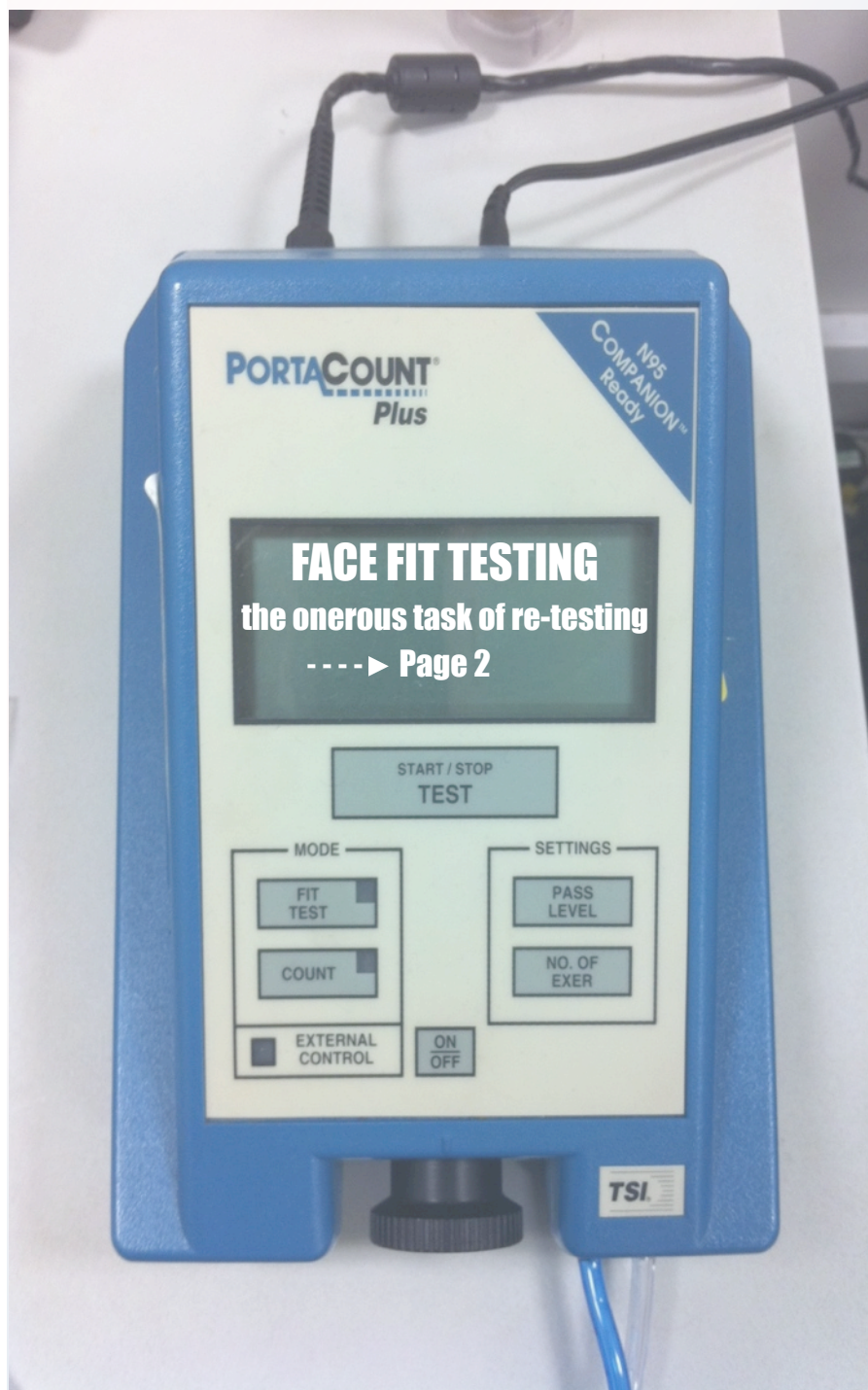


Imperial College
London

Health and Safety Matters

December 2012



Page 2

Respiratory Protective Equipment

Tackling the face-fit re-testing programme

Page 3

Gaseous radioactive emissions

What are the constraints?

