“The UC Davis WorkStrong program changed my life!”
- Pat Bevington, UC Davis Extension

What is WorkStrong?

The WorkStrong program is a University of California systemwide program developed with the expertise and collaborative support of UC staff in wellness programs, occupational health and recreational sports. It was designed to promote recovery and prevent future workplace injuries. Each UC campus has its own unique program to suit the needs of the employees on its campus.

UC Davis’ WorkStrong program enrolled its first participant in May 2012. Initial referrals are initiated by Sedgwick, a third party worker’s compensation company and participants are enrolled after the Occupational Health physician’s evaluation and clearance. The WorkStrong program is currently managed by a WorkStrong Coordinator, an exercise physiologist, who performs initial, mid and final fitness testing as well as wellness coaching services for participants. A registered dietitian, also housed in Occupational Health, provides nutrition consultations. This program provides a continuity of care for patients that have been injured on the job as most first go through physical therapy on site before graduating to the WorkStrong program to continue their recovery.
Program Components

12 week program

- Pre- and post-program lipid profiles, glucose and HgA1c measurements
- Wellness coaching sessions: 12 weekly sessions including 3 fitness testing sessions
- Individual ergonomic evaluations and recommendations
- Personal training: 24 sessions, 2x/week for 60 minutes
- Campus gym membership for 6 months
- Registered dietitian visit with 3 day food record analysis and follow-ups: 3 visits
- Pain and Stress Management techniques: 3 individual sessions
- Lifestyle and Wellness group class
- Meditation group class
- Nutrition workshop
- “Shopping Tour” – a trip to the UC Davis Farmers Market

The WorkStrong program is a rigorous wellness program that requires active participation. The effectiveness of the program is measured primarily by re-injury rates of the participants and secondarily by SF-36 pre- and post-questionnaire and pre- and post- fitness testing measurements. In addition, testimonials are collected that describe how the WorkStrong program has contributed to on-going behavior change.

Partners

Our partners include the Academic Staff Assistance Program (ASAP) and Campus Recreation. ASAP provides two group classes held at Occupational Health from 12-1 p.m., rotating biweekly: Lifestyle and Wellness and Meditation. These are taught by post-doctoral students and, on occasion, Spanish interpretation can be provided. ASAP also provides a Health Enhancement series that focuses on a neurobehavioral method to reduce chronic pain and/or stress. This series is taught one-on-one at ASAP by trained staff. Campus Recreation provides 1-2 professional trainers for WorkStrong participants and a 6 month ARC membership.
Participation Statistics: May 2012 - April 2014

- 381 individual referrals from Sedgwick; 183 invited into WorkStrong
- 91 total participants = 50% enrollment rate
  - 11 dropped
  - 6 participants on hold for medical or personal reasons
  - 6 active participants
  - 60 grads = 87% Graduation Rate
- 15 actual new graduate injuries; 11 claimants = 18% re-injury rate; actual cost = $38,000
- 23 expected new injuries; expected cost = $296,000*
  *Actuarial data from Bickmore

