



Nova Scotia Fitness Association, 5516 Spring Garden Road, Suite 309,
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902-425-1128 EXT.224 www.nsfa.info Diane Bellefontaine, Executive Director

From the Editor

Jolene Titus

It's summertime, but don't let the warm weather wear you down! Summer is an excellent time to fine-tune your solid fitness skills or to challenge yourself and teach a new and exciting class with your participants. In this edition of FitBits you will find tips to help you strengthen your skills-specific testing and you will also find information on upcoming courses to keep your mind and body challenged this summer.

This edition of FitBits also contains a special article and quiz to help you receive continuing education credits. This is a new initiative of the association and we are excited to see the results. Depending on the response, we will look for other innovative options to assist you in receiving your necessary credits.

On a final note, thanks to all of you who completed the ballots to elect the 2007/08 members to the NSFA Board of Directors. We are all very excited to push NSFA to new heights over the next several months. I am particularly excited to assume the role as promotions chair.

If you have suggestions or submissions for the newsletter please email me at promotions@nsfa.info. Happy reading!

Fitness Friendly wrap-up...

A BIG thanks to those of you who took the time to complete the FF'07 survey. The results of these evaluations are a valuable reference for planning future Fitness Friendly conferences and regional workshops. The winner of the "Anne Lindsay Heart Smart™ Cookbook" from the Heart and Stroke Foundation is Cynthia McGrath. Congratulations Cynthia!!!

A huge thank you is also extended to all of our presenters for sharing their expertise with us. Thank you Angela Curry, Geoff Bagshaw, Kim Kraushar, Darren Steeves and Cynthia Moulin. Special thanks to suppliers such as Dynamix and Canadian Springs and to all who supplied donations and prizes for give-aways.

Finally, a BIG thank you goes out to the Dalplex Fieldhouse for such a great facility and to you, our members, for your continued support.

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Check inside for a cool way to earn additional continuing education credits!

Also, learn more about upcoming courses.

Check out the pictures on the back!



Health Promotion
and Protection

Meet the 2007-2008 NSFA Board of Directors

Sheila Rafferty, Past Chair

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Peter Hico, Secretary

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Mike Arthur, Nova Scotia Department of Health Promotion and Protection Liaison

About NSFA

The NSFA trains, certifies and supports fitness leaders and promotes fitness, active living and wellness throughout the province.

The Nova Scotia Fitness Association (NSFA) is a member of the National Fitness Leadership Alliance (NFLA) which means your NSFA certification is recognized nationally and is transferable to any province/territory in Canada.

We want to hear from you!

Have a question? Looking for a course? Talk to us:

NSFA SUMMER OFFICE HOURS

Monday	12:00pm-5:30pm
Tuesday	12:00pm-5:30pm
Wednesday	1:00pm-5:30pm
Thursday	12:00pm-5:30pm
Friday	11:30am-3:30pm

Save a tree

FitBits is now issued electronically! To save money and trees, we now produce a limited number of print newsletters. Unless you have specified otherwise, those who have email addresses listed with NSFA will receive the newsletter electronically. If you have any questions please contact Diane at diane@nsa.info or call 425-1128 ext # 224.



Contact: Richard Harrington
Email: rick@kineticsolution.com

Continuing Education Credit – Challenge yourself this summer!

With busy schedules, we know it can sometimes be difficult to find enough opportunities for CEC's that fit your schedule, so we are bringing the opportunities right to your doorstep. Literally.

The NSFA has developed an additional way to obtain continuing education credits. Read the following article and complete the corresponding exam. Mail the exam, along with a \$10 payment, to the NSFA for grading (80% is a passing grade) and receive a NSFA credit of 1.0. Payment can be made by cheque, money order or credit card. No more than 2 mail-in CECs will be awarded per certification period.

Please mail completed tests by Sept 15th to:
ATTN: CEC Credit
Nova Scotia Fitness Association
5516 Spring Garden Road, Suite 309,
Halifax, NS B3J 1G6

Good luck and be sure to include your name and return address!
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To Curl or not to curl; That is the question!