Conference season

The Safety Department speaks

Page 4

Typhoid vaccine shortage

Implications for College travel

Lizzy Gallwey

Experiences of a placement student

Page 5

News snippets

Including new Policies & CoPs

Page 6

Incidents etc.

Including further proposed changes to RIDDOR

Page 7

FAQ

Disposable facemasks

Vaccination for welders

Available from OH

Page 8

Safety Training

Current topics



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<http://www3.imperial.ac.uk/safety/subjects/newsletter>



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paper
copies

Face-Fit.....the Re-Test

Earlier this year 3M (makers of the *Aura* 'standard' mask used by the College) took the decision to upgrade the filter in a number of their face masks (see information opposite). In the view of the Health and Safety Executive, these upgraded products constitute a completely new mask and any person using the old mask therefore needs to be face-fit tested for the new model.

As a result of this, the College Safety Department and Occupational Health Service are in the process of undertaking a complete re-test of all those people currently using the *Aura* 9320 FFP2 mask (the model most widely used in the College) - amounting to over 700 individuals. This onerous task commenced rolling out in November and will continue through December and into January 2013. A temporary member of staff has been employed to assist with the testing.

All workers that use a mask need to be re-tested as soon as possible, as anyone not tested within the allotted timeframe may be at risk of losing their laboratory access and will need to apply again to have it reinstated. Departments may also be charged a fee to help to cover the cost of keeping the face-fit tester on a longer contract.

Anyone working with animals on the South Kensington or Hammersmith campuses that have not been contacted by Occupational Health to arrange a test should contact the Occupational Health Service immediately. Those people that have received an e-mail notification but have not yet arranged an appointment (or confirmed that they are exempt from needing to have a test) should contact mask.fittest@ic.ac.uk as soon as possible. Animal workers on the St. Mary's, Chelsea & Westminster and Harefield campuses will be contacted in the New Year. As soon as all of the staff in each CBS (Central Biomedical Services) section have been re-tested with the new mask, then the old ones can be removed. Laboratory workers should not use the new mask until a fit-test has been conducted and it has been demonstrated that the mask is able to protect the individual.

There is very little visual difference between the old and new mask. However, there are significant changes in the filter material and the design has been improved to facilitate a better fit and provide greater comfort. The new design also makes it more obvious with regard to how to put it on correctly and it reduces fogging from exhaled air for people wearing glasses. Visually there is a small tab under the chin section of the new mask for pulling back and a '+' sign after the 9320 on the front of the mask. In addition, the 3M logo is smaller on the new mask in comparison with the old. The differences are illustrated in the figure below.

UPGRADED PRODUCTS FROM 3M

The following series of masks are affected:

9310 (FFP1)
9320 (FFP2)
9330 (FFP3)

FFP = Filtering Face Piece

See also FAQ on Page 7

Distinguishing between old and new....



Can radioactive material be released to atmosphere?

Environment Agency Permits may include limits on the amount of radioactivity that can be released to atmosphere (gaseous discharge limits). When any volatile substance is being used or radiochemistry is being carried out that could result in a release, it is necessary to include this information in the risk assessment and estimate what percentage could be discharged. Any releases must comply with the limits stated in the Permit. Some Permits will not state limits but this does not imply that releases can be limitless! – no releases are permitted if not included in the Permit. Releases that arise as the results of accidents are not considered in Permits.

If the risk assessment shows that gaseous releases are likely (not just the result of rare accidents) but are not covered by the current Permit, a variation must be applied for. This can take several months to achieve. It is therefore necessary to establish this requirement early when planning work.

When releases are known to occur, stack monitoring systems might be necessary. These are usually connected to alarm systems and will record all releases. This information can be requested by the regulator. Releases must not exceed the limits stated in the relevant Permit - if they do, action can be taken by inspectors including prohibition of work until improvements have been made. A recent unplanned release in the College has resulted in delays to PET chemistry work. Improvements including addition of abatement will be completed soon and work will resume, but it is not yet clear what (if any) action will be taken by the EA.

