

# THE CUTTING EDGE

## REGION IX NEWSLETTER



Summer Newsletter – August 2005

*Come and join us at the*

**31st Annual Symposium/Convention**  
**September 10-14, 2005**  
**Fort Lauderdale, Florida**



To register for the educational workshops:

Visit: [www.nsh.org](http://www.nsh.org)

[http://www.nshconvention.org/reg\\_info.cfm](http://www.nshconvention.org/reg_info.cfm)

~

### First Time Attendee Breakfast

Date: Sunday, 11 September

Time: 7:00 am

Please email [Aubrey@nsh.org](mailto:Aubrey@nsh.org) if you are interested in attending.

A full breakfast will be provided followed with a brief orientation by the Public Relations Committee and members of the Board of Directors.

Your breakfast ticket will be in your registration packet.

~

**Do Not Miss!!**  
**Region IX meeting**  
**Fort Lauderdale, Florida**

**A \$500 Regional membership scholarship draw will be awarded to a Region IX member!**

Date: Saturday, September 10, 2005

Time: 4:30 – 5:30 p.m.

Room: TBA

Agenda: Please e-mail Cheryl Clarke for any item you want discussed. [Cheryl@nshregionix.org](mailto:Cheryl@nshregionix.org)

All the names of the Region IX members will be included in this draw ~ you will have two years to spend the scholarship funds on any NSH educational material or to attend any NSH sponsored event.

### Greetings from the Region IX Director!

A big **WELCOME** to all our new Region IX members and thank you to those that renewed their NSH membership!! By now, you would have realized the benefits of being an NSH member, and being part of Region IX – we are all special!

Congratulations to our Education Chair, Mark Elliott, for the success of the Vancouver Education Day!! Education days are fun – continuous learning keeps our brain cells active and electrified, it is also a time to network with fellow Histotechs and compare the latest in products and equipment. If you need assistance in setting up an Education Day in your area, please contact Mark Elliott or any of your Executive committee, we will be glad to help!

Exciting preparations have been made for the 2005 NSH Symposium/Convention at the Broward County Convention Center in Fort Lauderdale, Florida September 10-14, 2005. There are endless choices for educational workshops and seminars to choose from. Visit the NSH website: [www.nsh.org](http://www.nsh.org) to get more information on suggested hotels to stay at and places to visit while in Florida.

To represent Region IX in the House of Delegates at the S/C in Florida aside from myself are, Dev Olshansky, Michael Ho, Heather Nymeyer and Mark Elliott. We had room for 5 more delegates, but unfortunately, we did not get enough brave souls willing to do the job. "The House of Delegates determines the policies that govern the society".

[http://www.nshconvention.org/what\\_is\\_the\\_hod.cfm](http://www.nshconvention.org/what_is_the_hod.cfm)

Nominations are still being accepted for the following Region IX awards: Surgipath Award of Excellence and the Malcolm D. Silver award. Criteria and nomination forms for these awards are available on

<http://www.nshregionix.org/awards.html> Please e-mail nominations to Rachel at [rachel@nshregionix.org](mailto:rachel@nshregionix.org) and/or Heather at [heather@nshregionix.org](mailto:heather@nshregionix.org). Deadline date for submission is: August 31<sup>st</sup>.

See you in Florida!

**Rose Clarke**

[rose@nshregionix.org](mailto:rose@nshregionix.org)

## Education Update

It is hard to believe that it has been over a month since our very successful Education Day was held at St. Paul's Hospital. From the feedback we have received it appears to have been an overwhelming success from everyone's perspective-attendees and vendors, as well as committee members. There were a large number of people asking when the next one is scheduled for! It was very apparent that there is a large need for this type of meeting and the committee is looking into what will happen next.

The vendors were fantastic with their support-both financially for providing funds for food etc, but also for providing amazing door prizes- and from all accounts they were quite pleased with the response they received from everyone in attendance. They were some of the most vocal in calling for more such events. I would like to thank them all (see side panel for list of sponsors) for their participation because if it wasn't for their support, we probably could not have pulled this off.

