

**DEPARTMENT OF ORTHOPAEDIC SURGERY,  
NATIONAL UNIVERSITY OF SINGAPORE**



DECEMBER 2018 : Issue 16

**TREE OF ANDRY**



Special points of interest:

- DEPARTMENT SAFETY OBJECTIVES, PROGRAMME & REVISED SAFETY & HEALTH POLICY
- SAFETY INSPECTION & UPDATES
- DEPARTMENT WELLNESS & TEAM BONDING
- SPECIAL WELLNESS FOCUS
- NUS SAFETY & HEALTH NEWS

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**SAFETY NEWSLETTER**

<b>Editors</b>	Ramruttun Amit Dominic Tey	Chong Sue Wee Esther Tan
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## 2018 Department Safety & Health Objectives & Programme

### 2018 Department Safety & Health Objectives

	Objective	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Current Status/ Remarks
1	To achieve zero reportable accident/incident which result in high impact incident such as those: A. Subjected to Committee of Inquiry B. Resulting in punitive measures by regulator C. Resulting in financial loss > \$500K	✓	✓	✓	✓	Completed
2	All new staff & students to complete safety induction within 1 month of commencing duties	✓	✓	✓	✓	Completed
3	To conduct 2 wellness activities as part of the safety activities to provide a more holistic safe and healthy workplace		✓		✓	Completed

### 2018 Department Safety & Health Programme

	Objective	Responsible	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Current Status/ Remarks
1	Organize 4 safety, health & wellness activities to serve as an avenue to raise awareness of safety, training and total health and wellness for staff & students	Department Safety Committee	Safety Induction & Quiz (12/01)	- Safety Induction & Quiz (17/04) - Labrador Park Walk (22/06)	Safety Activity (HBRA Safety Awareness Talk) (25/09)	The Great Heritage Trail (07/12)	Completed
2	Participate in safety & health related activities organized by University/Faculties & other organizations/institutes	Staff and Students	-	NUS City Walk (27/04)	NUS Medicine Safety Day (26/07)	- NUSMed Lab Safety Inspection (15-19/10) - Botanic Garden Walk (14/12)	Completed
3	To conduct emergency response exercises to familiarize staff & students with emergency procedures not limited to: a) Internal Fire Evacuation Drill b) Chemical & Biological Spill training for new staff/student	Department Safety Committee & Safety Leads	- NUHS Fire Drill (12/01) - MD11 fire drill(29/01) - NUSTEP Fire Drill (02/03) - ODC Fire Drill (23/03)	-Chemical & Biological Spill Exercise (06/04) - BCP Table Top Exercise (08/05)	-	-	Completed
4	Conduct workplace safety inspections once a year	Department Safety Committee	-	-	Internal Dept Lab & Office Inspection (20/08 - 11/10)		Completed
5	Review workplace safety performance once a year to ensure continual improvement	Head of Department	Ongoing	Ongoing	Ongoing	Management Review with HOD (12/12)	Completed
6	Workplace safety lead to conduct safety induction training to new staff and students	Safety lead	Ongoing	Ongoing	Ongoing	Ongoing	Completed

## REVISED DEPARTMENT SAFETY & HEALTH POLICY (OCTOBER 2018)

The Department Safety Policy was retitled as "Department Safety & Health Policy" and was revised on 28 October 2018 to reflect continued emphasis on both Occupational Safety and Total Wellness & Health in the department.

Yong Loo Lin School of Medicine

Department of Orthopaedic Surgery



Document Name: Department Safety & Health Policy		Document ID: DOS-S01-01
		Version No.: 03
Issue Date: 01 November 2009	Revision Date: 28 October 2018	Next Revision Date: 28 October 2021
Prepared by: Department Safety & Health Committee		Approved by: A/Prof Wilson Wang

### Department of Orthopaedic Surgery Safety & Health Policy

The Department of Orthopaedic Surgery is dedicated to provide a safe and healthy working environment for our student, staffs, contractors and visitors. We are committed to build a positive Safety & Health (S & H) culture and comply with all applicable occupational S & H legislations, guidelines and standards that NUS subscribes to: and other corporate policies that NUS adopts through the Office of Safety, Health and Environment (OSHE). We are committed to take all reasonable precautions to ensure that our laboratories and workplaces are fully compliant with NUS Safety, Health Policies and Standards.

