Flexibility

One of the most frequently overlooked items in training novice oarsmen is flexibility. Very often, lack of flexibility can be THE most inhibiting factor in learning good technique. Flexibility simply refers to the ease of body movement through a wide range of motion. The athlete's body should be flexible enough to move *slowly, smoothly, and comfortably* through a wider range of motion than his event requires. If an athlete lacks this flexibility he is often working against himself and more importantly, he cannot move with control or achieve the desired technique.

In rowing there are six areas requiring flexibility:

1. Hamstrings
2. Lower back
3. Hips
4. Calves
5. Ankles
6. Shoulders

In each of these areas there is a rationale for the need of flexibility as it applies to good rowing technique, and an exercise to attain the desired flexibility.

Novice oarsmen will have varying degrees of flexibility in each of these areas, and for the sake of time, they can concentrate only on the areas that interfere with efficient and relaxed technique.

It is important to emphasize that in the exercises requiring stretching, MODERATE, but SUSTAINED STRETCHING is more effective than short, extreme, and forced stretching.

I. Hamstrings

A) Desired rowing technique: At the finish, and in the first part of the recovery, the knees should be held down firmly as the hands and shoulders swing out of bow in an attempt to attain most of the body angle before the slide begins.

B) Rationale: this technique:
   1) Keeps the body weight over the keel of the boat at the critical point of blade release, consequently
   2) only the height of the oar handle (or pressure on the earlock) is affecting the set-up of the boat.
   3) Gives greater ratio to the recovery by delaying the start of the slide a fraction of a second.
   4) Gives more room for downward movement of oar handle in rough water conditions.
   5) Helps to avoid lunging for body angle at the catch.

C) Exercise: Hamstring Stretcher
Kneel on one knee. Extend the other leg sideward with heel on floor. Press hip downward on extended leg side to the point of mild stretch of hamstrings. Hold 30-40 seconds, release, repeat several times. Do same procedure for other side.

II. Lower back

A) Desired rowing technique: Same as in I, and being able to maintain full body angle easily throughout the recovery into the catch.

B) Exercise: Back Stretcher
Laying on back, pull knees to chest and squeeze 6-10 counts; relax; repeat several times. On relaxation hold on to knees but extend arms.

III. Hips (also lower back and hamstrings)

A) Desired Rowing Technique: Coming into the catch, the knees should compress easily toward the chest; and the tail easily toward the heels so that pull compression is attained with good SLIDE CONTROL.

B) Rationale: this technique:
   1) Allows the boat to run out.
   2) Avoids unwanted escalation of stroke rating by eliminating the feeling that the boat is being pulled up under those who are not rushing the slide.
   3) Leads to more consistent timing.
   4) Enhances the feel of "swing" in the boat.

C) Exercise: Compression Jumps
From a standing position, jump straight up. While going up, draw knees to chest. Straighten legs as you come down. Repeat 10-20 times.

IV Calves:
A) Desired Rowing Technique: Full slide should be attained with ease and control, pulling with the top of the feet and stomach muscles, while the heels comfortably remain in contact with the foot stretcher.
B) Rationale: this technique:
1) Allows the boat to run out.
2) Permits full compression and reach with control
3) Eliminates check by keeping excessive pressure off the foot stretchers until the blade is in the water.
C) Exercise: Calf Stretcher
Stand near wall; toes slightly inward, weight on outer borders of feet. Reach forward to wall; bend arms, lean forward. Keep Heels on Floor to a mild stretch of calf muscle; hold 50-60 seconds, release, repeat 4-5 times.

V. Ankles
A) Desired Rowing Techniques: Same as IV.
B) Rationale: Same as IV.
C) Exercise: Ankle Stretcher.
Stand next to a wall on one foot. Place the ball of the opposite foot to the wall, with the heel in contact with the floor. Bend knee and push hip toward the wall until moderate pressure is felt in the ankle. Hold for 20-30 seconds, relax, repeat several times. Repeat with other leg.