I would also like to thank the 90 people who gave up their Saturday to attend this event. When we started planning this we thought we would be lucky to get 50 people attend, but we then had to restrict registration when the numbers reached 100, we were floored, especially since we had members from northern BC, Alberta and even the USA in attendance. From what I have heard and read in the evaluations handed in everyone enjoyed the day, and were asking for more.

Another big THANK YOU goes to our four brilliant speakers-Bryan Hewlett, Ethel Macrea, Alan Rempel and Dr. Steve Kussick. They gave outstanding presentations which were thoroughly enjoyed by all who heard them. The major complaint that we heard was that we had not given the speakers enough time to cover their topics. As this was our first attempt at putting one of these on, it was a learning experience for us and we will remedy this in future events. We did receive feedback from people in attendance and we received some great ideas as to what kind of topics you would like to see covered in future events

Finally I would like to thank the Organizing committee-Rose Clarke, Richard Mah, Janet Tunnicliffe, Tom Wells and Cheryl Clarke. Without their immense help and support this would not have been the success it was.

We are not sure what is coming up next-we are taking a bit of a breather for the summer and then will start working on deciding what comes next. There was word of an educational event being organized for Toronto sometime this fall but haven't heard anything on this lately.

## Thank you ...to our Sponsors



*chapteC*



*Creative Waste Solutions, Inc.*

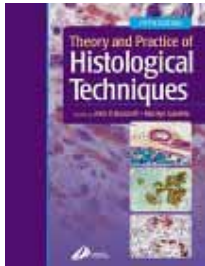


*Davis Diagnostics Ltd.*



Thanks...

Marilyn Gamble for door prize donation of  
 "Theory and Practice of Histological Techniques, 5<sup>th</sup> Edition"  
 By John D. Bancroft & Marilyn Gamble  
 Also courtesy of Michael Houston of Elsevier  
<http://www.elsevierhealth.com/title.cfm?ISBN=0443064350>



Winner – Elaine Townsend, Prince George Regional Hospital, B.C.

Somagen Diagnostics Inc. for the Sonomagen wine

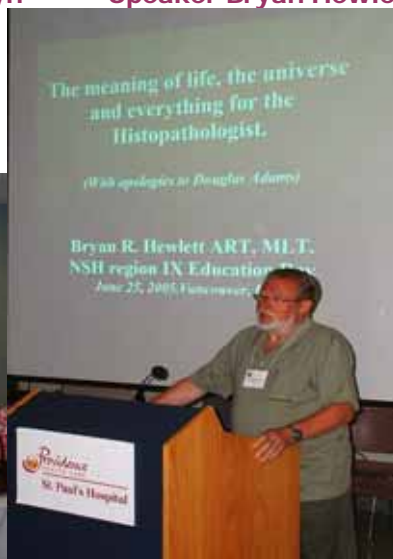


For the 13" TV

For the T-shirts and bags



Region IX Members (below) strike a pose  
 Linda, May Ling, Kathy & Marilyn Speaker Bryan Hewlett



Beautiful photos....courtesy of May Chin!

**WANTED!!**

**Designer for a Region IX T-shirt**



2004 Region IX S/C T-shirt

Prize for D' Winning Design:  
 A bottle each of B.C. Red and White wine

**Fax or Scan & E-mail your design by:**  
**August 25, 2005 to:**

[Cheryl@nshregionix.org](mailto:Cheryl@nshregionix.org) or  
[janet@nshregionix.org](mailto:janet@nshregionix.org)

Please contact Cheryl or Janet for Fax #.

Winning design T-shirts will be on sale at the  
 ~ Region IX meeting ~  
 Sept 10<sup>th</sup> in Fort Lauderdale

and then....