Our guiding '**STARR**' principles are:

**Safety & Health** - Ensuring S & H is a top priority in our operational procedures. We will develop appropriate protocols for department specific work practices. We advocate medical surveillance for staff and students engaged in department research activities. We will safeguard all our stakeholders by implementing a S & H Management System to minimize injuries and ill health.

**T**rainig - We encourage all staff to attend the safety seminars and courses organized by OSHE. New staff and students will undergo safety induction training by more experienced personnel who will pass on the concepts of safety in operational practices in our laboratories.

**A**wareness - We provide information about health and safety issues to all our stakeholders, including identifying and updating knowledge of potential hazards & other requirements on a regular basis, sharing with each other best practices.

**R**esponsibility - To ensure that compliance is the responsibility of every staff & student in the department. Each Principal Investigator is ultimately responsible for the compliance of the team under the NUS Safety, Health Policies and Standards.

**R**eview - Continuously review our S & H Management Systems through the PDCA cycle to identify gaps and ensure continual improvement in order to meet or exceed best safe practices

We will manage Occupational S & H by conducting the necessary Risk Assessments in a Team, leveraging on the skills set and expertise of each member. We will identify and minimize Hazards with the appropriate Operational Controls.

The Department S & H Committee has the mandate to highlight unsafe practices and encourage and educate staff and students to adopt better work procedures.

The Department will ensure areas under its management have adequate resources and funding for its S & H Management System.

Endorsed by:

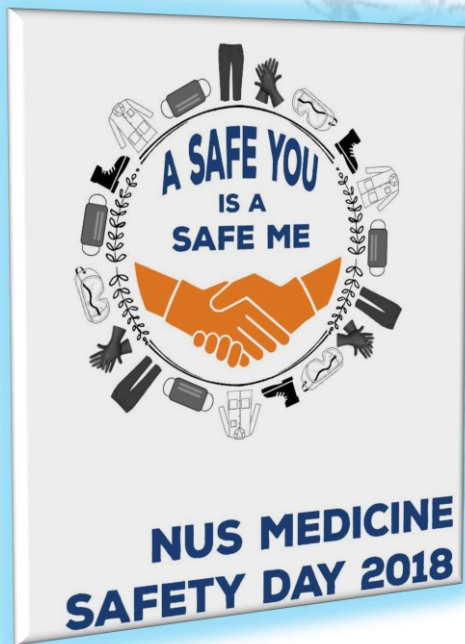
A/Prof Wilson Wang Ee Jen

Head

Department of Orthopaedic Surgery



## NUS MEDICINE SAFETY DAY (JULY 2018)



**Best Poster Award**



Welcome to our Department Safety Booth

**PLAY AT YOUR OWN RISK !!!**



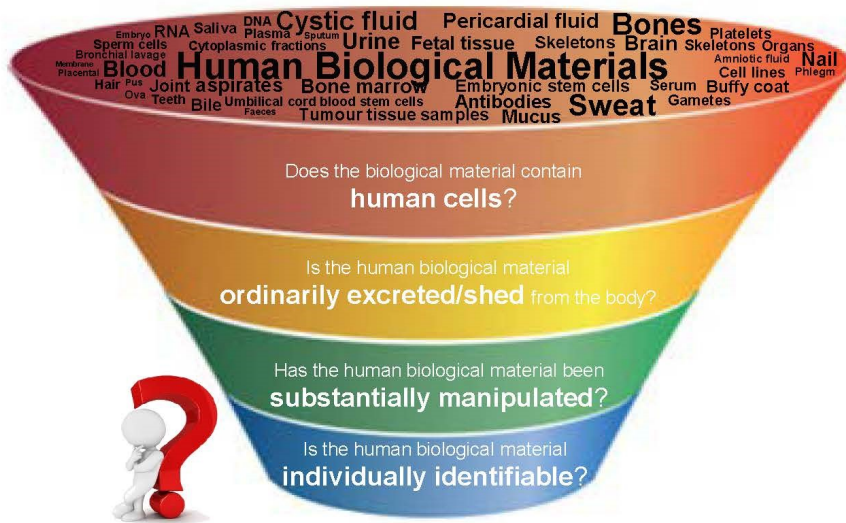
**Every participant having a fun time playing the safety game**