Examples of work where gaseous release must be considered include iodination, PET chemistry or any other radiochemistry procedures that could create volatile compounds. Abatement is preferable to release. The College Radiation Protection Adviser can provide further advice if required.



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365 days a year

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supporting organisations

Conference season comes round again...

The College Safety Department provided an active contribution to this years round of health and safety conferences.

First up was the USHA (University Safety and Health Association) Autumn Seminar held on the 24th October at the Natural History Museum in London. Our own Ian Hackford, College Biological Safety Officer and fieldwork specialist, presented a persuasive argument in favour of planning offsite work with the intention of surviving the experience long enough to record your academic findings. The message being, that proper planning is good for both academic research and the participant's health and safety. Ian somehow managed to support his arguments with historical anecdotes from Sun Tsu (ancient Chinese military general and philosopher) and Field Marshal Helmuth Karl Bernhard Graf von Moltke.....as well as reflecting on some more recent experiences by Imperial College employees, many involving some sort of adverse driving event, encounters with angry wildlife, or the dangers of simply falling over. He also had some positive messages citing incidents where researchers have experienced the relative joy of being involved in a disaster and finding out that their emergency plan actually worked.

The 2012 ISTR (Institute of Safety in Technology and Research) Autumn Symposium was held in Manchester in November. Anton de Paiva, College Biorisk Manager & Deputy Safety Director and veteran of the ISTR circuit presented a talk on the challenging subject of safety issues arising from sharing research space with another employer - a subject very relevant to the College.



Please stay in your seats!.....Ian addresses the USHA Conference

.....and Anton does likewise at ISTR





Welcome to Lizzy Gallwey, Placement Student with Occupational Health and the Safety Department. Lizzy describes her first two months at the College

I am currently a student at Loughborough University studying towards a degree in Ergonomics. In addition to my degree, I am working towards a Diploma in Professional Studies which requires me to undertake 45 weeks worth of work experience. Ergonomics, often confused with Economics, is the scientific discipline concerned with the understanding of interactions among humans and other elements of a system, or product. Theories, principles and data are used to create a design which should optimise human well-being and overall system performance. Working at Imperial College is a perfect way to spend these 45 weeks because I am working in an institute which has so much interesting work going on which is relevant to my course.

I have thoroughly enjoyed my first two months here. Working with both Occupational Health and the Safety Department has meant that I have had

the chance to gain experience in many areas. I have been made to feel like part of the team and nearly every day has involved learning something new.

So far, I have been working on a project for Occupational Health which has involved research into how the College currently manages training for DSE (Display Screen Equipment), particularly with regards to new staff and students. I have also been trained to become a DSE assessor which means that I can now carry out workstation assessments for people who may be experiencing pain or discomfort whilst working. I have come across people working with all kinds of equipment from a simple desk computer to pipettes and microtomes. With the Safety Department I am currently undergoing research within CBS in order to carry out an ergonomic assessment of their working environment. I am particularly focussing on manual handling and repetitive tasks. I have also been trained to face-fit facemasks for people who may be working with biological hazards.

Even in this short period, the work I have experienced has lead me to work independently and my communication skills are improving every day. By the end of the 45 weeks I'm sure I will feel more confident and well equipped to find a successful career in Ergonomics after I graduate.

TYPHOID VACCINE SHORTAGE

There is a shortage of typhoid vaccine in the UK at present due to a manufacturing problem. It is hoped this will be resolved in the next few months.

The Occupational Health service has a small supply of typhoid vaccine and as such are only vaccinating those individuals travelling on College business who are deemed at highest risk of disease or undertaking specific types of work. If you require this vaccine for travel, your GP or local travel clinic may have some in stock if Occupational Health are unable to help you. Scrupulous food and water hygiene precautions should be observed when travelling.