**Join us!**  
**Represent our Region**  
**at the**  
**Annual T-shirt Contest**

Date: Tuesday, September 13, 2005  
 Time: 12:00 noon  
 Place: Exhibit Hall A,  
 Broward County Convention Center

- Best T-shirt Design Award
- Runner up for Best T-shirt Design

**Prizes**

- 1<sup>st</sup> Category –  
 \$100 Region with the most T-shirt participation!
- 2<sup>ND</sup> Category -  
 \$100 1st Prize - Best State T-shirt  
 \$50 2nd Prize - Best State T-shirt



*You've Got Mail...*

*from Lisa Callan ....on American vs. Canadian Certification*

Could you please tell me what the American certifications indicate: HT, HTL, MT? What is the equivalent of MLT? Thanks.

Lisa

Facility: RVH

Barrie, Ontario

*See response to Lisa's question on page 8...*

~

*E-mail from Vicki Kalscheur,  
NSH Hard Tissue Committee Chair*

Dear Members of Region IX,

It was a pleasure to meet many of you at the Region IX Education Day held on June 25, 2005 at St. Paul's Hospital in Vancouver B.C. The program was wonderful and it is always nice for me to have a chance to learn about the different techniques conducted in clinical laboratories. The evolution of histology into molecular biology and fluorescence *in situ* hybridization evaluation is becoming very important in our profession. Additionally, I enjoyed the exhibitor and sponsor display held during the education day. Thanks so much for your hospitality.

Best Regards, Vicki

[kalschev@svm.vetmed.wisc.edu](mailto:kalschev@svm.vetmed.wisc.edu)

~

*Still waiting for more response...on  
Workload Benchmark question from Regina ....*

Editor's note: We have received only one response to Regina's question – we need to hear from a few more members to validate our data.

It would be appreciated if you can share your workflow or share your established workload benchmark to determine what a reasonable workload would be in Histology-

- How many blocks to embed per person
- How many blocks/sections to cut per person/per 7.5 hour shift.

Regina Ross

Sault Ste Marie, Ontario

[rossrm@sah.on.ca](mailto:rossrm@sah.on.ca)

**More Prizes to be given at the  
S/C Fort Lauderdale  
Surfing for Knowledge**



**Guess the number of  
NSH members...  
The closest guess wins \$100**

Stop by the Membership Committee table to record your guess for the number of NSH members as of the start of Convention. The winner will be announced Tuesday, September 13th during the Membership Meeting, 4:45pm. Entries will be accepted until 3pm Tuesday.

~

**Leadership in Action**



<http://www.asipphoto.com/>

Action shot of our very own Rachel Peters, Past Region Director finishing the Ottawa Marathon on May 29, 2005.

Rachel is busy training for her next run on September 25<sup>th</sup> 2005, the Toronto Waterfront Marathon

**Good Luck, Rachel!**



## Leadership Corner

### Nominations for Region IX Treasurer Open!

We are now accepting nominations for the Region IX Treasurer's position. The election process will be held during the Region IX meeting in Florida on September 10<sup>th</sup>. If you would like to nominate someone for this position, please e-mail your nominations to Michael Ho at [Michael@nshregionix.org](mailto:Michael@nshregionix.org). So far, we have one nomination - Michele Shackleton – our current Treasurer. Please take a look at Michele's successes in her Bio below.

#### Michele Shackleton

I graduated from Toronto Institute of Medical Technology in 1982 and worked at Women's College Hospital, Toronto, in the Histology Department for a number of years before being transferred to the Immunopathology Laboratory. I left the hospital setting in 1996 to pursue a new career at Leica Canada which led me to my current job at Inter Medico. I am the Marketing Manager for the Pathology and Genetic line of products and have been employed by Inter Medico since September 2000.

I was first approached to take on the role of Treasurer for Region IX in 1995. Since that time I have served under four different directors all of which were a pleasure to work with and I look forward to continuing my role on the executive.