VI. Shoulders
A) Desired Rowing Technique: As full slide is approached, the shoulders should be loose and flexible enough to swing the oar handle up without raising the back, or breaking the arms excessively to make the catch.
B) Rationale: this technique:
1) Helps maintain full reach at the catch.
2) Helps to emphasize that the change in direction on the slide, and of the blade, is initiated by the legs and not the back and/or arms alone.
C) Exercise: All-Over-Stretch
1) Standard push up stance
2) Arch back upward, duck head under as far as possible, keep knees upward, push heels to floor, push head toward knees until moderate stretching of shoulders is felt. Hold for 20-30 seconds.
3) Lower hips to floor by relaxing and letting body sag; push head back and hold for 20 seconds.
Repeat 2) and 3), several times. This exercise takes some time to coordinate but is well worth learning because it stretches the calves, the hamstrings, and the back in addition to the shoulders.
Flexibility

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In rowing there are six areas requiring flexibility:

1. Hamstrings 4. Calves
2. Lower back 5. Ankles
3. Hips 6. Shoulders

In each of these areas there is a rationale for the need of flexibility as it applies to good rowing technique, and an exercise to attain the desired flexibility.

Novice oarsmen will have varying degrees of flexibility in each of these areas, and for the sake of time, they can concentrate only on the areas that interfere with efficient and relaxed technique.

It is important to emphasize that in the exercises requiring stretching, MODERATE, but SUSTAINED STRETCHING is more effective than short, extreme, and forced stretching.

1. Hamstrings.

A) Desired rowing technique: At the finish, and in the first part of the recovery, the knees should be held down firmly as the hands and shoulders swing out of bow in an attempt to attain most of the body angle before the slide begins.

B) Rationale: this technique:
1) Keeps the body weight over the keel of the boat at the critical point of blade release, consequently
2) Only the height of the oar handle (or pressure on the oarlock) is affecting the set-up of the boat.
3) Gives greater ratio to the recovery by delaying the start of the slide a fraction of a second.
4) Gives more room for downward movement of oar handle in rough water conditions.
5) Helps to avoid lunging for body angle at the catch.

C) Exercise: Hamstring Stretcher

Kneel on one knee. Extend the other leg sideward with heel on floor. Press hip downward on extended leg side to the point of mild stretch of hamstrings. Hold 30-40 seconds, release, repeat several times. Do same procedure for other side.

II. Lower back

A) Desired rowing technique: Same as in I, and being able to maintain full body angle easily throughout the recovery into the catch.

B) Exercise: Back Stretcher.

Laying on back, pull knees to chest and squeeze 3-10 counts; relax; repeat several times. On relaxation hold on to knees but extend arms.

III. Hips (also lower back and hamstrings)

A) Desired Rowing Technique: Coming into the catch, the knees should compress easily toward the chest; and the tail easily toward the heels so that pull compression is attained with good SLIDE CONTROL.

B) Rationale: this technique:
1) Allows the boat to run out.
2) Avoids unwanted escalation of stroke rate by eliminating the feeling that the boat is being pulled up under those who are not rushing the slide.
3) Leads to more consistent timing.
4) Enhances the feel of "swing" in the boat.

C) Exercise: Compression Jumps
From a standing position, jump straight up. While going up, draw knees to chest. Straighten legs as you come down. Repeat 10-20 times.

IV Calves:

A) Desired Rowing Technique: Full slide should be attained with ease and control, pulling with the top of the feet and stomach muscles, while the heels comfortably remain in contact with the foot stretcher.

B) Rationale: this technique:
1) Allows the boat to run out.
2) Permits full compression and reach with control
3) Eliminates check by keeping excessive pressure off the foot stretchers until the blade is in the water.

C) Exercise: Calf Stretcher
Stand near wall; toes slightly inward, weight on outer borders of feet. Reach forward to wall; bend arms, lean forward. Keep Heels on Floor to a mild stretch of calf muscle; hold 50-60 seconds, release, repeat 4-5 times.

V. Ankles

A) Desired Rowing Technique: Same as IV.
B) Rationale: Same as IV.
C) Exercise: Ankle stretcher.
Stand next to a wall on one foot. Place the ball of the opposite foot to the wall, with the heel in contact with the floor. Bend knee and push hip toward the wall until moderate pressure is felt in the ankle. Hold for 20-30 seconds, relax, repeat several times. Repeat with other leg.

