

DEI

Reproductive Hazards

Grace Trammel
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A Call for Increased Focus on Reproductive Health within Lab Safety Culture

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Read Online

Key Takeaways:

1. Burden of lab safety placed on pregnant workers, or those planning to conceive
2. Lack of clarity/consistency in documentation of reproductive toxins
3. What needs to change: (a) need better Chemical Hygiene Plans (CHPs); (b) normalization of reproductive health safety in lab culture

1. Burden of lab safety placed on pregnant workers, or those planning to conceive
- Reproductive health safety affects everyone – male and female
 - Specific chemicals affect one or both sexes
 - See list at:
<https://policies.unc.edu/TDClient/2833/Portal/KB/ArticleDet?ID=132020>
 - Risks of poor reproductive health safety:
 - Genetic damage to germ cells leading to infertility, potential birth defects
 - Exposure to toxins during pregnancy can cause birth defects, miscarriage
 - Risks of exposing the child during lactation

2. Lack of clarity/consistency in documentation of reproductive toxins

- Methodology:
 - Chemical Hygiene Plans (CHGs) evaluated for top 100 US universities
 - CHGs refer students to Safety Data Sheets (SDSs), NIOSH Pocket Guide (NPG), and Proposition 65 list (Prop. 65) – these resources were evaluated for consistency

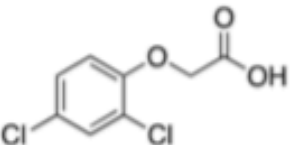



2. Lack of clarity/consistency in documentation of reproductive toxins

2 approaches to reproductive health safety:

1. Unified Protection – all workers identify reproductive hazards and take precautions to protect the most at risk group
 2. Differentiated Protection – the at risk group is responsible for reproductive health safety (i.e. pregnant workers are removed from the lab)
 - Risks to this approach: unknown pregnancy, chemicals that bioaccumulate
- *Most university CHPs follow 2., putting the burden on the at risk group*

2. Lack of clarity/consistency in documentation of reproductive toxins

- Lack of consistency in SDS's (dependent on supplier)

 <p>2,4-dichloro-phenoxyacetic acid</p>	Supplier 1	-		<p>Germ cell mutagenicity No data available</p> <p>Reproductive toxicity Laboratory experiments have shown teratogenic effects. No data available.</p>
	Supplier 2	<p>Toxic to Reproduction [Category 2] Suspected of damaging fertility or the unborn child</p>		<p>Germ cell mutagenicity dni-ham-ovr 1 mmol/L sce-hmn-lym 10 mg/L mmo-sat 250 ug/plate (-S9)</p> <p>Reproductive toxicity ori-rat TDLo: 220 ug/kg (1-22D preg) ori-rat TDLo:500 mg/kg (6-15D preg)</p>
	Supplier 3	-		<p>Mutagenic Effects No information available</p> <p>Reproductive Effects No information available</p> <p>Developmental Effects No information available</p> <p>Teratogenicity No information available</p>

2. Lack of clarity/consistency in documentation of reproductive toxins

- Niosh Pocket Guide (NPG):
 - Maintained by the CDC
 - Only includes chemicals with documented risks to reproductive health
- Proposition 65 list (Prop. 65 – California's list)
 - Includes all chemicals that have a potential risk for reproductive health
 - Updated annually
- *SDS, NPG, and Prop. 65 are all useful but not all equal

3. What needs to change

- CHP's need to include a section on reproductive health
 - Emphasize that ALL workers are responsible for reproductive health safety – promote an equitable environment
 - CHP's should clearly explain the differences in information found in SDS, NPG, and Prop. 65
- Regular conversations about reproductive health should be normalized