Michele

[Michele@nshregionix.org](mailto:Michele@nshregionix.org)

### What's New at the NSH Office?

**Executive Director - Carrie Diamond (September 2004)**  
**Meeting Manager - Aubrey Wanner**  
**Registration Manager - Robin Guyse,**  
**Membership Manager - Lauren Buckman**



[www.nsh.org](http://www.nsh.org)

**NSH**

#### MISSION STATEMENT

*The National Society for Histotechnology is a non-profit organization, committed to the advancement of Histotechnology, its practitioners and quality standards of practice through leadership, education and advocacy.*

#### Region IX Executive Committee

**Rose Clarke**  
[rose@nshregionix.org](mailto:rose@nshregionix.org)  
**Director**

**Rachel Peters**  
[Rachel@nshregionix.org](mailto:Rachel@nshregionix.org)  
**Past Region IX Director**

**Michele Shackleton**  
[Michele@nshregionix.org](mailto:Michele@nshregionix.org)  
**Treasurer**

**Cheryl Clarke**  
[Cheryl@nshregionix.org](mailto:Cheryl@nshregionix.org)  
**Secretary**

**Michael Ho**  
[Michael@nshregionix.org](mailto:Michael@nshregionix.org)  
**Member at Large**

#### Sub Committees

**Rachel Peters**  
[Rachel@nshregionix.org](mailto:Rachel@nshregionix.org)  
**Awards Committee, Chair**

**Heather Nymeyer**  
[heather@nshregionix.org](mailto:heather@nshregionix.org)  
**Awards Committee, Co-chair**

**Mark Elliott**  
[mark@nshregionix.org](mailto:mark@nshregionix.org)  
**Convention/Education Committee, Chair**  
**By Laws Committee, member**

**Heather Nymeyer**  
[heather@nshregionix.org](mailto:heather@nshregionix.org)  
**Membership, Chair**

#### Region IX Committee Members Serving on Other NSH Committees

**Janet Tunnicliffe**  
[janet@nshregionix.org](mailto:janet@nshregionix.org)  
**NSH Vice President**

**Lynda Elliott**  
[Lynda@nshregionix.org](mailto:Lynda@nshregionix.org)  
**Nominations and Membership**

**Region IX Website**  
[www.nshregionix.org](http://www.nshregionix.org)

**NSH Website**  
[www.nsh.org](http://www.nsh.org)

## The Reality of Osteoporosis

Vicki L. Kalscheur, HT (ASCP)

Jaclyn N. Lee

Comparative Orthopaedic Research Laboratory

University of Wisconsin, School of Veterinary Medicine

Madison, WI 53706, (608) 262-8534, e-mail: [kalschev@svm.vetmed.wisc.edu](mailto:kalschev@svm.vetmed.wisc.edu)

Osteoporosis, or “porous bone,” is a metabolic disorder in which the bones become brittle and easily break. In the U.S. today, 10 million people are estimated to already have the disease and up to 30-plus million more are at an increased risk due to low bone mass and related factors. The disease predominantly affects women, but based on scientific health studies, it is being found that more and more (twenty percent) of the general male population is being affected. Worldwide, the figures for this disease are staggering, at an additional 60 million, and the financial toll is critical.

Osteoporosis is a silent disease; bone loss often progresses without symptom. What is seemingly simple back pain may in fact be an unknown spinal fracture. Even simple physical tasks such as walking down a flight of stairs may be cause for bone fracture. Primary breaks relative to osteoporosis occur in the spine, hip and wrist.

Calcium is a mineral essential for heart muscle contraction, nerve activity, blood clotting and bone building. The bones release calcium into the bloodstream and this balanced calcium supply is key. The bone is dependant on calcium for strength and resistance to breaks. A constant calcium balance is maintained through the continual gain and loss of this essential mineral. Vitamin D (available from dairy products) helps in the absorption of calcium and aids in the conversion of calcium to bone. While calcium accumulates during the first five decades of life, it is lost more quickly than gained after 40 to 50 years. Accordingly, bone strength gradually decreases with age.

Essentially, bones are formed by osteoblasts, cells which constantly build new tissue, and osteoclasts, which constantly break down hard tissue. Normally, these two types of cells work at an even rate. Decreased bone density occurs when osteoblasts fail to keep up with osteoclasts, a common consequence of the aging process. The risk of osteoporosis increases as bone density decreases. Build up of calcium before the fifth decade of life lessens this risk.