VI. Shoulders

A) Desired Rowing Technique: As full slide is approached, the shoulders should be loose and flexible enough to swing the oar handle up without raising the back, or breaking the arms excessively to make the catch.

B) Rationale: this technique:
1) Helps maintain full reach at the catch.
2) Helps to emphasize that the change in direction on the slide, and of the blade, is initiated by the legs and not the back and/or arms alone.

C) Exercise: All-Over-Stretch
1) Standard push up stance
2) Arch back upward, duck head under as far as possible, keep knees upward, push heels to floor, push head toward knees until moderate stretching of shoulders is felt. Hold for 20-30 seconds.

3) Lower hips to floor by relaxing and letting body sag; push head back and hold for 20 seconds.

Repeat 2) and 3), several times. This exercise takes some time to coordinate but is well worth learning because it stretches the calves, the hamstrings, and the back in addition to the shoulders.
Flexibility

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Novice oarsmen will have varying degrees of flexibility in each of these areas, and for the sake of time, they can concentrate only on the areas that interfere with efficient and relaxed technique.

It is important to emphasize that in the exercises requiring stretching, moderate, but sustained stretching is more effective than short, extreme, and forced stretching.

1. Hamstrings.

A) Desired rowing technique: At the finish, and in the first part of the recovery, the knees should be held down firmly as the hands and shoulders swing out of the bow in an attempt to attain most of the body angle before the slide begins.

B) Rationale: this technique:
1) Keeps the body weight over the keel of the boat at the critical point of blade release, consequently
2) Only the height of the oar handle (or pressure on the oarlock) is affecting the set-up of the boat.
3) Gives greater ratio to the recovery by delaying the start of the slide a fraction of a second.
4) Gives more room for downward movement of oar handle in rough water conditions.
5) Helps to avoid lunging for body angle at the catch.

C) Exercise: Hamstring Stretcher
Kneel on one knee. Extend the other leg sideward with heel on floor. Press hip downward on extended leg side to the point of mild stretch of hamstrings. Hold 30-40 seconds, release, repeat several times. Do same procedure for other side.

II. Lower back

A) Desired rowing technique: Same as in I, and being able to maintain full body angle easily throughout the recovery into the catch.

B) Exercise: Back Stretcher.
Laying on back, pull knees to chest and squeeze 8-10 counts; relax; repeat several times. On relaxation hold on to knees but extend arms.

III. Hips (also lower back and hamstrings)

A) Desired Rowing Technique: Coming into the catch, the knees should compress easily toward the chest; and the tail easily toward the heels so that pull compression is attained with good SLIDE CONTROL.

B) Rationale: this technique:
1) Allows the boat to run out.
2) Avoids unwanted escalation of stroke rating by eliminating the feeling that the boat is being pulled up under those who are not rushing the slide.
3) Leads to consistent timing.
4) Enables the feel of “swing” in the boat.

C) Exercise: Compression Jumps
From a standing position, jump straight up. While going up, draw knees to chest. Straighten legs as you come down. Repeat 10-20 times.

IV Calves:
A) Desired Rowing Technique: Full slide should be attained with ease and control, pulling with the top of the feet and stomach muscles, while the heels comfortably remain in contact with the foot stretcher.
B) Rationale: this technique:
1) Allows the boat to run out.
2) Permits full compression and reach with control.
3) Eliminates check by keeping excessive pressure off the foot stretchers until the blade is in the water.
C) Exercise: Calf Stretcher
Stand near wall; toes slightly inward, weight on outer borders of feet. Reach forward to wall; bend arms, lean forward. Keep Heels on Floor to a mild stretch of calf muscle; hold 50-60 seconds, release, repeat 4-5 times.

V. Ankles
A) Desired Rowing Technique: Same as IV.
B) Rationale: Same as IV
C) Exercise: Ankle stretcher.
Stand next to a wall on one foot.
Place the ball of the opposite foot to the wall, with the heel in contact with the floor. Bend knee and push hip toward the wall until moderate pressure is felt in the ankle. Hold for 20-30 seconds, relax, repeat several times. Repeat with other leg.