**Department Organizing Team**

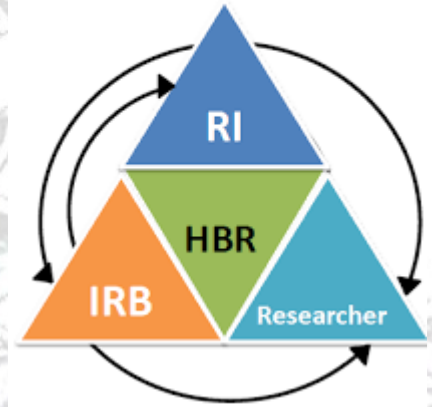




## HUMAN BIOMEDICAL RESEARCH ACT (HBRA) BRIEFING (SEPTEMBER 2018)



### HBRA framework

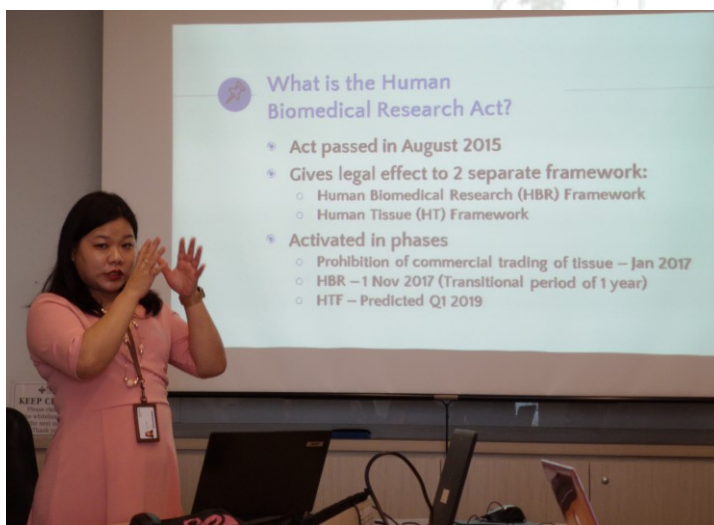


### What is the Human Biomedical Research Act?

The Human Biomedical Research Act is an act passed by the Singapore government in August 2015 and will be activated in phases. It serves to protect and regulate the human biomedical research conducted in Singapore.

It consists of two separate but related regulatory framework:

1. Human Biomedical Research Framework
2. Human Tissue Framework



Briefing by NUHS Research Office representative



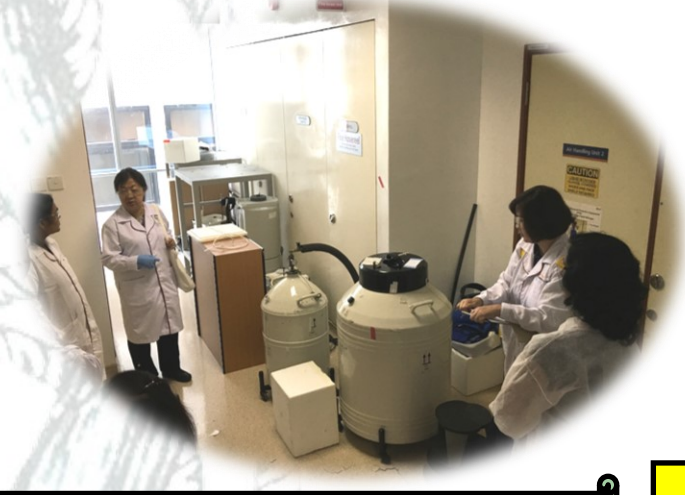
Department Safety & Health Committee members fully focus to understand the new HBRA compliance requirements