While osteoporosis is most associated with post-menopausal women, it can affect many other populations, including men. Many factors may put a person at risk:

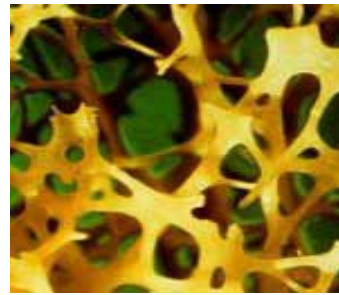
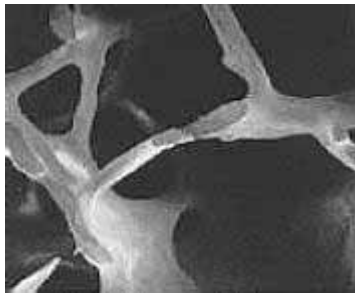
- Family history of osteoporosis
- Smoking
- Regular consumption of caffeine
- Slender body build
- Inadequate calcium intake
- Inadequate vitamin D intake
- Consumption of two or more servings of alcohol a day
- Caucasian or Asian descent
- Lack of weight-bearing exercise
- Use of steroid drugs
- Post-menopause (including early menopause due to surgery)

According to a Report of the Surgeon General in October 2004, low bone mass generally is detected via bone mineral density testing (BMD). Bess Dawson-Hughes, director of the Bone Metabolism Laboratory at Tufts University, asserts the value of BMD. “Although bone density is not the only way to describe bone in terms of strength, it’s the best we have at this point.” The bone density test, short and painless, consists of scanning the forearm, wrist or heel for density. The Dual-Energy X-ray Absorptiometry (DEXA) test is more sophisticated and measures the spine and hip of a lying patient, more clearly confirming the bone density problems with osteoporosis. It is recommended to have a baseline scan performed pre-menopause and follow-up evaluations every two to five years.

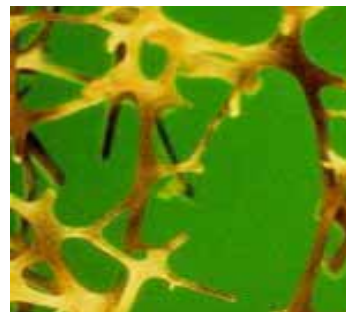
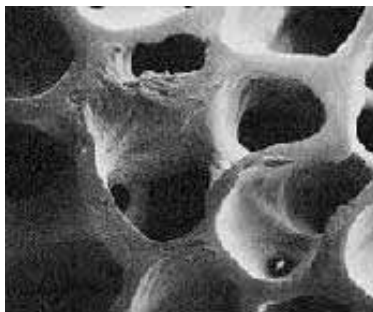
It is true what they say—aerobic exercise combined with resistance training stimulates bone formation and helps keep the bones strong—by building bone density. Also of equal importance is adequate calcium intake. Calcium is found in many foods—dairy, fish and most green vegetables—and is available in tablet form, often combined with vitamin D, which aids body uptake of calcium. Several studies have indicated that it is beneficial for people of all ages to increase their calcium intake.

Histologically, bone loss and structure is studied using histomorphometric parameters. The American Society of Bone and Mineral Research (ASBMR) follows a standardized nomenclature.

The risk of osteoporosis can be lowered with certain precautions. Current scientific findings along with progressing knowledge will continue to contribute to the prevention and control of osteoporosis. Osteoporosis is incurable but available research drugs have proven to build back some of the lost bone density as well as prevent further loss.



Normal Strong Bone



Osteoporotic Fragile Bone

In the Comparative Orthopaedic Research Laboratory we are focused on enhancing both human and animal lives through musculoskeletal research. Although we do not work directly in osteoporosis research, we are involved in bone remodeling and cytokine and cell signaling in the skeletal system, both of which have direct applications to animal and human complications. This information may be valuable in identifying bone processes that are conducive to the development of osteoporosis.