VI. Shoulders
A) Desired Rowing Technique: As full slide is approached, the shoulders should be loose and flexible enough to swing the oar handle up without raising the back, or breaking the arms excessively to make the catch.
B) Rationale: this technique:
1) Helps maintain full reach at the catch.
2) Helps to emphasize that the change in direction on the slide, and of the blade, is initiated by the legs and not the back and/or arms alone.
C) Exercise: All-Over-Stretch
1) Standard push up stance
2) Arch back upward, duck head under as far as possible, keep knees straight, push heels to floor, push head toward knees until moderate stretching of shoulders is felt. Hold for 20-30 seconds.
3) Lower hips to floor by relaxing and letting body sag; push head back and hold for 20 seconds.

Repeat 2) and 3), several times. This exercise takes some time to coordinate but is well worth learning because it stretches the calves, the hamstrings, and the back in addition to the shoulders.
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I. Hamstrings.

A) Desired rowing technique: At the finish, and in the first part of the recovery, the knees should be held down firmly as the hands and shoulders swing out of bow in an attempt to attain most of the body angle before the slide begins.

B) Rationale: this technique:
   1) Keeps the body weight over the keel of the boat at the critical point of blade release, consequently
   2) Only the height of the car handle (or pressure on the oarlock) is affecting the set-up of the boat.
   3) Gives greater ratio to the recovery by delaying the start of the slide a fraction of a second.
   4) Gives more room for downward movement of car handle in rough water conditions.
   5) Helps to avoid lunging for body angle at the catch.

C) Exercise: Hamstring Stretcher
   Kneel on one knee. Extend the other leg sideward with heel on floor. Press hip downward on extended leg side to the point of mild stretch of hamstrings. Hold 30-40 seconds, release, repeat several times. Do same procedure for other side.

II. Lower back

A) Desired rowing technique: Same as in I, and being able to maintain full body angle easily throughout the recovery into the catch.

B) Exercise: Back Stretcher.

Laying on back, pull knees to chest and squeeze 8-10 counts; relax; repeat several times. On relaxation hold on to knees but extend arms.

III. Hips (also lower back and hamstrings)

A) Desired Rowing Technique: Coming into the catch, the knees should compress easily toward the chest; and the tail easily toward the heels so that pull compression is attained with good SLIDE CONTROL.

B) Rationale: this technique:
   1) Allows the boat to run out.
   2) Avoids unwanted escalation of stroke rating by eliminating the feeling that the boat is being pulled up under those who are not rushing the slide.
   3) Leads to more consistent timing.
   4) Enhances the feel of "swing" in the boat.

C) Exercise: Compression Jumps
From a standing position, jump straight up. While going up, draw knees to chest. Straighten legs as you come down. Repeat 10-20 times.

IV Calves:

A) Desired Rowing Technique: Full slide should be attained with ease and control, pulling with the top of the feet and stomach muscles, while the heels comfortably remain in contact with the foot stretcher.

B) Rationale: this technique:
1) Allows the boat to run out.
2) Permits full compression and reach with control.
3) Eliminates check by keeping excessive pressure off the foot stretchers until the blade is in the water.

C) Exercise: Calf Stretcher
Stand near wall; toes slightly inward, weight on outer borders of feet. Reach forward to wall; bend arms, lean forward. Keep Heels on Floor to a mild stretch of calf muscle; hold 50-60 seconds, release, repeat 4-5 times.

V. Ankles

A) Desired Rowing Techniques: Same as IV.

B) Rationale: Same as IV

C) Exercise: Ankle stretcher.
Stand next to a wall on one foot. Place the ball of the opposite foot to the wall, with the heel in contact with the floor. Bend knee and push hip toward the wall until moderate pressure is felt in the ankle. Hold for 20-30 seconds, relax, repeat several times. Repeat with other leg.

VI. Shoulders

A) Desired Rowing Technique: As full slide is approached, the shoulders should be loose and flexible enough to swing the oar handle up without raising the back, or breaking the arms excessively to make the catch.

B) Rationale: this technique:

1) Helps maintain full reach at the catch.
2) Helps to emphasize that the change in direction on the slide, and of the blade, is initiated by the legs and not the back and/or arms alone.

