<table>
<thead>
<tr>
<th>Stretch</th>
<th>Image</th>
<th>Cue Words</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Neck</strong>&lt;br&gt;Erin Kommerstad</td>
<td></td>
<td>* Pull head towards shoulder while looking straight ahead</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Repeat for opposite direction and in front (pull chin towards chest)</td>
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<tr>
<td><strong>Lateral Deltoid</strong>&lt;br&gt;(Side of shoulder)&lt;br&gt;Bob Vaughn III</td>
<td></td>
<td>* Keep elbow straight on arm being stretched</td>
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<tr>
<td></td>
<td></td>
<td>* Pull arm towards body</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Look straight ahead</td>
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<tr>
<td></td>
<td></td>
<td>* Repeat for opposite arm</td>
</tr>
<tr>
<td><strong>Anterior Deltoid</strong>&lt;br&gt;(Front of shoulder)&lt;br&gt;Curt Baldus</td>
<td></td>
<td>* Keep arms shoulder width apart</td>
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<tr>
<td></td>
<td></td>
<td>* Slight bend in elbows</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Slide buttocks further from arms to increase intensity of stretch</td>
</tr>
<tr>
<td><strong>Bicep and Forearm</strong>&lt;br&gt;(Front of arm)&lt;br&gt;Lea Howard</td>
<td></td>
<td>* Pull fingers towards back of arm with opposite hand.</td>
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<tr>
<td></td>
<td></td>
<td>* Keep elbow straight but do not hyperextend it.</td>
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<tr>
<td></td>
<td></td>
<td>* Repeat for opposite arm</td>
</tr>
<tr>
<td><strong>Triceps</strong>&lt;br&gt;(Back of upper arm)&lt;br&gt;Brady Finnern</td>
<td></td>
<td>* Pull the bent elbow down and across the back side of the head with opposite arm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Repeat for opposite arm</td>
</tr>
<tr>
<td>Exercise</td>
<td>Description</td>
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<td>----------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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</tbody>
</table>
| **Partner Pectoral Stretch**     | * Person being stretched: stand straight up, keep arms straight, and cue partner as to when to stop  
*Cindy Sonntag & Michelle Schaefer*<br>  
* Person assisting: Pull partners arms back keeping them parallel to the ground. |
| **Pectorals**                    | * Place forearm on study surface (wall)  
* Rotate upper body away from wall  
* Arm can be bent at 90 degrees or kept straight  
* Repeat on opposite side |
| **Spinal Twist**                 | * Cross one bent leg over the other  
* Twist upper body in the direction of the bent leg  
* Use one arm to stabilize on the ground and the other to apply pressure onto the outside of the knee  
• Repeat in opposite direction |
| **Erector Spinae**               | *Bend knees  
• Pull legs (from behind the knees) towards the chest |
<p>|                                  | * Sit with buttocks and back flat |</p>
<table>
<thead>
<tr>
<th>Exercise</th>
<th>Instructions</th>
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| Wall sit                             | * Hold upper arms parallel to the ground while bending the elbows at 90 degrees  
   * Keep back of hands flat against the wall  
   * Keep head against the wall                                                                 |  
| Cat Arch Stretch                     | * Keep arms straight and shoulder width apart  
   * Keep a round back and let head hang to create a “cat arch” look                                                                                                                                       |
| Quadratus lumborum                   | * Reach both arms to the side and bend at waist  
   * Can be done standing or seated  
   * Repeat in opposite direction                                                                                                                                       |
| Abdominals                           | * Push upper body up with straight arms  
   • Keep head in normal alignment (do not pull it back or let it hang forward)                                                                                           |
| Abdominal Curl                       | * Curl upper body towards knees  
   * Keep low back pressed to floor  
   * Decline until shoulder blades touch the ground                                                                                                                       |
| Hip Flexors                          | * Keep upper body upright  
   * Keep knee behind toes  
   * Push hips forward  
   * (This picture demonstrates a left hip flexor being stretched)                                                                                                         |
| **Z – Sit**  
(External rotators)  
*Emily VanHee* | *Repeat for opposite leg* |
|---|---|
| *Sit upright*  
*Use hands to stabilize and maintain upright posture*  
*Repeat in opposite direction* |