YLL SOM ANNUAL LABORATORY SAFETY INSPECTION  
(OCTOBER 2018)



Checking of flammable storage cabinet to ensure the MAQ is not exceeded

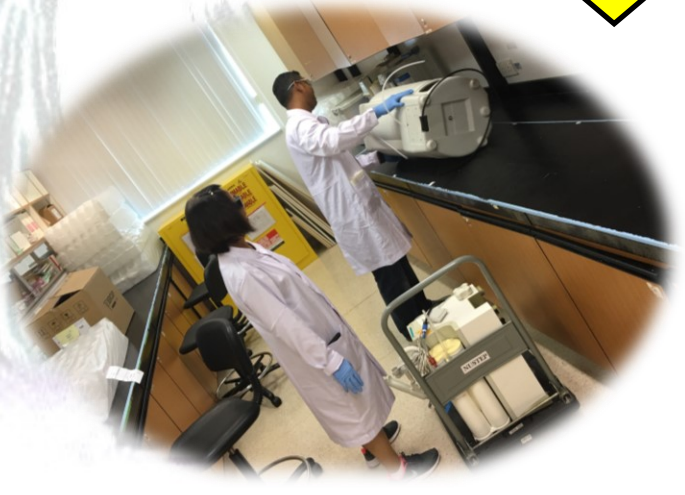
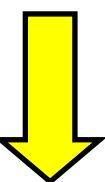
The SOM safety inspectors all ready to start the inspection of the NUSTEP labs



What is this chemical doing in my lab? I have never seen this bottle before !!!



Immediate rectification after obstruction of fire hose reel area were highlighted





## DEPARTMENT WELLNESS & TEAM BONDING ACTIVITY ("The Great Heritage Trail") (DECEMBER 2018)



Team grouping and briefing by the organizing committee to the team members



Yay!!! All ladies team!!!  
Lady Luck is surely on our side !!!

Umbrella sisters !!!  
"Rain or shine, we always carry our umbrella with us" is our motto!!!



Dinner Buffet @ Tiffany Café & Restaurant, Furama City Centre

An Amazing Race of  
"The Great Heritage Trail"  
Orthopaedic Surgery 2018



Winner (left) & Runner up (right) teams receiving their well deserved rewards



# The Tree of Andry

## SPECIAL WELLNESS FOCUS – THE SWEET ISSUE

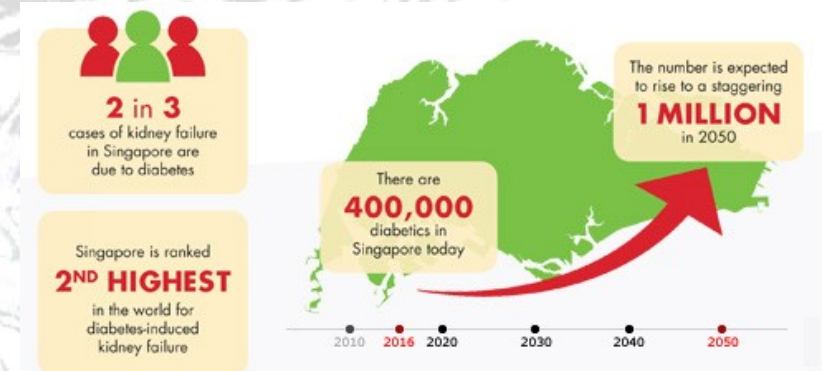


According to current Singapore statistics, 1 in 9 individual has diabetes. This figure could escalate to 1 in 5 by 2030.

