WET MOVE TO LEARN

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Inspired by Barbara Pheloung Developed by the attendees of the 2008 Move to Learn Fijian Seminar Written by Helen Thomson, Veronica Steer & Jini Liljeqvist Formatted by Jini Liljeqvist Cover photography by Lia Loewenthal

DISCLAIMER:

The water activities suggested and illustrated in this booklet should be supervised by a qualified swimming teacher with a current first aid certificate.

All water activities involve an element of risk, and children should not be left unsupervised.

Parents are encouraged to enjoy this program with their own children at their own discretion and under their own responsibility.



WET MOVE TO LEARN

Barbara's love of water and swimming was part of her desire to extend the use of the Move to Learn sequences into a water-based learning environment. To this end, she threw out the challenge to explore the possibilities of a 'Wet' Move to Learn program to the participants of a special seminar she held in Fiji in 2008. What better place could there be to dive into the joys and potential of movement in water than in Fiji? Together, the group wrestled with the task, and this little booklet is the end result of their collective creativity.

We'd like to extend our sincere thanks to those involved, especially to Veronica Steer and Helen Thomson who spearheaded the task, and we hope that you all will be as excited with this as we are.

Why Not Take the Program into the Water?

The aim was not to develop activities to replace the original Move to Learn sequences, but to provide another dimension in which to have fun and also to promote children's development so that they could reach their potential while addressing underlying sensori-motor and primitive reflex integration. Not only would learning benefit but it would also help overcome hindrances to mastering swimming, a most important play, social and life skill.

The need for sensori-motor and primitive reflex integration for learning is well addressed in Barbara's books so it is important to also recognise their contribution to mastering swimming.

Every child needs to learn to swim. For some, swimming is as natural as walking. For most, it is learnt over several summers and in swimming classes, while others are water babies, having a great deal of fun in and under the water but not learning to swim.

For many, and not uncommonly children with Learning Difficulties, it is an ongoing struggle, partially learnt, and partially avoided as many have underlying immature sensori-motor and primitive reflex integration.



Being able to swim requires a variety of skills and abilities, and although we spend our earliest months of life in water in the womb, swimming can seem far from natural to many of us when we first experience it. As mentioned, it can be a particularly challenging activity to those with learning difficulties, and this is not just coincidental. Many of the basic requirements for feeling comfortable in the water and for being ready to learn to swim are areas of difficulty for those with LD. Let's look at some of those basics.

Swimming requires:

- **tactile tolerance:** The child needs to feel comfortable with water on their face, with their face underwater and with bare skin on sand and grass. They also need to feel comfortable with splashing, temperature differences, being held, being touched and being pushed by others in the water.
- **a well developed vestibular system:** The child's eyes, head, neck and body need to be able to work well together to cope with moving in many different planes, (forwards, backwards, sideways), at different speeds and independently or assisted by others.
- a good sense of body position and movements (proprioception / kinesthesia):
- **noise tolerance:** This is especially important for indoor swimming classes.
- the ability to attend by listening, watching and following instructions:
- the ability to organise the different parts of the body as directed or intended (motor planning or praxis):
- ease with one side of the body working together with, and separately from, the other side of the body: Also ease with having the arms work separately from the legs (bilateral coordination and sequencing of actions).
- the ability to be able to coordinate breathing with swimming strokes:
- well integrated primitive and postural reflexes: This will contribute to mature sensori-motor integration and enable a smooth progression in learning to swim. The integration of these reflexes is essential for mastering new skills.
- strength of tummy, back, neck, shoulders, arms, hips and leg muscles:



The Move to Learn Program provides good foundations for swimming in that it helps to:

- develop body awareness and confidence
- develop postural control and strength
- stimulate the eyes and ears along with the body senses (touch, movement and muscle/body position sense)
- coordinate both sides of the body to do simultaneous and reciprocal movements
- develop the ability to plan and direct the body in different movement patterns
- integrate primitive reflexes

Primitive Reflexes and swimming

The development of swimming skills will be impeded if some of the following primitive reflexes are retained:

Moro Reflex - This is an involuntary startle reflex, activated by stimulation to one or more of the senses, depending on the child (or adult).

Retained Moro Reflex can affect balance, co-ordination, breathing, visual & auditory processing, immunity, social behaviour, self-esteem and stamina.