By Sheryl Hansen, AFLCA Trainer

Fitness Informer Winter 2006

In recent years there has been much said and written about the "best" abdominal exercises. As well, there exists a discussion between those who believe in "functional" versus traditional training methods. The curl up has lost popularity in favor of other static exercises such as planks, side planks and bridges. All of this can lead to confusion for the group exercise leader who aspires to provide participants with the best quality instruction. What is the best method of training?

By looking at *considerations* for assisting in the selection of abdominal exercises, a leader can make an informed choice.

"Upper" and "Lower" Abdominals

Structurally, the rectus abdominus extends from the pubic crest and symphysis to the xiphoid process on the sternum and the 5th to 7th ribs. A core principle of training, the all or none principle (Wilmore and Costill, 2004), suggests that it is not possible to recruit one portion of a motor unit or a fiber more than another portion of the same unit or fiber. This has been supported by Clark et al (2003) who compared 6 different abdominal exercises and found that there are no differences in recruitment between the upper rectus abdominus (URA) and lower rectus abdominus (LRA) as determined by electromyography (EMG). McGill (2003) concurs with these findings. Simply put, if you recruit the URA, you also recruit the LRA. It is not possible to contract one end or the other with greater amplitude. For correct cueing, rather than telling clients that they are working the upper abs or lower abs, a diligent leader would cue that the clients are working their entire rectus abdominus. The question from participants that comes up is why are they *feeling* it more in the upper or lower portions of the abdominals? The answer is because of the unique capabilities of the rectus abdominus in that it can recruit from the top down (as in a curl up) or from the bottom up (as in a reverse curl), the angle of pull is different in these exercise variations, so there may be more torque on one end or the other.



Active Stabilization versus Isometric Stabilization

Clark et al (2003) discovered that isometric exercises such as leg lowering and the stability ball roll out had the lowest amplitude of EMG activity in comparison to range of motion exercises. Debra Ellison (IDEA 2005) recommends performing active stabilization exercises. What is active stabilization? Barrie (2001) defines it as the recruitment of the deep abdominals, the transverse abdominus, and the spinal stabilizers when the body is reacting to changes in the centre of gravity and pressure on the joints (also known as proprioception). Wolf (2005) defines effective abdominal training as those exercises that include three elements: a lengthening phase prior to a shortening phase, movement occurring in all three planes, and exercise that is ground reactive. Examples of exercises that meet these criteria would be:

- Lunge (in any plane) with an overhead reach
- Oblique cable pull

In agreement with Wolf and Ellison, Barrie (2001) also suggests that free weight resistance training and unilateral exercises would effectively train in this manner. Cheng (2005) writes that active spinal movement exercises that are a combination of spinal flexion, extension, rotation, and lateral flexion, present in many curl up variations, are appropriate when there is a need to increase the strength or endurance in these muscles. In addition, Clark (2003) discovered that a curl up on the ball elicited the highest activation of abdominal musculature when compared to 5 other exercises. Integrating all of these opinions/research, perhaps a curl up on the ball then meets these criteria and is therefore an example of active stabilization and active spinal movement. In addition, incorporating muscular endurance or strength exercises which utilize dumbbells, tubing or body weight are excellent choices for active stabilization.

Curl ups and Knee Flexion

Confusion also exists regarding foot placement when performing a basic curl up. Hall et al (1990) looked at various knee angles and their effects on recruitment activity. Their study concluded that the closer the heels to the torso when performing a curl up, the greater the amplitude of EMG activity in the rectus abdominus and external obliques and the lower the amplitude in the rectus femoris (hip flexor). This confirms the knowledge that curl ups with the legs extended would tax the hip flexors more so than the abdominals, rendering the exercise less effective. In comparison, when analyzing sit-ups where the range of motion is greater than a curl up, the hip flexors are activated to a greater degree when in a bent-knee position versus a straight leg sit-up (McGill, 2003).

Summary

Prudent fitness leaders would include great variety of exercises in order to train the abdominals for the following reasons:

- active stabilization occurs during many standing strength and endurance exercises
- active spinal movement occurs during many variations of curl up exercises
- the ball increases the need for active stabilization
- flexed knees during active spinal movement increases the activation of the spinal flexors and rotators (abdominals)



Contact: Rob Frederick

Email:

robfrederick@fitnesstogether.com

To Curl or Not to Curl; That is the Question!
By Sheryl Hansen, AFLCA Trainer

Name: _____

Address: _____

CEC quiz questions – Please circle the correct answer and return this quiz, along with payment of \$10.00, to the NSFA for 1.0 continuing education credit.