Diabetes can affect anyone. Knowing your risk of diabetes will help identify the changes you need to make to your lifestyle. You are at an increased risk of developing Type 2 diabetes if you:

- Have a parent or sibling with diabetes
- Have a BMI of 23.0 kg/m<sup>2</sup> or higher
- Lead an inactive (sedentary) lifestyle
- Have high blood pressure
- Have abnormal blood cholesterol/lipid levels
- Have a history of gestational diabetes
- Are 40 years old and above
- Have impaired glucose tolerance or impaired fasting glucose

<https://www.healthhub.sg/programmes/87/diabetes-mellitus>



Diabetes increases your risk for many serious health problems including:

- ♦ Foot complications
- ♦ Kidney Diseases
- ♦ High Blood Pressure
- ♦ Stroke
- ♦ Eye complications

<http://www.diabetes.org/living-with-diabetes/complications/>

## Diabetes diet

A diabetic diet doesn't have to be complicated and you don't have to give up all your favorite foods. The first step to making smarter choices is to separate the myths from the facts about eating to prevent or control diabetes.

A **healthy diet** includes protein, carbohydrates, and fats. Our bodies need all three to function properly. The key is a **balanced diet**.

Focus on **whole grain carbs** instead of starchy carbs since they're high in fiber and digested slowly, keeping blood sugar levels more even. Choose high-fiber, slow-release carbs, they are digested more slowly, thus preventing your body from producing too much insulin. **Low GI foods** have the least effect on blood sugar.

**Low GI (Glycemic Index) food include:**

- Basmati rice (long grain rice)
- Sweet potato and yam

DIABETES SUPER FOODS				
THAT WILL HELP CONTROL AND MINIMIZE BLOOD SUGAR				
 LADY FINGER	 CAULIFLOWER	 LETTUCE LEAF	 CABBAGE	 SPINACH
 BRINJAL	 ONIONS	 GREEN ONIONS	 BEET ROOT	 TURNIP
 CUCUMBER	 SKINNY CUCUMBER	 TOMATOES	 CAPSICUM	 GREEN CHILLIES
 BITTER GOURD	 CARROT	 LEMON	 WHITE RADDISH	 RED RADDISH
 RIDGED GOURD	 EGG WHITE	 LIGHT SOUP OR STEW	 SODA WATER	 BOTTLE GOURD
 INDIAN BLACKBERRY	 CINNAMON	 GARLIC	 FENUGREEK	





For more detail, please check:  
[https://inetapps.nus.edu.sg/osh/portal/safety\\_updates/nusshn/nusshn.html#](https://inetapps.nus.edu.sg/osh/portal/safety_updates/nusshn/nusshn.html#)

SEPTEMBER 2018

### Mutual recognition of safety & health training among institutes of higher learning – Your 'passport' to research productivity

Learn more about the new scheme that mutually recognises safety and health training among institutes of higher learning.

>> [Read more](#)

### Inaugural peer-to-peer workshop for Safety & Health Coordinators

The inaugural Safety & Health Coordinator (SHC) peer-to-peer learning workshop was held on 3rd Jul 2018.

>> [Read more](#)

### Learning lessons from recent incidents in Institutes of Higher Learning

Learning lessons from recent incidents.

>> [Read more](#)

### Updates to NUS safety and health manuals, standards and quick guides

Learn more about the revisions to existing manuals and the new standards & quick guides published this quarter.

#### **NUS General Laboratory Safety Manual**

The manual include requirements for using shared equipment that are to be left unattended overnight or where personnel are required to work alone. More guidance on how to conduct commissioning and decommissioning exercises for laboratory and workshops effectively.

#### **NUS Safety and Health Management System Standard for Departments**

##### **Part B: Guidance Notes**

The guidelines was revised to provide greater clarity on the process to develop departmental safety and health objectives & some key considerations departments should address when developing SHMS

#### **NUS Safety and Health Standard for Blood Collection from Humans for Research and Teaching Purposes in NUS Premises**

The document details the NUS requirements pertaining to safe practices and infrastructure needed when collecting blood from human subjects for research and teaching purposes in NUS premises.