For a child with a retained Moro Reflex, some or all aspects of the swimming environment, and the multi-sensory stimulation it presents, may be overwhelming. The child may have an overwhelmed, stressful response that interferes with breathing or coping with their mouth, nose, face or eyes in or underwater.

There may be difficulty with being touched, held or guided, moving their heads or lying on their backs.

This stressful over-aroused state will indeed effect tension throughout the body and will make the lesson or swimming experience a much feared one. It will take a great deal of desensitisation before any learning can take place.



Asymmetrical Tonic Neck Reflex (ATNR) - This involves a reflexive extension of the arm, hand and fingers on the side to which the head is turned, while the arm and leg on the opposite side bend.

A child with a retained ATNR can have difficulty with over arm swimming, i.e. when the head turns to the side, the arm on that side undertaking the over arm stroke will want to extend out to the side.

They may want to turn their head from side to side with each arm's stroke and find it very difficult not to do so. They may find it difficult to hold their head in midline while attempting simultaneous symmetrical arm actions during breaststroke.

The child may also prefer, or find it easier, to do side stroke, as the arm extends out on the side the head is turned and other arm has a flexion action.

Neck and Body Righting Reactions - These are very early reflex reactions aiming to keep the head and body aligned and set up early rolling.

They involve either the body turning or following the direction of the head turning, or the neck and upper body following the hips in a log roll. Both allow the *head* and body to always be aligned during movements from birth, and they start to integrate into mature Neck and Body Righting Reactions half way through the first year of life.

Understandably retained neck and body righting reactions will make learning to swim difficult as when the head turns to one side, the body will also turn or roll over in that direction. This can make it difficult to keep on the back or tummy for the arms to stroke when the head turns separately from the body.

Tonic Labyrinthine Reflex (TLR) - if present, is seen when there is difficulty holding the head, arms and legs up against gravity e.g. if on the back to hold head and limbs up and similarly when on the tummy.

Therefore, when on the tummy or back, a retained TLR can cause difficulties with:

- holding the head up to breathe
- holding the head in line with the body when floating
- freeing the head to turn to the side to breathe



- with strength of neck, back and tummy muscles
- with developing core strength and stability and endurance

Symmetrical Tonic Neck reflex (STNR) - if this is present, when the head is held up, both arms tend to extend and hips flex; when the head is held down, both arms tend to flex or bend and the hips and legs tend to straighten.

This can cause difficulties:

- with over arm stroking, as the head position influences both arms to hold the same position
- with controlling position and action of the legs, which also tend to change with head position, because when the head is down, hips and knees tend to straighten, and when the head is up, hips and knees tend to flex or bend

Spinal Galant – This reflex helps with movement in the womb and enables hip flexibility. It is thought to play an active role in the birth process; causing small rotational movements of the hip on one side when the lumbar region is stimulated by contractions of the vaginal wall.

Retention of the Spinal Galant reflex will make it difficult to keep still and not squirm or wriggle when there is touch to the mid to lower back (by swim suit, being touched or held, or the water stimulation) as it will cause the torso to flex to the side being touched.

Amphibian Reflex - retention of this reflex will inhibit development of mature crawling and hence over arm swimming.

This reflex develops on the tummy and back and assists the raising of the hip on one side along with flexion of the arm, hip and knee.

'Stomach Crawling' is excellent for working with this reflex.



Palmar Reflex – occurs when an object is placed in the hand or the palm is stroked, the fingers close to grasp.

This can cause difficulty:

- with keeping open hands when stoking the water
- with a loose grasp of the kickboard and ease of letting go during stroke practice

The tongue and mouth may also become involved in the arm and hand actions as early in life these are tied together during breastfeeding, influencing breathing and swallowing the water.

Plantar and Babinski – With the Plantar reflex, the toes curl down with pressure on the ball of the foot, and with the Babinski, the toes fan out with touch-pressure on the side of the sole of the foot .