For further information on osteoporosis, the following Web sites may be useful.

The Foundation for Osteoporosis Research and Education<[www.FORE.org](http://www.FORE.org)>

The Osteoporosis Centre<[www.osteoporosis-centre.org](http://www.osteoporosis-centre.org)>

National Osteoporosis Foundation<[www.nof.org](http://www.nof.org)>

NIH Osteoporosis and Related Bone Diseases<[www.osteo.org](http://www.osteo.org)>

[www.healthology.com/focus\\_index.asp?b=healthology&f=osteoporosis](http://www.healthology.com/focus_index.asp?b=healthology&f=osteoporosis)

**This article is more applicable to what we do in a research musculoskeletal laboratory. Feel free to contact me at any time if you have questions about calcified and decalcified tissue techniques.**  
**Vicki Kalscheur, NSH Hard Tissue Committee, Chair**

## References

- Haider, M. Learning Scope 2: Menopause, Hormones and Osteoporosis. *Advance/Laboratory* 9:2 64-67; 2000
- Hutton WC, Toribatake Y, Elmer WA, Ganey TM, Tomita K, Whitesides TE. The Effect of Compressive Force Applied to the Invertebral Disc *In Vivo*: A Study of Proteoglycans and Collagen. *Spine* 23 2524-2537; 1993
- Rosenfeld, Isadore. *Live Now, Age Later: Proven Ways to Slow Down the Clock*. Bridgewater, NJ: Replica Books, 1999
- Tarkan, L. Building Better Bones. *Golf for Women* 54-56; December 2000
- Zdeblick TA, Abitbol J, Kunz DN, Eng M, McCabe RP, Garfin S. Cervical Stability After Sequential Capsule Resection. *Spine* 18 2005-2008; 1993

## ~ *Cont'd from..... You've Got Mail ....*

### Response to Lisa's Question from page 3...*plus...*Title Designates in Canada

**MT (ASCP) - Medical Technologist** - Baccalaureate degree (BSMT – 4 years) from an accredited University plus clinical education in a Medical Technology program accredited by NAACLS – 12 months of practicum in hospital labs. MT's can work in any area of the lab, but they have to pass competency in each area.

**MLT (ASCP) - Medical Laboratory Technician** - MLT Program is a 2 year Associate Degree at a Community College, plus a clinical education in a NAACLS accredited Medical Laboratory Technician (MLT) program with the last 6 months – practicum rotation in a clinical Lab. MLT's perform general tests in all laboratory areas — Blood banking, Chemistry, Hematology, Immunology and Microbiology; works under the supervision of a medical technologist.

**HTL (ASCP) – Histotechnologist** - Baccalaureate degree (4 year program) and then they can take the HTL certification exam. HTL's perform enzyme histochemistry, immunohistochemistry and electron microscopy. HTL's can also teach, be a supervisor in a laboratory or be the director of a school for histotechnology.

**HT (ASCP) - Histotechnician** – Associate degree (2 years) community college plus a NAACLS clinical education in a Histotechnician (HT) program with the last year practicum in a Histology Lab. HT prepares thin sections of body tissues for microscopic examination by a pathologist; the Histotechnician freezes and cuts the tissues, mounts them on slides and stains them with H&E and/or special stains.

Info above obtained from <http://www.ascp.org/bor/medlab/careers/> ~ Thanks to Godfrey Guerzon, MS, MBA, RT, HT, DLM (ASCP).....for clarifying the information above.

### CSMLS Registered Technologists' Title Designates in Canada

- QC uses \_\_\_\_\_ RT
  - ◆ TM \_\_\_\_\_ if OPTMQ member
- ON, NB, SK, AB \_\_\_\_\_ MLT
  - ◆ RT in Ontario is for Respiratory Therapists - this is their protected title in Ontario - if anyone who is not an RT uses the title RT, they can be subject to disciplinary action and be fined.
  - ◆ NB \_\_\_\_\_ RT if member of NBSMLT
  - ◆ SK \_\_\_\_\_ RT if member of SSMLT – not everyone is required to be a member of SSMLT
- Manitoba \_\_\_\_\_ RT
- B.C. \_\_\_\_\_ RT
- PEI \_\_\_\_\_ RT
- New Foundland \_\_\_\_\_ RT
- Nova Scotia \_\_\_\_\_ RT

Thanks to Christine Nielsen, BHA, MLT, CSMLS Director of Certification ...for information on CSMLS Title Designates.



