Workers' Guide to Health and Safety

by Todd Jailer Miriam Lara-Meloy and Maggie Robbins



Copyright © 2015 by Hesperian Health Guides. All rights reserved.

ISBN: 978-0-942364-71-2

Hesperian encourages you to copy, reproduce, or adapt any or all parts of this book, including the illustrations, provided that you do this for non-commercial purposes, credit Hesperian, and follow the other requirements of Hesperian's Open Copyright License (see www.hesperian.org/about/open-copyright).

For certain kinds of adaptation and distribution, we ask that you first obtain permission from Hesperian. Contact **permissions@hesperian.org** to use any part of this book: for commercial purposes; in quantities more than 100 print copies; in any digital format; or with an organizational budget more than US \$1 million.

We also ask that you contact Hesperian for permission before beginning any translation, to avoid duplication of efforts, and for suggestions about adapting the information in this book. Please send Hesperian a copy of any materials in which text or illustrations from this book have been used.

THIS EDITION CAN BE IMPROVED WITH YOUR HELP. If you are a worker health promoter, occupational safety and health professional, community organizer, or anyone with ideas or suggestions for ways this book could be changed to better meet the needs of your community, please write to Hesperian. Thank you for your help.

This book has been printed in Canada by Friesens, an employee-owned corporation, on 100% post-consumer, chlorine-free, recycled paper.



Hesperian Health Guides 1919 Addison St. #304 Berkeley, California 94704 USA www.hesperian.org

Credits

Editorial oversight

Todd Jailer Sarah Shannon

Editorial management

Catherine Doe Miriam Lara-Melou Kathleen Vickery

Additional writing and research

Kathleen Bubriski Diane Bush Arun Faur Michele Gonzalez Arroyo Yelena Ionova Michelle

Loya-Talamantes Tara Mathur Tom O'Connor Suzanne Teran

Indexing

Victoria Baker

Cover design

Kathleen Tandy

Design and production

Iñaki Fernandez Shu Ping Guan Kathleen Tandy

Art Coordination

Catherine Doe Miriam Lara-Meloy

Community review coordination

Catherine Doe Todd Jailer Miriam Lara-Meloy Maggie Robbins

Technical review

Garrett Brown Tom Gassert Enrique Medina Rory O'Neill

Project support

Catherine Doe Yelena Ionova

Additional project support

Kathleen Bubriski Lilian Chen Amber Collins Kate Dube Alison Hamburg Sa Liu Lila Marshall Patricia Navarro Candace O'Bryann Sana Patel Maria Rosales Michaela Simmons Nainwant Singh

Proofreading

Sunah Cherwin

Cover photography

Andrew Biraj/Reuters (Rana Plaza, Bangladesh) Institute for Global Labour and Human Rights (sleeping worker, China)

Miriam Lara-Meloy (shoe factory, Indonesia) Marco Longari/AFP/Getty Images

(garment worker, Africa)

R. B. Reed (wires)

Andy Shapiro (thread)

Richard Vogel/AP Photo (shoe worker, Vietnam) Bobby Yip/Reuters (electronics worker, China)

Joseph Younis (shoelaces)

For their kind permission, we thank the Solidarity Center and the International Labour Organization for the use of their illustrations.

Art

Roberto "Galo" Arroyo Heidi Broner Gil Corral Regina Doyle Sandy Frank Shu Ping Guan **Iesse Hamm** Haris Ichwan Lori Nadaskay Mabel Negrete Chengyu Song Yoly Stroeve Ruan Sweere Kathleen Tandy Christine Wong Kevin Wood Mary Ann Zapalac

Field testing

Australia:

Oxfam – Australia

Bangladesh:

Karmojibiu Nari – KN Nari Uddug Kendra – NUK

Chile:

Centro de Capacitación para la Mujer Trabajadora – CECAM

China:

China Labor Support Network Chinese Working Women's Network – CWWN

Female Migrant Workers' Training Project

Guangzhou Occupational Health and Occupational Rehabilitation Resource Center

Institute of Contemporary Observation – ICO

Costa Rica:

Asociación Servicio Pro-Laboral – ASEPROLA

Denmark:

Misión Dinamarca/PRODECA

Dominican Republic:

Centro de Investigación para la Acción Femenina – CIPAF Federación Dominicana de Trabajadores de Zonas Francas y Afines y Project Alta Gracia – FEDOTRAZONAS

El Salvador:

Centro de Estudios y Apoyo Laboral

– CEAL

Movimiento de Muieres Mélida Ana

Movimiento de Mujeres Mélida Anaya Montes – MAM

Ghana:

Industrial and Commercial Workers Union – ICU

Guatemala:

Centro de Acción Legal en Derechos Humanos – CALDH Comisión de Verificación de Códigos de Conducta – COVERCO STITCH UNSITRAGUA

Honduras:

Centro de Derechos de Mujeres – CDM Central General de Trabajadores – CGT Comunicación Comunitaria – COMUN

Equipo de Monitoreo Independiente de Honduras – EMIH

Equipo de Reflexión, Investigación y Comunicación – ERIC

International Textile, Garment and Leather Workers' Federation – ITGLWF

Hong Kong:

Asia Monitor Resource Center – AMRC Hong Kong Workers' Health Centre – HKWHC

India:

Initiatives for Social and Health Advancement – ISHA People's Training and Resource Center – PTRC Self-Employed Women's Association

Indonesia:

- SEWA

Local Initiatives for OSH Network

– LION
Social Information and Legal Guidance
Foundation – Yayasan Sisbikum

– SISBIKUM

Kenya:

Kenya Women Workers Organization
– KEWWO

Korea

Social Programme for Action and Research in Korea – SPARK

Malaysia:

Women's Development Collective – WDC

Mexico:

Alianza Fronteriza de Obreras – ALFO



Casa Amiga
Centro de Apoyo al Trabajador – CAT
Centro de Información para
Trabajadores, A.C. – CITTAC
Colectivo de Obreras Insumisas
Comité Fronterizo de Obreras – CFO
La Mujer Obrera
Servicio, Desarrollo y Paz, A.C.
– SEDEPAC
SITEMEX

Namibia

Labor Resource and Research Institute
- LaRRI

Nicaragua

Movimiento de Mujeres Trabajadoras y Desempleadas "Maria Elena Cuadra" – MEC

Pakistan

Working Women Organization – WWO

Philippines

Institute for Occupational Health and Safety Development – IOHSAD

Kilusan Ng Manggagawang Labor Education and Research Network – LEARN

Resource Center for People's

Development – RCPD

Trade Union Congress of the Philip

Trade Union Congress of the Philippines

South Africa

Community Health Global Network Industrial Health Resource Group – IHRG

South African Clothing and Textile Workers Union – SACTWU

Sri Lanka

Free Trade Zone and General Services Employee Union – FTZ & CSEU

United States

ENLACE

Environmental Health Coalition – EHC Garment Worker Center Madre Mujeres Unidas y Activas

Special thanks to the following individuals and organizations:

Garrett Brown is the godfather of this project. It would never have been completed without his patient advice, tireless support, and relentless networking through the Maquiladora Health and Safety Solidarity Network. Tom Gassert gave generously of his time and expertise, as did Jeong-ok Kong and members of KILSH and SHARPS, and Ted Smith and Mandy Hawes of ICRT; we couldn't have produced the electronics section without them. Rory O'Neill of Hazards Magazine was a constant fount of information, resources, and networking connections. Apo Leong, Sanjiv Pandita, Omana George, Sally Choi, and others at the Asia Monitor Resource Center have accompanied this book since its start and we are thankful for all their support throughout the years. Jagdish Patel, Noel Colina, Melody Kemp, and Darisman Man were among the many in the Asian Network for the Rights of Occupational and Environmental Victims (ANROEV) who, alongside Julia Quiñones at the Comité Fronterizo de Obreras in Mexico, shared their experience and knowledge with us, reminding us often why we were developing this book. Lynda Yanz, Ana Enriquez, and Kevin Thomas of the Canadian Maquila Solidarity Network provided essential connections and resources. Providing help in a myriad of ways from popular education techniques to hazard mitigation, we appreciate Suzanne Teran, Betty Szudy, Laura Stock, Diane Bush, Valeria Velazquez, Robin Dewey, and others at UC Berkeley's Labor and Occupational Health Program, Katie Quan of UC Berkeley's Labor Center, and Linda Delp, Deogracia Cornelio, Sarah Jacobs and others at UCLA's Labor and Occupational Safety and Health program. Finally, our coworkers at Hesperian, past and present, provided personal and collective support to this project through its many iterations, and to them we give our heartfelt thanks.

A million thanks for their assistance to:

Suvechha Adhikari Sarah Adler-Milstein Lupita Aguila Nasimul Ahsan Babul Akhter Shirin Akhter Kalpona Akter Donald Aleman Nelly Amaya Karen Andrews Evangelina Arqueta Nina Ascoly Sued Asif

Nasir Ateeq Jeff Ballinger Jordan Barab Jorge Barajas Sherry Baron Irene Barrientos **Enrique Barrios**

Dinorah Barton-Antonio

Nikki Bas

Lucrecia Bautista Mary Bellman

María de la Paz Benavides

Hernández Blanca Blanco Megan Bobier Suchada Boonchoo

Tim Brady David Bronkema Jim Brophy Earl Brown Marianne Brown Lorena Patricia Cabanillas

Sonia Cano Narvaez Silvana Cappuccio Martha Lorena Cárdenas

Teresa Casertano Ariel Castro Carla Castro

Jean-Marc Caudron Magdalena Cerda Martha Cervantes

Serapina Cha Mi-Kyung

Jackie Chan

Ka Wai Chan Amber Channer Mirai Chatteriee Esther Chavez Cano

Helen Chen

Debby Cheng Yi Yi Maria Chin Abdullah Suetwah Choi

Edwin Christiawan Soon-ok Chun Suki Chung Kirsten Clodius Stephen Coats Niza Concepcion

Floridalma Contreras Dick Crosbie Andrew Cutz Melona Daclan Glorene Das **Enrique Davalos** Caoimhe de Barra Cindu de Erazo

Leonardo de Leon Carmen Manuela Del Cid

Nellu Del Cid Abdulhalim Demir

Kelly Dent

Blanca Velázquez Díaz

Leonor Dionne Tess Dioquino

Alejandra Domenzain Peter Dooley

Phil Drew Ionathan Eaton Daniel Edralin David Egilman Howard Ehrman Iill Esbenshade Rosa Marina Escobar Steve Faulker

Catherine Feingold Bridget Fellini

Maria Antonia Flores Luzviminda Fortuna Virginia Franco Hannah Fritsch

Eric Frumin

Homero Fuentes Sugio Furuya Simmi Gandhi Gilberto García Irene Garza Leslie Gates Olimpia Gatica Pilar Gonzalez

Gino Govender

Bartolo Fuentes

Iau Govender Ariane Grau Crespo Elizabeth Grossman Rubenia Guadalupe Marina Gutierrez Catalina Guzmán Catherine Muthoni David Harrington Robert Harrison Katia Hemmerich Nick Henwood **leff Hermanson** Eugenia Hernández

Rodrigo Hernández Ygnacio Hernández Josefina Hernández Ponce

Hannah Higginson David Hornung M. Delowar Hossain

Ricardo Hernández

Jim Howe Emily Ilag Janice Jacobson Lily Jahan Harsh Jaitli Rubina Jamil Herbert Jauch