C) Exercise: All-Over-Stretch
1) Standard push up stance
2) Arch back upward, duck head under as far as possible, keep knees straight, push heels to floor, push head toward knees until moderate stretching of shoulders is felt. Hold for 20-30 seconds.

3) Lower hips to floor by relaxing and letting body sag; push head back and hold for 20 seconds.

Repeat 2) and 3), several times. This exercise takes some time to coordinate but is well worth learning because it stretches the calves, the hamstrings, and the back in addition to the shoulders.
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It is important to emphasize that in the exercises requiring stretching, MODERATE, but SUSTAINED STRETCHING is more effective than short, extreme, and forced stretching.

I. Hamstrings.

A) Desired rowing technique: At the finish, and in the first part of the recovery, the knees should be held down firmly as the hands and shoulders swing out of bow in an attempt to attain most of the body angle before the slide begins.

Finish

stretched hamstrings

Recovery

B) Rationale: this technique:
1) Keeps the body weight over the keel of the boat at the critical point of blade release, consequently
2) Only the height of the oar handle (or pressure on the oarlock) is affecting the set-up of the boat.
3) Gives greater ratio to the recovery by delaying the start of the slide a fraction of a second.
4) Gives more room for downward movement of oar handle in rough water conditions.
5) Helps to avoid lunging for body angle at the catch.

C) Exercise: Hamstring Stretcher
Kneel on one knee. Extend the other leg sideward with heel on floor. Press hip downward on extended leg side to the point of mild stretch of hamstrings. Hold 30-40 seconds, release, repeat several times. Do same procedure for other side.

II. Lower back

A) Desired rowing technique: Same as in I, and being able to maintain full body angle easily throughout the recovery into the catch.

B) Exercise: Back Stretcher
Laying on back, pull knees to chest and squeeze 8-10 counts; relax; repeat several times. On relaxation hold on to knees but extend arms.

III Hips (also lower back and hamstrings)

A) Desired Rowing Technique: Coming into the catch, the knees should come in easily toward the chest; and the tail easily toward the heels so that pull compression is attained with good SLIDE CONTROL.

B) Rationale: this technique:
1) Allows the boat to run out.
2) Avoids unwanted escalation of stroke rating by eliminating the feeling that the boat is being pulled up under those who are not pushing the slide.
3) Leads to more consistent timing.
4) Enhances the feel of "swing" in the boat.

C) Exercise: Compression Jumps
From a standing position, jump straight up. While going up, draw knees to chest. Straighten legs as you come down. Repeat 10-20 times.

IV Calves:

A) Desired Rowing Technique: Full slide should be attained with ease and control, pulling with the top of the feet and stomach muscles, while the heels comfortably remain in contact with the foot stretcher.

B) Rationale: this technique:
1) Allows the boat to run out.
2) Permits full compression and reach with control
3) Eliminates check by keeping excessive pressure off the foot stretchers until the blade is in the water.

C) Exercise: Calf Stretcher
Stand near wall; toes slightly inward, weight on outer borders of feet. Reach forward to wall; bend arms, lean forward. Keep Heels on Floor to a mild stretch of calf muscle; hold 50-60 seconds, release, repeat 4-5 times.

V. Ankles

A) Desired Rowing Technique: Same as IV.
B) Rationale: Same as IV
C) Exercise: Ankle stretcher.
Stand next to a wall on one foot. Place the ball of the opposite foot to the wall, with the heel in contact with the floor. Bend knee and push hip toward the wall until moderate pressure is felt in the ankle. Hold for 20-30 seconds, relax, repeat several times. Repeat with other leg.

VI. Shoulders

A) Desired Rowing Technique: As full slide is approached, the shoulders should be loose and flexible enough to swing the oar handle up without raising the back, or breaking the arms excessively to make the catch.

B) Rationale: this technique:

1) Helps maintain full reach at the catch.
2) Helps to emphasize that the change in direction on the slide, and of the blade, is initiated by the legs and not the back and/or arms alone.