## ERGONOMICS – A Histology Worksite Control Plan NSH Health and Safety Committee Information Packet (pages 29-31)

### Controlling Hazards-NIOSH Recommendations

1. **Engineering Controls**-used to reduce or eliminate potentially hazardous conditions.
2. **Administrative Controls**-changes in work protocols or management policies.
3. **Work Practice Controls** - analyze work practices and make changes.
4. **Personal Protective Equipment**- not proven to prevent ergonomic-type injuries.

### Analyzing workplace risk factors

#### Computer keyboard work

1. Maintain correct sitting posture.
2. Keep your wrist in a neutral position, floating above the board. Rest them on a cushioned surface only when you are not typing.
3. Use a gentle touch on the keys. Do not bang on keys or press hard when scrolling.
4. Do not hold your thumb or pinkie in the air.
5. Be careful when using a mouse because the burden is on one finger of one hand.
6. Do not cradle the phone on your shoulder while using the computer. It throws the spine out of alignment.
7. Bifocals and progressive lenses are not generally recommended for use. It is better to get glasses that are made specifically for viewing 20-28 inches away.
8. Light sources should be adjusted to eliminate reflections and glare from the monitor screen and from the background.
9. In a seated position, your feet should be touching the floor. Get an ergonomically designed chair or one which can be adjusted for good lumbar support. A foot rest can help.

#### Changing the solutions on the processor

1. Use proper lifting and bending techniques. Squat down instead of leaning over when removing or replacing heavy containers.
2. Get a power grip when carrying containers, i.e., use the whole hand or both hands.
3. Get a stool with safe footing to reach above chest height.
4. Use caution when moving stock storage containers.
5. Investigate a processor that has been designed to assist with the transfer of fluids.

#### Embedding

1. Evaluate the types of forceps you are using. Try changing to reverse grip forceps that remain closed unless you apply pressure. Pad the grip area with foam to increase the size. If you use a large pair of forceps with a wide distance between the tips, wrap a rubber band around the top to decrease the distance and reduce the force needed to hold a small object.
2. Try not to use the same motion repeatedly to open cassette lids.
3. Keep as many things as possible in your reach area.
4. Do not lean your arms on the edges of the countertop or equipment.
5. Be aware of how long your hands are in dorsiflex, take breaks and exercise your wrists and fingers.
6. Maintain good posture.
7. Get up periodically and walk around if you are embedding for long periods.
8. Alternate tasks.

## Sectioning

1. Use the whole arm (not just the wrist) to make complete revolutions of the handwheel.
2. DO NOT ROCK THE HANDWHEEL!
3. Increase the fine advance handle size to 1.5 cm in diameter. Cover to make slightly compressible and smooth. Bicycle hand grips can be used to increase diameter and add softness.
4. Keep your arms close to your body. Do not bend your elbows out.
5. Keep your arms off the countertop or any other hard, sharp surface.
6. Keep your shoulders in a neutral position while sectioning. Do not raise them. Keep the muscles in your neck relaxed. Tense muscles in the neck area cut off the blood circulation and create pressure on the nerves.
7. Evaluate your reach envelope. Slide motions should be within 14-18 inches. Try positioning the waterbath on an L-shaped extension from the microtomy area so that it can be reached by swiveling the body and the chair instead of leaning over.
8. Adjust the chair so that you can comfortably reach the equipment and see the specimen alignment without compromising leg room.
9. Use a footrest, especially if your feet do not touch the floor.
10. Maintain lumbar lordosis.
11. Take mini breaks often. Do exercises and self-massage to restore circulation and relieve tension.
12. Automate if possible.