Nityanand Jayaraman

Lucia Jayaseelan Ana Jimenes Richard Hirsh Jordi Edwin Jurig

Rusti Jutajulu Aanchal Kapur Elizabeth Katz Amarieet Kaur Margaret Keith Naira Khan Heiner Koehnen Athit Kona Mariano Kramer Eva Kreisler Andre Kriel Yuling Ku Iennifer Kuhlman Evelina Kurki Laura Kurre Ioe La Dou Luisa Lange Bill Lankford Bjarne Larsen Ka Mei Lau Kimi Lee Alberto Legall

Amparo Lennarduzzi Michael Lesli Parry Leung Chuck Levenstein Pedro Reyes Linares Karen Lo Hui Yu Ling Zhang Ling

Zhang Ling Belinda Liu Kaiming Liu Joann Lo Rene Loewenson

Sandra Lopez Maria Teresa Loyola

Pheara Ly Sam Maher Pia Markkanen

José Amado Mancía Leiva Margaret Mandago Nasir Mansoor

Anton Marcus Gladis Marroquín Genevieve Martinez Ramon Martinez Rolando Fúnez Mateo Lisa McGowan Ilona Medrikat Racheal Meiers

Fred Millar John Miller Nanette Miranda Frank Mirer Sujata Mody

Norma Molina Karla Montalvo Dunia Montoya Medina Lisa Moore

Gemma J. Moraga Dominique Muller Karen Mulloy Marcela Muñoz Robin Munro Beth Myers Abby Nájera

Dulceamor Navarette Sheikh Nazma

Jesper Neilson Neil Newman Nguyen Ngoc Nga

Pun Ngai Qu Ning

Ganesh Nochur Huberto Juárez Nuñez Patricia Nyman Apollis

Dennis O'Brien Liz O'Connor Tom O'Connor Martha Ojeda Juliana Omale Abed Onn Surama Orantes

Dara O'Rourke Lida Orta Elisa Ortega

Miriam Ortega

Pedro Ortega Méndez Mina Palacios

Hilda Palmer Madhavi Panda Lourdes Pantaleon Pola Pantoja John Pape

John Pape Luis Paredes Maritza Paredes Alison Paul

José Nelson Paz Velásquez

Robert Perillo Sonia Pernillo Gary Phillips Magaly Pineda Au Mei Po Laura Podolsky Jackie Pollock Dimu Pratama

 $Malee\ Pruekpongsawalee$

Patty Quinlan
Carolina Quinteros
Richard Rabin
Peter Rabinowitz
Saeed Rahimi
M. Mofizur Rahman
Reyna Ramirez Sanchez

Sandra Ramos Rey Rasing

María Luisa Regalado

Marina Ríos

Beti Robles-Ortega

Yadira Minero Rodas Lumi Rodríguez Rita Isabel Romero Sirajul Rony Mila Rosenthal Shakh Rumana Monica Ruwanpathirana Lilibeth Sabado

Omar Salazar Albert Sales Arnel Salvador Raquel Sancho Ratan Sarkin Mary Sayupa Peter Scholz Yoem Seda Ashling Seely

Mónica Segobia Moscoso Dharmesh Shah

Mashuda Khatun Shefali

Ianet Shenk Ruth Sherer Young Shin Carolina Sierra

Arist Merdeka Sirait

Darius D. Sivin Iuliana So Sim Socheata Luis Solano Chun Soon-ok Juliana Soon-ok Stan Sprague Ashwini Sukthankar

Emiliana Tapia

Dorothy Tegeler Michael Terry Wanee Thitiprasert Trina Tocco Zernan Toledo Anna Torriente Sreuneath Touch Marion Traub-Werner Wilhelmina Trout Rachel True Cecilia Tuico Marco Tulio Juárez Juan Miguel Tumi Laura Turiano Iane Turner

Carmen Valadez Perez

Jim Vannoy Clara Velasquez Roberto Vivar A. Viyakulamary Etienne Vlok Norbert Wagner Chan Ka Wai Cathy Walker Phan Wanabriboon Hsing-Chi Wang Deborah Weinstock Wyger Wentholt Heather White Sarah Widmer Dorothy Wigmore Michael Wilson May Wong Moning Wong Michael Wright Emelia Yanti