### Significant Health and Fitness Improvements, n=44-57

<table>
<thead>
<tr>
<th></th>
<th>Average Change after WS Program</th>
<th>Average % Change after WS Program</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anthropometrics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>-2.18 lbs</td>
<td>0.9%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>BMI</td>
<td>-0.31</td>
<td>0.9%</td>
<td>0.0213</td>
</tr>
<tr>
<td>Body Fat %</td>
<td>-2.4%</td>
<td>6.2%</td>
<td>0.0164</td>
</tr>
<tr>
<td>Waist Circumference</td>
<td>-1.61 cm</td>
<td>15%</td>
<td>0.0016</td>
</tr>
<tr>
<td>Hip Circumference</td>
<td>-0.18 cm</td>
<td>15%</td>
<td>NS</td>
</tr>
<tr>
<td><strong>Cardiovascular</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resting Heart Rate</td>
<td>-0.39 bpm</td>
<td>0.1%</td>
<td>NS</td>
</tr>
<tr>
<td>Resting Systolic BP</td>
<td>-3.95 mmHg</td>
<td>26%</td>
<td>0.0105</td>
</tr>
<tr>
<td>Resting Diastolic BP</td>
<td>-1.81 mmHg</td>
<td>2%</td>
<td>0.0374</td>
</tr>
<tr>
<td>Max Heart Rate</td>
<td>-3.45 bpm</td>
<td>2.3%</td>
<td>0.0074</td>
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<tr>
<td>Heart Rate Recovery</td>
<td>-5.49 bpm</td>
<td>4.2%</td>
<td>0.0104</td>
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<tr>
<td>YMCA Fitness Rating</td>
<td>1.18</td>
<td>85%</td>
<td>&lt;0.0001</td>
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<tr>
<td><strong>Strength and Flexibility</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Push Ups</td>
<td>11.33 #</td>
<td>176.5%</td>
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<tr>
<td>Curl Ups</td>
<td>218 #</td>
<td>20%</td>
<td>0.0035</td>
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<tr>
<td>Plank</td>
<td>41.91 sec</td>
<td>108.9%</td>
<td>&lt;0.0001</td>
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</table>
Body composition was measured by skinfold calipers using a 7 site equation. The YMCA step test was used for cardiovascular fitness measurements. All other strength and flexibility tests were done with American College of Sports Medicine (ACSM) protocols except for the plank test which was simply the amount of time the participant could hold a forearm plank in proper form.

**Significant SF-36 Questionnaire Improvements; n=36**

All SF-36 measurements improved significantly pre to post WorkStrong with the exception of Emotional Role Function. The SF-36 survey is a generic measure of 8 categories of functional health and well-being as well as psychometrically-based physical and mental health summary measures and a preference-based health utility index.

**Participant Testimonials**

“What a fantastic program WorkStrong is! I felt depressed and disgusted in the way I felt and the way I looked, I was not physically fit or felt very active. Due to some previous injuries I was not able to or motivated enough to exercise, until the opportunity to enroll in this program came along.

“I went from 255lbs when the class started to 231lbs at the end of it, by, in addition to my normal training regimen, I also started riding a bike, and following some nutrition guidelines that the WorkStrong
Coordinator had set up for me. I gained better balance and straighter posture because of the training and learned how to lift properly.

“I continue to stay motivated to continue to work out as I don’t wish to be where I was before my opportunity in this program came along. Everyone, either healthy or not should be given the opportunity to have access to this class. I feel that all will benefit in some way or another from this and will take something away from the program.

“Thanks for a wonderful program and the opportunity to start my life over.”

– Steve Plocher, Primate Center

“I feel the program helped me right from the start. For various reasons, not all work related, I could not walk up a flight of stairs without great difficulty. After just one workout I was able to walk up 2 long flights of stairs without holding on to the rail. I guess I had forgotten how to do it after a previous injury. Now I am so proud I go out of my way to use the stairs whenever I have the opportunity. It is a big deal for me. I broke my habit of drinking too much soda and now grab for water instead of soda. My trainer was excellent and I was able to do things I never thought I could before. I could feel my strength increase from the exercises. Also the moral support I received at the weekly meetings was very helpful as well as the hour long noon seminars. I was able to learn about and make use of The Academic and Staff Assistance Program which has also helped in my family life.”

– Vincent D’Antonio, Plant Sciences

“For years I had been telling myself I need to exercise more and eat better. Every New Year I made those same resolutions. But somehow I never got around to it, until I was invited to participate in WorkStrong. With Stacey’s help, I was able to set both short and long-term goals that were realistic, measurable, attainable, and that I felt strongly about. They were personal to me, not just things I “should” do. And with Bob’s expert guidance, I learned exercises that allowed me to gain strength, balance, and stamina, and that, very importantly, I could do at home without expensive equipment. Bob and Stacey both encouraged me to meet my goals, and with their help I stayed on course, developed new healthy habits, and met my short term goals.

“If you are interested in changing to a healthier lifestyle, WorkStrong will give you the tools to do it! I’ve made improvements in my diet and exercise habits that I expect to last a lifetime. Because of WorkStrong I discovered that I do have the ability to make those changes.

“This program is very beneficial, and I hope many more people will be able to join the program. It worked for me, and I am very grateful for being allowed to participate.”

– Pat Bevington, UC Extension
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