#### **Quick Guide on Safe Handling of Non-Human Primate (NHP)-Derived Materials**

This guide provides details on the universal practices required for researchers handling NHP-derived materials.

#### **Quick Guide on Accident and Incident Investigation for Level 1 Incidents**

This guide provides a quick overview on how to do an investigation for incidents classified as "level 1".

### **Case 1: Cold burn from liquid nitrogen**

#### **What happened?**

A graduate student came into contact with liquid nitrogen during sample retrieval from a Dewar tank and sustained cold burns on her fingers. She was not wearing the required PPE when performing the activity



#### **Corrective Actions**

The student was re-trained on the PPE and safety procedures to be followed when handling liquid nitrogen and retrieving samples from Dewar tanks.

### **Case 2: Fire in laser cutter**

#### **What happened?**

A fire started inside a laser cutting machine while it was cutting an acrylic board. The rubber diaphragm of the air assist pump had deteriorated over time resulting in inefficient flow of cooling air into the machine.



#### **Corrective Actions**

1. The air assist pump was replaced with an air compressor that had a gauge to display airflow rates.
2. The frequency of maintenance of the various was increased & the standard SOP was revised



### **Case 3: Wrist injury during sample transportation**

#### **What happened?**

A staff was transporting a Styrofoam box weighing about 1 kg containing samples and cooler packs. While she was walking, the Styrofoam box was slipping from under her arm and she had to adjust it in an awkward position using her right hand resulting in her right wrist being painful and swollen.



#### **Corrective Actions**


The lab group revised its RA for activities involving transportation of samples and included ergonomics hazards

NOVEMBER 2018

### NUS SAFETY & HEALTH NEWS

November 2018


**Update to NUS Laboratory Biorisk Management Manual and launch of new online resources – Safety and Health Guidelines for 3D Printing & Conducting Incident Investigation and Root Cause Analysis Training Course**



Fresh off the printing press – (1) The revised NUS Laboratory Biorisk Management Manual (2) Guidelines for working safely with 3D printers (3) Training module on how to conduct effective incident investigations.

>> [Read more](#)


**Watch out for bats and hammers! - Lessons learnt from recent incidents**



Find out more about some of the recent incidents that happened to our researchers conducting field experiments and learn how to prevent them!

>> [Read more](#)

**Snapshots of Safety and Health events organized by NUS Departments, Faculties/Schools & Research Centres/Institutes (Sept – Oct 2018)**



A glimpse into the various safety and health events held on campus in September and October 2018.

>> [Read more](#)

### Revision to NUS Laboratory Biorisk Management Manual

#### Key Highlights

1. Integration of bio-related standards/ standard operating procedures into the revised NUS Laboratory Biorisk Management manual
2. Integration of the following chapters into the other existing chapters in the revised manual (Biosafety Programme Administration, Good microbiological techniques and recommended work practices & Common chemicals and radioactive materials)
3. Reorganisation and integration of all niche biosafety topics into a single chapter

#### New Safety & Health Resources

##### Quick Guide

Safety and Health Guidelines for 3D Printing

##### Online Training Module

Conducting Incident Investigation and Root Cause Analysis (OSHGEN09)

### Safety Days Around Campus

- ◆ Technology Lab (T-Lab) Building Safety Day on 27th September 2018 **“Enhancing positive safety and health culture”**
- ◆ Chemical & Biomolecular Engineering Safety and Health Day on 27 September 2018 **“A step forward to improve lab safety culture”**
- ◆ Department of Electrical and Computer Engineering Safety and Health Day on 28 September 2018
- ◆ Science Safety Day on 28 September 2018 **“Celebrating 10 years of Science Safety and Health”**
- ◆ University Campus Infrastructure Construction Safety Day on 9th October 2018

For more detail, please check:

[https://inetapps.nus.edu.sg/osh/portal/safety\\_updates/nusshn/nusshn.html#](https://inetapps.nus.edu.sg/osh/portal/safety_updates/nusshn/nusshn.html#)