Cherul Yip

Jim Young

Wilber Zavala

Chan Yu

FUNDERS

We gratefully acknowledge the generous support of:

Amnesty International - Ireland

Berger-Marks Foundation California Wellness Foundation

Church of Sweden Youth

Dominican Sisters of Springfield,

Illinois

Egilman Family Ford Foundation

General Service Foundation Grousbeck Family Foundation/

Lakeshore Foundation He-Shan World Fund Jadetree Foundation Trust

Kazan, McClain, Satterley & Greenwood, PLC

Lawson Valentine Foundation

Left Tilt Fund

Levi Strauss Foundation Maguila Health and Safety

Support Network

Moriah Fund

Panta Rhea Foundation Partnership Foundation Public Welfare Foundation Rockefeller Foundation Sidney Stern Memorial Trust Sisters of Charity of the Incarnate Word Solidarité Mondiale

Solifonds

United Methodist Church -Women's Division

West Foundation

Women Working Worldwide

We also thank the many individuals who contributed financially to make this book posible.



Contents

PART 1: Organizing for Safe and Fair Workplaces		
Chapter 1: Working for a living and living well	. 2	
Chapter 2: Learning and teaching about health at work	16	
Chapter 3: Organizing to improve worker health	34	
PART 2: Industries		
Chapter 4: Electronics factories	64	
Chapter 5: Garment factories	92	
Chapter 6: Shoe factories10	07	
PART 3: Work Dangers and Solutions		
Chapter 7: Ergonomics	22	
Chapter 8: Chemical dangers15	50	
Chapter 9: Machine injuries19	91	
Chapter 10: Electricity20	05	
Chapter 11: Fire	10	
Chapter 12: Dust	18	
Chapter 13: Noise	22	
Chapter 14: Light	29	
Chapter 15: Heat and cold23	32	
Chapter 16: Falling workers, falling objects, and vehicle injuries2	38	

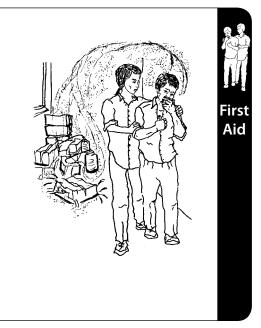
Chapter 17: Ventilation	244
Chapter 18: Personal protective equipment (PPE)	259
PART 4: Social Dangers and Solutions	
Chapter 19: Working too much, too fast, for too little	278
Chapter 20: Doing factory work at home	295
Chapter 21: Discrimination	304
Chapter 22: Violence	319
Chapter 23: Workers who migrate	336
Chapter 24: Children who work	349
Chapter 25: Access to health care	359
Chapter 26: Reproductive and sexual health	375
Chapter 27: Stress and mental health	390
Chapter 28: Eating well for health	405
Chapter 29: Access to safe water and toilets	413
Chapter 30: HIV (Human Immunodeficiency Virus)	418
Chapter 31: TB (tuberculosis)	428
Chapter 32: A decent place to live	432
Chapter 33: Pollution from factories	437
APPENDIX A: Laws and the struggle for decent,	
healthy, and fair work	448
APPENDIX B: Common chemicals and materials	461
Resources	530

Where to find



The right to live free of violence and sexual harassment
The rights of migrant workers 344
The UN and ILO on children and work
The right to be compensated for injuries caused by work
The right to health care
The right to work that does not affect reproductive health
The rights of people with HIV in the workplace
Two UN Covenants to inspire labor organizing451

First aid for hydrofluoric acid burns66
First aid when you breathe in a chemical
First aid when a chemical touches your skin or eyes
First aid when chemicals get in the mouth
First aid for machine injuries 203
First aid for electric shock 209
First aid for burns
First aid for heat illness
First aid for too much cold 237
First aid after rape



Activities

But why? 20
Analyze the causes of worker health problems21
Talk in small groups
Do a survey
Draw a map of the body42
Draw a map of your factory
Draw a map of your community
Ergonomic dangers in your factory125
Using a survey to improve ergonomics126
Follow the air!
Examine your pay286

Who has the power?31
What do you do in a day?31
We have power, too!31
Facing fear together32
Role playing builds confidence32
Learn self-defense
Gather information about recruiters33
An emergency plan for your factory36
Make time to relax40
HIV is not transmitted at work42-
HIV is a disability, not an inability42
Community pollution survey44.