How to avoid getting typhoid when you travel:

- Only eat food that is freshly prepared, cooked and served piping hot, or fruit that you have peeled yourself, such as banana and mango.
- Only drink bottled or cooled boiled water, or pasteurised milk. When drinking bottled water ensure the seal is unbroken or choose sparkling water to ensure the bottle has not been refilled.
- Wash your hands frequently using soap and water
- Wash your hands before preparing food, eating or drinking, and after using the toilet.
- Use bottled or boiled water to brush your teeth. Do not use tap water.

You should avoid:

- Uncooked food such as salads.
- Raw or uncooked shellfish.
- Buffets (if you have to eat at a buffet, choose steaming hot dishes).
- Unpasteurised milk and cheese.
- Ice-cubes (to keep drinks cold put the container or glass on ice, do not put ice in your drinks).
- Tap water.
- Ice-cream products.
- Cold desserts in restaurants.
- Leftovers.

News Snippets

New Director of Occupational Health

Claire O'Brien will take over as Director of Occupational Health in January.

As well as managing the College Occupational Health Service, Claire will be responsible for advising College on OH matters and developing College policies to protect and promote health at work.

Claire has over 10 year's experience working as an OH adviser in College. Prior to joining Imperial, Claire worked in the retail sector and in the NHS, so she has wide experience of health at work issues.

Alan Swann, the current Director, will continue working part-time as the OH Service's OH Physician.

Cryogenics Liquids Policy and Liquid Nitrogen Code of Practice

The College Cryogenic Liquids Policy (new) and Liquid Nitrogen Code of Practice (amended) were ratified at the meeting of the College Health, Safety & Environment Committee on 31 October. Both have now been uploaded onto the Safety Department website, the latter replacing the previous 2004 guidance. A CHASE Notice (College Health and Safety Essentials) will follow in due course.

Liquid Nitrogen Impact Assessment

A liquid nitrogen impact assessment is currently being undertaken College-wide. This activity is being coordinated by Faculty and Campus Safety Managers. The purpose is to identify where College liquid nitrogen facilities fall short of the criteria laid down in the 2012 Code of Practice (see above) and to act as a basis for a PID to obtain funds for corrective measures to be implemented.

Fume Cupboard Working Group

Following the recent fume cupboard audit, plans are afoot to form a Fume Cupboard Working Group. The Working Group will be tasked with looking into:

- Fume cupboard performance standards e.g. volume inflow rates

- Energy performance
- Design standards for the labs in which the fume cupboards are located
- Preferred manufacturers
- User training (not to develop this but to identify what training is required)
- Accessibility issues

Funding has already been identified for developing a ten minute training video and preliminary discussions have taken place with a company to produce this resource. This will be developed over the coming months.

Fees for Intervention

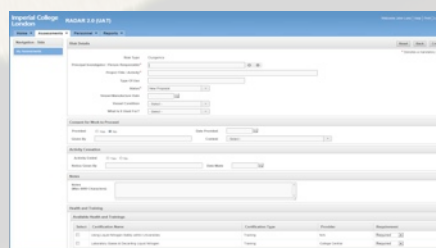
The Health and Safety Executive now operates a Fee for Intervention (FFI) cost recovery scheme. This came into effect on 1 October 2012. Under the scheme, those who break health and safety laws are liable for recovery of HSE's related costs, including inspection, investigation and taking enforcement action. Previously HSE were only able to recover costs following successful prosecution. The new scheme means that Inspectors can charge if they consider there has been a 'material breach', whereas before the introduction of the scheme they may have provided verbal advice or sent a letter.

On the RADAR

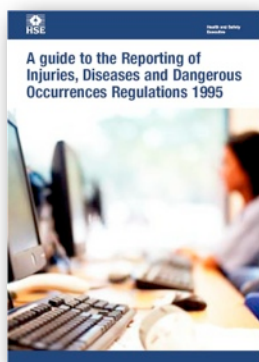
Coming soon.....RADAR (Risk Assessment Database and Registration) - the new central database for holding information on hazards and controls.