## Manual staining

1. Avoid repeatedly dipping the slides during manual staining procedures.
2. Purchase a slide holder for slides in Coplin jars to avoid using forceps.
3. Avoid using pressure to squeeze small reagent bottles and squirt bottles.
4. Be aware of your reach zone and use caution in getting materials from underneath the counter and on overhead shelves.
5. Prop one foot up of stand with one foot forward if you will be standing for long periods of time. Alternate feet often.
6. Automate if possible.

## Manual coverslipping

1. Automate as soon as possible.
2. Alternate duties.
3. Take multiple mini-breaks and do stretching exercises for your wrists and fingers.
4. Use forceps that don't require force to hold an object.
5. Be aware of the position of your wrists. Try to keep them in a neutral position

## Cryomicrotomy

1. Remember that cold temperatures will reduce the feeling and sensitivity in your fingers and hands.
2. Find a means of operating the microtome in a comfortable sitting or standing position.
3. Do not lean into the chamber, or stretch to reach things.
4. Place a piece of foam or insulating material on any area of the cryostat that comes in contact with the user.
5. Use the same microtomy skills that are detailed under "sectioning".

## Microscopy

1. Avoid static postures that are characterized by contraction of muscles over extended periods of time.
2. Work with the head slightly bent down instead of bending it back. The head weighs from 15 to 20 pounds. The neck and shoulders hold, secure, and balance this weight.
3. Use arm rests for a soft, smooth surface with no sharp edges.
4. Make sure that the microscope focus and stage movement controls are ergonomically positioned within your reach.
5. Request a tiltable eye piece.

6. Request extenders for the body if the eyepieces are still not high enough. Do not elevate the scope as this moves the controls out of comfortable reach.
7. Position the work area in a quiet place away from drafts and noise.

## References

Gervais P, Whitley S: Cumulative trauma disorder and the histotechnologist. NSH in Action, vol. 22 # 2

Minshew J: Histology laboratory ergonomics and occupational risk factors. Hand-out from NSH symposium, 9/17/96



**"I imagine this was mentioned  
in the solvent handling instructions  
I didn't read."**



## X-TRACT Filter System



**Surgipath** has combined the features and benefits enjoyed with the ALD-X and XYL-X units into one product that will now do both jobs — the X-TRACT Filter System.

A specially designed carbon filter material has been formulated to filter hydrocarbon solvents (i.e. xylene) and efficiently handle the various aldehydes (i.e. formaldehydes) used in the histology lab. The **X-TRACT** instrument also enhances its usefulness by including a filter that removes harmful bacteria and viruses as well as pollen and dust. This is accomplished using the "Bactiguard™" filter pad.

The **X-TRACT** unit is designed to operate twenty four hours a day in many environments where fumes are generated. An alarm alerts the customer when it is time to change the filter.

- Low capital cost
- Fast chemical removal with proven track record
- Portable and easy to move
- Three speed control
- Electrically safe, operating on a 12 volt DC supply
- Low operating costs
- Removes formaldehyde and xylene with one cartridge
- Low level cartridge alarm to ensure optimum efficiency (every three months)
- Also removes bacteria and viruses
- Small and compact — takes up little space
- Unobtrusive appearance blends into background
- One year warranty

Item #	Description
04952	X-TRACT Filter Unit (includes 1 filter)
04954	X-TRACT Replacement Filter

For More Information,  
Call Your Local Sales  
Representative

1-800-665-7426

[www.surgipath.com](http://www.surgipath.com)

**THE CUTTING EDGE** is the official newsletter of Region IX of the National Society for Histotechnology. It is distributed quarterly to approximately **460** members in Canada.



**The Objectives of THE CUTTING EDGE are to:**

- Reflect both Canadian and North American articles pertinent to the practice of Histotechnology
- Publish articles that are beneficial to our discipline .
- Promote communication between Region IX members and members of the other NSH Regions
- Provide a medium for exchange of information among members.

*Contributions are welcome.*  
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