C) Exercise: All-Over-Stretch
1) Standard push up stance
2) Arch back upward, duck head under as far as possible, keep knees straight, push heels to floor, push head toward knees until moderate stretching of shoulders is felt. Hold for 20-30 seconds.

3) Lower hips to floor by relaxing and letting body sag; push head back and hold for 20 seconds.
Repeat 2) and 3), several times. This exercise takes some time to coordinate but is well worth learning because it stretches the calves, the hamstrings, and the back in addition to the shoulders.
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1. Hamstrings

A) Desired rowing technique: At the finish, and in the first part of the recovery, the knees should be held down firmly as the hands and shoulders swing out of bow in an attempt to attain most of the body angle before the slide begins.

B) Rationale: this technique:
1) Keeps the body weight over the keel of the boat at the critical point of blade release, consequently
2) Only the height of the oar handle (or pressure on the oarlock) is affecting the set-up of the boat.
3) Gives greater ratio to the recovery by delaying the start of the slide a fraction of a second.
4) Gives more room for downward movement of oar handle in rough water conditions.
5) Helps to avoid lunging for body angle at the catch.

C) Exercise: Hamstring Stretcher
Kneel on one knee. Extend the other leg sideward with heel on floor. Press hip downward on extended leg side to the point of mild stretch of hamstrings. Hold 30-40 seconds, release, repeat several times. Do same procedure for other side.

II. Lower back

A) Desired rowing technique: Same as in I, and being able to maintain full body angle easily throughout the recovery into the catch.

B) Exercise: Back Stretcher

Laying on back, pull knees to chest and squeeze 8-10 counts; relax; repeat several times. On relaxation hold on to knees but extend arms.

II) Hip (also lower back and hamstrings)

A) Desired rowing technique: Coming into the catch, the knees should compress easily toward the chest; and the tail easily toward the heels so that pull compression is attained with good SLIDE CONTROL.

B) Rationale: this technique:
1) Allows the boat to run out.
2) Avoids unwanted escalation of stroke rating by eliminating the feeling that the boat is being pulled up under those who are not rushing the slide.
3) Leads to more consistent timing.
4) Enhances the feel of "swing" in the boat.

C) Exercise: Compression Jumps
From a standing position, jump straight up. While going up, draw knees to chest. Straighten legs as you come down. Repeat 10-20 times.

IV Calves:

A) Desired Rowing Technique: Full slide should be attained with ease and control, pulling with the top of the feet and stomach muscles, while the heels comfortably remain in contact with the foot stretcher.

B) Rationale: this technique:
   1) Allows the boat to run out.
   2) Permits full compression and reach with control.
   3) Eliminates check by keeping excessive pressure off the foot stretchers until the blade is in the water.

C) Exercise: Calf Stretcher

Stand near wall; toes slightly inward, weight on outer borders of feet. Reach forward to wall; bend arms, lean forward. Keep Heels on Floor to a mild stretch of calf muscle; hold 50-60 seconds, release, repeat 4-5 times.

V. Ankles

A) Desired Rowing Technique: Same as IV.

B) Rationale: Same as IV

C) Exercise: Ankle stretcher.

Stand next to a wall on one foot. Place the ball of the opposite foot to the wall, with the heel in contact with the floor. Bend knee and push hip toward the wall until moderate pressure is felt in the ankle. Hold for 20-30 seconds, relax, repeat several times. Repeat with other leg.

VI. Shoulders

A) Desired Rowing Technique: As full slide is approached, the shoulders should be loose and flexible enough to swing the oar handle up without raising the back, or breaking the arms excessively to make the catch.

B) Rationale: this technique:

1) Helps maintain full reach at the catch.

2) Helps to emphasize that the change in direction on the slide, and of the blade, is initiated by the legs and not the back and/or arms alone.

C) Exercise: All-Over-Stretch

1) Standard push up stance

2) Arch back upward, duck head under as far as possible, keep knees upward, push head toward knees until moderate stretching of shoulders is felt. Hold for 20-30 seconds.

3) Lower hips to floor by relaxing and letting body sag; push head back and hold for 20 seconds.

Repeat 2) and 3), several times. This exercise takes some time to coordinate but is well worth learning because it stretches the calves, the hamstrings, and the back in addition to the shoulders.