| **Abductors**  
(Side of hips)  
*Amanda Stoeckel* | *Pull leg across the body with the knee bent at 90 degrees*  
*Look in opposite direction*  
*Repeat for opposite leg* |
|---|---|
| *Bend one leg at 90 degrees and cross the other leg over*  
*Place one hand at the ankle and the other behind the knee and pull both legs towards the chest*  
*This picture demonstrates a left leg IT Band stretch*  
*Repeat for opposite leg* |

| **IT Band**  
(Outside of upper leg)  
*Brian Bergstrom* | *Place soles of feet together*  
*Place hands on lower leg or ankle*  
*Pull feet towards groin*  
*Apply downward pressure on the inside of the knees with elbows*  
*Sit upright* |
<table>
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<td><em>Pull straight leg toward body</em></td>
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</table>
| **Hamstrings**  
| (Back side of upper leg)  
| * Curt Baldus  
| - Repeat for opposite leg |
| **Hamstrings**  
| (Back side of upper leg)  
| * Brian Bergstrom  
| - Reach for ankles or feet  
| - Keep back straight and head in normal alignment |
| **Hamstrings**  
| (Back side of upper leg)  
| * Tiffany Alstead  
| - Lie at the edge of a wall, corner, or door frame  
| - Rest one leg on the ground while the other is kept straight against the wall |
| **Quadriceps**  
| (Front side of upper leg)  
| * Brady Finnern  
| - Pull heel towards buttocks  
| - Can be done standing or lying on side  
| - Repeat for opposite leg |
| **Gastrocnemius and Soleus**  
| (Calf)  
| * Laura Paddack  
| - Keep one leg straight and try to keep heel on the ground  
| - Let opposite foot rest on back of the stretched leg’s heel  
| - Slight knee bend creates a stretch in the lower calf |
| **Gastrocnemius and Soleus**  
| (Calf)  
| * Brady Finnern  
| - Press toes against a sturdy surface (wall)  
| - Keep leg slightly bent and let heel rest on the ground  
| - Straight leg creates a stretch in the upper calf |
**Dorsi-Flexors**
(Front of shin)
* Beth Luegge

- * Repeat for opposite leg

---

**Dorsi-Flexors**
(Front of shin)
* Katie Skrypek

- * Place the stretched leg in front of opposite leg
- * Push top of toes on stretched leg into the ground
- * Repeat for opposite leg

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- * Sit on knees with shins flat against the ground.
- * Keep top of foot as flat as possible
- * Lean back and press down with hands for deeper stretch
**Deep Breathing**  
*Katie Skrypek*

* Deep breathing should be performed in a comfortable body position.  
* Your stomach should expand while you inhale go in while you exhale.  
* Exhale fully and slowly  
* Do 5 to 8 deep breaths in this manner  

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**Special Thanks To:**

<table>
<thead>
<tr>
<th>Professors</th>
<th>The 2002 Human Performance Lab Staff</th>
<th>Manual Designers:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bruce VanDuser &amp; June Kloubec</td>
<td>[Image of the 2002 Human Performance Lab Staff]</td>
<td>Brian Bergstrom &amp; Kate Reiman</td>
</tr>
</tbody>
</table>
**Human Performance Lab**
**Stretching Manual**

*General Stretching Guidelines:*

- **Frequency:** Four to seven times a week (after activity)
- **Intensity:** Stretch to a point of tension, NOT PAIN
- **Time:** Hold each stretch for 10-20 seconds – Approximately 10 minutes total

- Stretching is most effective after an activity session. Your muscles are warm and therefore they can stretch further. This will allow for a more effective stretching program and it will increase your flexibility. Stretching after activity is also a good time for your body to relax.