How to

Clean up a mercury spill	71
Make a seat cushion	130
Make a spring-loaded cart	137
Clean up a small chemical spill	173
Get and read an SDS	180
Make a fire extinguisher at home	216
Check your local ventilation	252
Make a cloth mask for dust	267
Check your respirator fits and works	269

nsert earplugs so they work	272
Calculate your real pay	296
Get hetter care	366



About this book

People who work in factories making clothing, shoes, and electronics are some of the hardest working people in the world. Almost everyone on the planet depends on their labor and uses what they make. Yet many of these workers confront unhealthy, unsafe, and unfair conditions every hour of their working day.

Factory work can be designed to be healthy and safe for workers, to pay enough for workers to live with dignity and health, and to not harm people or the environment. Together with workers, organizers, occupational safety and health professionals, and employers, we have worked to describe problems, identify solutions, and find examples of organizing collaboratively and collectively to create better workplaces. This book is the result of that 10-year process.

This Workers' Guide to Health and Safety is easy to understand, rather than written in technical language. Anyone, no matter their educational level, expertise, or knowledge about occupational health and safety, can use this book. That is important because we believe that anyone can learn about health and safety at work, and anyone can help others learn and get organized.

This is not a textbook. It does not attempt to cover the entire body of information that is occupational health nor can it substitute for the assistance and expertise of professionals and others knowledgeable in the field. The goal of this book is to help workers gain knowledge to participate actively in creating healthier and safer workplaces. It is also a tool to encourage professionals and employers to include workers' experiences and knowledge in the creation of solutions. Without workers, change is not sustainable.

We wrote this book with the beliefs that:

- Lasting change happens when people identify the issues they think are important and acquire the tools they need to resolve them.
- Words, concepts, and illustrations that are easily understood help create knowledge and action.
- Women are a majority of the workers in export factories and their experience is the majority experience.
- Experts who pay attention to workers' needs and insights can be important allies in creating safer workplaces.
- Health and safety problems arise out of the conditions and structures of work, and solutions are found by improving them. Don't blame the workers!

We encourage you to adapt whatever you find useful in this book to best meet your needs and strengthen your efforts.



Basic occupational safety:

- Chairs, tables, tools, and workstations fit workers.
- · Workers take regular breaks.
- Chemicals that harm people are not used. Workers' direct contact with chemicals is limited.
- · Machines have guards to prevent injuries.
- The factory prevents fires and is prepared to fight fires.
- · Noise is below 90 decibels.
- General ventilation keeps the air clean and the temperature comfortable. Local ventilation removes dust and dirty air at the source.
- Personal protective equipment (PPE) fits well, is the right kind for the danger, and is free to workers.
- Toilets are clean, and the factory provides enough clean drinking water and water for emergencies.

Organize for:

- Wages that let us live fully and well.
- Protection from harm at work from machines, materials, or people.
 Justice and compensation when harm has been done.
- Work and life without violence or discrimination.
- Jobs that help create better communities, not worse ones.
- An end to pollution from factories.

Power within ourselves



Power with others



Power to take action



Advice for health promoters:

- · Start with what workers know
- Work on the big problems
- · Teach what is most needed
- Use words people understand
- Teach people how to learn
- Get help if needed

Advice to OSH professionals:

- Talk with and listen to workers
- Pay attention to social issues
 - Share knowledge
- What is best for workers and the community should be prioritized over profits, production, and politics