1. Which is **not** an attachment site for the rectus abdominus?
 - a. pubic crest
 - b. fifth rib
 - c. iliac crest
 - d. symphysis pubis
2. During muscle contraction the all or none principle states:
 - a. all muscle fibres will be recruited in a particular muscle
 - b. the entire fibre will be recruited
 - c. one portion of a muscle will be recruited
 - d. no fibres will be recruited unless all are recruited
3. During a curl up which portion of the muscle is contracted more forcefully?
 - a. the upper rectus abdominus
 - b. the lower rectus abdominus
 - c. neither the upper or lower rectus abdominus is contracted
 - d. the upper and lower portion of the fibres are contracted equally
4. Barrie's definition of active stabilization includes the recruitment of:
 - a. the deep abdominals
 - b. the transverse abdominus
 - c. the spinal stabilizers
 - d. all of the above
5. Barrie and Wolf both include what element in their definitions of active stabilization?
 - a. lengthing and shortening phase
 - b. changes in the centre of gravity
 - c. ground reactive
 - d. changes in pressure in the joints
6. According to the researchers in this article which exercise is not an example of active stabilization?
 - a. side bridge
 - b. dumbbell row
 - c. lunge
 - d. cable pull
7. As defined by Wolf, elements of effective abdominal training include all of the following except:
 - a. lengthening prior to shortening
 - b. movement in all three planes
 - c. isometric exercise
 - d. exercise that is ground reactive
8. Cheng recommends a combination of:
 - a. active stabilization and balance
 - b. active spinal movement and balance
 - c. balance and static stabilization
 - d. active stabilization and active spinal movement
9. Which exercise elicits the greatest EMG activity in the hip flexors?
 - a. bent knee sit up
 - b. bent knee curl up
 - c. straight leg sit up
10. Which combination of exercises would be most effective for abdominal training?
 - a. bent knee sit ups and oblique curl ups
 - b. side lunges and curl ups on the ball
 - c. bent knee curl ups and bent knee sit ups
 - d. bent knee curl ups and bridging

PART 3: Skill specific testing

By Darren Steeves

Note: This is the third and final article in a series provided by Daren Steeves. Darren Steeves is the Fitness Coordinator at Dalplex and the head strength and conditioning coach for varsity athletes and the Atlantic National Sports Centre. Enjoy!

Some testing requires specificity, not in a sport skill, but an occupational task. This testing can include timed obstacle courses, lift and carry drills, and special strength tests.

Creating Your Own Test

Although we have covered several sports, this is by no means an inclusive list. Rather, this list is meant to inspire your imagination in creating and using more applicable testing for the athletes you work with. For specific testing for various sports, the book Physiological Tests for Elite Athletes has a myriad of protocols. If you can't find the type of test you need in the literature, you can create your own. Remember the following:

- Safety is the #1 issue. Keep movements sport specific and within acceptable ranges.
- While a new test may not have norms by which to compare with a larger population, you can create your own baseline at the beginning of a season, and can follow improvement (we hope) though the year(s).
- Specifically describe and illustrate the test, so that it is reproducible. You don't want an athlete coming back for the next season more fit, yet scoring lower on your test.

A Last Word...

Specific testing doesn't necessarily mean complicated testing. Use the facilities you have. If you have a nice, fully-loaded exercise physiology lab at your disposal, obviously that opens up your choices. Many of these tests require quite simple equipment: tape measures, stopwatches, wobble boards, etc. Many times, the athlete will own the equipment you need to test, like a tennis racquet. All you need is some creativity and knowledge of what your client needs to do.



Upcoming Courses and Workshops

For more information on upcoming courses throughout the province, visit www.nsfa.info

Basic Fitness Theory course

Sat and Sun July 21st/22nd

9am-6pm (both days)

Location: St Mary's Tower, Halifax, NS

Cost \$105.00 (includes manual)

Course Conductor: Angela Curry

Group Fitness Leader course

Sat and Sun July 28th/29th

9am-6pm (both days)

Location: St Mary's Tower, Halifax, NS

Cost \$90.00 (includes manual)

Course Conductor: Angela Curry

Resistance Trainer Leader course

Sat and Sun Aug 11th/12th

9am-6pm (both days)

Location: St Mary's Tower, Halifax, NS

Cost \$105.00 (includes manual)

Course Conductor- Peter Hico

To register for any of the above courses contact Diane at diane@nsa.info or call 425-1128 ext # 224.