User Acceptance Testing (UAT) is scheduled for the beginning of December and the system is expected to go live early in the New Year. The system will enable users, including Principal Investigators, to upload and retrieve information and will provide a centralised searchable database for the College.

A full article on RADAR will appear in the next issue of *Health and Safety Matters*.



Accidents, Incidents, Occupational Ill Health etc.



Further RIDDOR changes proposed

Following the changes that took place in April resulting in over seven day absences becoming the threshold for reporting, further RIDDOR changes are afoot. In the exact words of the HSE, 'the changes proposed will remove the duty to report in cases where the information is of little use or better collected through other means, while still ensuring that sufficient, quality data is available'. The proposal likely to have the biggest impact on the College is the removal of the requirement to report non-fatal injuries to people not at work. There has always been something of an anomaly with regard to this, since students are not considered to be employees, so we have always reported injuries that result in students being taken to hospital as though they were 'members of the public'. This type of incident currently constitutes the majority of our RIDDOR reports and the removal of this requirement will impact on our statistics and that of other universities as well as making a bit less work for ourselves.

The rationale behind the proposal is that in the view of the HSE 'experience shows, that the injured person may attend hospital as a precaution or while initially telling the duty holder that they are uninjured, decide to seek treatment after leaving the place of the accident'. This is probably true in our own experience i.e. that the decision to attend hospital is as much down to the disposition of the individual as it is to the severity of the injury. The consultation has recently closed, but at the time of going to print, the results are not yet known.

Accident statistics.....*Salus* reaches its first birthday

The College incident reporting and management system *Salus* reached its first birthday on 24 October. Statistics are much easier to generate from an electronic database but we will have to wait for another year to easily be able to compare year-on-year data. Some general statistics for the period 24 October 2011 to 23 October 2012 are given in the box below:

Work Related Injuries	Near Misses	Reportable under RIDDOR	
		Injuries	Dangerous Occurrences
240	207	13	1



iCheck - Incident reporting and investigation

A CHASE Notice (College Health and Safety Essentials) was issued on 31 October advising Heads of Department of the latest *iCheck* self-audit which includes the specific topic of accident and near miss reporting and investigation. The deadline for completion of the questions is 31 January 2013. The question set explores the following broad issues:

- The ease of use (or otherwise) of the electronic reporting system.
- The reasons for incidents needing to be reported and familiarity with the categories of incident.
- The requirement to notify incidents in relation to College activities being undertaken away from College premises.
- Monitoring staff absences following workplace injuries.
- The extent to which Departments investigate incidents and analyse and review data.
- The monitoring, interpretation and dissemination of the results of statutory testing of equipment.
- The extent to which incidents are discussed at Safety Committee meetings.

FREQUENTLY ASKED QUESTION FAQ

What is the difference between FFP1, FFP2 and FFP3 facemasks?

These numbers relate to the protection factor that the mask provides - or the APF - Assigned Protection Factor. This is formally described as the level of respiratory protection that can realistically be achieved in the workplace by 95% of adequately trained and supervised wearers.

The performance of Respiratory Protective Equipment (RPE) is quantified by the APF, which is the ratio between the contaminant concentration outside the facepiece to that inside the facepiece - that is, a mask with a APF of 10 maintains the in-facepiece concentration a factor of 10 lower than the outside concentration. Disposable half-mask respirators have the following protection factors assigned:

- FFP1 - APF of 4 (least protection)
- FFP2 - APF of 10
- FFP3 - APF of 20 (greatest protection)

Whether or not a facemask is suitable for a particular application can be determined by using the following calculation:

$$\text{Required protection factor (RPF)} = \frac{\text{Measured level of contamination in the workplace}}{\text{Workplace Exposure Limit for contamination}}$$

For example:

$$\frac{250\text{mg/m}^3}{50\text{mg/m}^3} \quad \text{Therefore: RPF} = 5$$

Further information on Respiratory Protective Equipment: HSG53 - *Respiratory equipment at work.....A practical guide* <http://www.hse.gov.uk/pubns/books/hsg53.htm> (free download)

Pneumococcal vaccination for welders

The Occupational Health Service is offering vaccination against the most common form of pneumonia to any member of staff who is regularly involved in welding.

