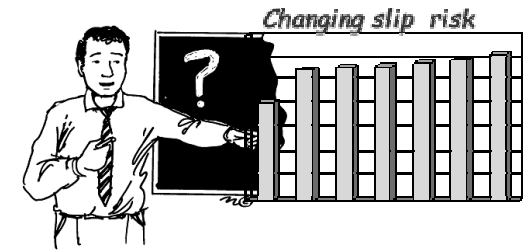


- Different flooring materials
 - ❖ Hard Floors, resilient floors, absorbent floors
 - ❖ Ceramic tiles, vinyl, wood, concrete
- Different coatings / finishes
 - ❖ Paints or coatings and how they bond
 - ❖ Treatments that “etch” or change the floor
 - ❖ Polishing or buffing
- Flooring Changes
 - ❖ Wear and other damage to the surface
 - ❖ contamination may penetrate/change surface



Floors and change to floors affect **slip risk**

Let's teach people to...



- **Understand slips...**

- ❖ Different slips risks, different measures
- ❖ Different causes of change in all **3 layers**

- **Measure and monitor floors + risk**

- ❖ Measure every new floor, monitor legacy floors
- ❖ How often to test, what to look for, understand changes



- Make **simple step** changes...

- ❖ Better floors, better maintenance, better cleaning
- ❖ Ensure floors have appropriate grip for intended purpose



Teach people how to... **stop slips**

You are the silver bullet...



Each of you in the audience today...

You can make a difference

You can teach people how to
measure and manage slip risk

You can teach people...
simple steps stop slips



You can lobby for change...

Other safety issues have clear requirements...



- Every large business should have a defined floor safety regime including:
 - ❖ defined levels of slip resistance for each function: changing room, toilet, car park etc
 - ❖ checks on cleaning and maintenance – and test the effectiveness of any changes to cleaning methods
 - ❖ Thorough testing of all new floors and changes to floors

Managers should be held accountable for floor safety



If there was a fire in the building...
someone would be accountable for our safety

slip prevention should not be ignored

How would **you feel** if?...

we all take **simple steps**

- spread the word
- teach others



Together we can stop 50% of slip injuries

- ❖ Prevent one slip every 6 minutes
- ❖ Save 12,500 people/day being hospitalized



Feel good... teach people
simple steps to **stop slips**

Questions?...



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