Physical Activity and Public Health course

Offered by: The Canadian Fitness and Lifestyle Research Institute (CFLRI)

Sept 27-30, 2007

Location: Digby Pines Resort, Digby

Cost: \$275 (Subsidized by Nova Scotia

Department of Health Promotion and Protection through Physical Activity, Sport and Recreation)

For more info:

http://www.cflri.ca/eng/story_details.php?id=8

NEW: Job Opportunity

Looking to share your extensive fitness knowledge with others while making some additional money?

The Nova Scotia Fitness Association (NSFA) is currently looking for fitness theory course conductors. Successful candidates must be available for training the weekend of August 11th and 12th in Halifax from 9-5 p.m. and be able to facilitate at least one course per year. Fitness theory course conductors are compensated at a rate of \$30 per hour of course work (ie. \$720 for a 24-hour course).

Responsibilities include:

- Facilitate national standard of fitness certification in fitness theory, a 24 hour course in adult leadership, physiology, biomechanics, etc.

Qualifications:

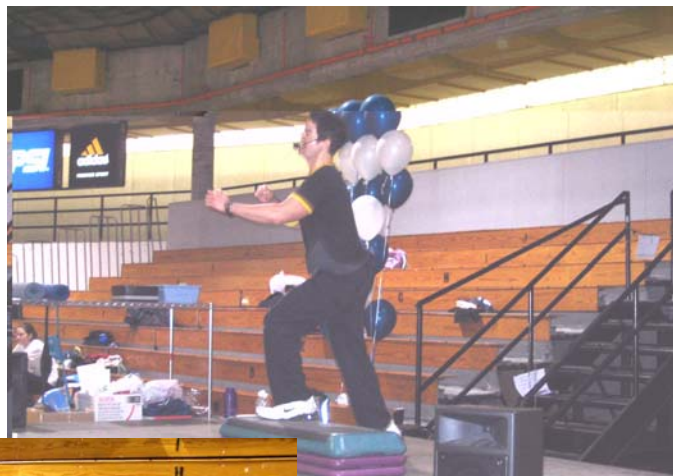
- Extensive facilitation experience; background in Kinesiology, Human Biology, Physiology, Biomechanics, or adult education. Combination of education and experience considered.

Please include a cover letter with a recent resume by August 1st to Diane at diane@nsfa.info. Specific areas of recruitment include South Shore, Highland, and Cape Breton. Central region is the only region we are not currently recruiting new course conductors.

- *Please note: Applicants must be certified NSFA members in good standing and should have obtained their certification at least two years prior to applying for a course conductor position.*

Fitness Friendly 2007

Can't wait for next year's Fitness Friendly? Neither can we! Don't forget to register early for next year's NSFA Fitness Friendly fun. In the meantime, check out these pictures from 2007. Don't forget to log-on to the NSFA members only site – www.nsfa.info - to receive copies of the various outbreak sessions.



Top right and left: Participants practice core strengthening and step work with Geoff.

Bottom: Participants sweat to the beat of Dynamix Music with Diane.

Discounts and resources

For a complete list, visit the members only site at www.nsfa.info or call (902) 425-1128 ext 224.

AEROBICS FIRST 10% off footwear, 15% of Apparel, 5% off sales prices
Luke MacDonald: LUKE.AEROBICSFIRST@GMAIL.COM; 902-423-1470

BREATHING SPACES YOGA STUDIO 10% off 200hr Yoga teacher training program
Jenny Kierstead: info@breathingspaceyogastudio.ca; (902) 444-YOGA (9642)
www.breathingspaceyogastudio.ca

SHIMBO FITNESS & ACTIVE WEAR 15% discount on both street-wear & active wear.
Rob Frederick: info@shimbo.ca; 902-830-3867

CLEVE'S –SNEAKERS 15% discount on regular priced sneakers & fitness wear.
Available at Cleve's Sporting Goods Outlets; Various locations in Halifax and Dartmouth