It has been known for over 20 years that welders have a higher than expected death rate from lobar pneumonia. A recent epidemiological review has drawn together evidence from a variety of research studies and disease registries. It found clear evidence not only of a higher death rate from lobar pneumonia, but an increased incidence of non-fatal infections and hospital admissions for pneumonia in welders and other workers exposed to metal fume in their work e.g. metal foundry workers. The risk appears to be short-term and reversible: the increased incidences were found only amongst current workers. Rates in men aged over 65 who had been employed as welders were no higher than expected.

The cause of the increased susceptibility to pneumococcal infection is not established. The

two leading theories are that freshly generated metal oxide causes damage to the lining of the lung, increasing susceptibility to infection or that free iron acts as a nutrient, supporting bacterial growth in lung tissues.

The research evidence is drawn mainly from studies of workers for whom welding was their chief or sole job. The risk for someone who only welds only occasionally is likely to be lower, although still raised.

The OH service recommends that anyone who welds more often than once per week on average is vaccinated. Anyone involved in welding less frequently but more often than 4 hours per month can also get vaccinated via the OH Service if wanted.

Although vaccination provides good protection, it does provide protection against all risks from welding fume: use of LEV to control exposure is still also necessary.

REFERENCE: Palmer KT Cosgrove MP. *Vaccinating welders against pneumonia. Occupational Medicine* 2012; 62(5) 325-330

Safety Training

The Learning Development Centre (LDC) provided information on safety training participation to the Health & Safety Consultative Committee on 17 October 2012 for the period September 2011 to June 2012. A total of 218 classes have been run across 37 different courses. Total attendance including staff, postgraduate students and contractors was approximately 2,943, of which staff alone accounted for 1,685. Overall, class appraisals were high with a large number of scores of 4.5 out of 5 awarded by participants. In order to maintain this high standard the LDC will extend the quality assurance framework to safety courses from 2013 to ensure quality, consistency and relevance.

The June 2012 NEBOSH National General Certificate achieved a 92% success rate and the LDC will arrange a presentation at 170 Queen Gate on 13 December 2012 to recognise delegate's achievement. Simultaneously studying and working is never easy, which makes their success all the greater. The College has run the NEBOSH National General Certificate with the Safety Director Ian Gillett as lead trainer since 1993 and we will celebrate a 20th anniversary next year.

The LDC is aiming to reduce its administration so that from 2013 we will not issue paper certificates for short course attendance. Instead the LDC will rely on the Oracle Learning Management System (OLMS) record and delegates can view their learning history; bookings and attendances under "My Training". We will continue to issue paper certificates for courses which are externally validated by exam bodies like NEBOSH, CIEH (Chartered Institute of Environmental Health), and specialist classes like Carriage of Infectious Substances, Gas Safety, Pressure Fittings, Lifting Operations and First Aid.

The Health and Safety Executive closed its consultation process CD248 on 3 December 2012 regarding changes to First Aid provision. The HSE will no longer approve first aid training providers. This change could take place as early as April 2013. OfQual will take over the role of Regulator and approve Awarding Bodies. Training providers will have to register and seek accreditation with them. It is very likely that OfQual will introduce a new syllabus for Level 2 Award in First Aid (formerly HSE 1 day Emergency First Aid at Work) and Level 3 Award in First Aid (formerly HSE 3 day First Aid at Work). It is likely that there will be an introduction of a written multiple choice paper at the end of both courses that will need to be sent to the Awarding Body for marking. There may therefore be a delay in delegates not knowing whether they have passed their first aid course until receipt of the certificates. There will also be additional costs for the certification process which training providers may choose to pass on to the LDC. The full implications are unknown until the review of the Approved Code of Practice (ACoP) and associated guidance is published. We would envisage that existing qualifications will remain valid and First Aiders will sit the new Award as and when their qualification comes up for renewal.


Seasons Greetings

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