With these retained reflexes, feet can be:

- over sensitive if they are held e.g. while being taught a foot action
- limited in freedom of ankle movements / position while learning to kick with water stimulation
- restless while standing and waiting during lessons. Standing still can also be a problem, making it difficult not to bounce around during lessons

Sucking and rooting – often associated with the "grasp' reflex'. Touch around the cheek and lips (from water, others nearby, own arm during while learning to stroke, or being positioned during a lesson) can cause tongue, lip and head movements. Retained sucking reflexes can cause:

• associated tongue, mouth and head turning, which can influence freedom of head turning, breathing and swallowing water.

The use of the Move to Learn exercises in the water can take on a variety of contexts, just as it can when used in the classroom. From games to specific teaching of swimming techniques, there are opportunities to incorporate the basic movements that override the primitive reflexes and help mature postural muscles.



Getting in the water

The first, most important task for working with anyone in the water is to ensure that they are comfortable and feel safe. Otherwise the Moro reflex may interfere. There are a number of activities that can help the student feel safe and comfortable in the water which, at the same time, will be working on overriding the Moro reflex and helping to relax a generally stressed, tense person. This may take some time and will require regularity of practice in, and exposure to, water to be achieved.

The activities that follow divide the concept of basic water familiarisation into 4 areas which scaffold that notion of 'safe'.

1. Feeling the water

Rock the student in your arms. Swap sides. Sing. When the student is sufficiently relaxed the following could be tried:

- Push the student away from you, while still facing you - sing
- Push the student away from you, facing away sing
- Swing the student away from you, while still facing you - sing
- Swing the student away from you, facing away sing



Hold them around the tummy so their arms and legs are free to experience the sensation of the water all around them. Flotation vests, noodles, kickboards and inflatable rings can be helpful for this too.

Have them lie, sit or kneel on the step of the pool or at the edge of the water on the sand at the beach, and just feel the sensation of the water around them.



Have them walk on their hands through the water, or crawl, or sit up and kick their legs out in front, or lie on their tummy and kick their legs out behind.

Have them look for objects on top of and under the water from above. Ask them to bend and pick them up, or to use their toes to pick them up - this will encourage familiarity at different levels and the use of the eyes for tracking and depth perception (e.g., fingers touch something at different levels).

Try to involve the whole body - (e.g., play imaginative games with fingers like 'dinosaurs' on the steps , look at wriggly toes, add a ring to step in).

2. Mouth in

Get the student to do some deep breathing beforehand to help them relax.

Blowing bubbles

Then have the student put their mouth under water and blow bubbles. This will help them to regulate breathing patterns which will not only keep them calmer but also prepare them for regular swimming strokes later.

Pretend to be speedboats and blow bubbles in water





3. Face in

Once the student knows to blow out through the mouth or, at least, not to breathe in whilst under water, try having them put their face under water. Holding an adult's hands can help them feel safe, or use a kickboard or noodle, hold on to the side of the pool, or lie in shallow water on the tummy to practice putting the whole face under.

- Try games, such as 'Ring a Rosie', which can be played in a group holding hands and going under together.
- Practise the 'Fish Face' (i.e. pushing cheeks in with hands to make a fish face) under water (rooting reflex)

Play games that involve objects on the bottom of the pool to encourage putting head in to retrieve them.



4. Core Stability

Core stability, i.e. the body being able to support itself through the tummy and the back, is another dimension of comfort and safety in the water. This involves the integration of nearly all of the primitive reflexes discussed and more, which affects the ability to float or be buoyant.



Some activities to help are as follows:

Prone (tummy)

- Have the student lift their head up while holding on to a kick board, or lying on the sand on their tummy.
- Play games using shallow kicking while propping, holding the side of the pool, using a kickboard, tyre or noodle.





• Have the student do other exercises or activities to strengthen hips and shoulders.

• In the shallows, use the kickboard and practise breathing - having the student turn their head to the side.

• Have them starfish float on their tummy holding on to a noodle.



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supine (back)

- Have the student crab crawl into water.
- Have the student sit on the step with their legs held out.
- Hold the student at trunk level while they kick their legs out.
- Supporting their weight have them do the 'sunflower' exercise in 'Ten Gems for the Brain.'
- Support their arms to help them float on their back.



• While still supporting them, have them pull their knees up and move their arms in and out.

Have them starfish float on their back holding on to a noodle/ tyre



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Wet Move to Learn

Now we can deal with the basic set of Move to Learn exercises as they might be performed in the water. These are by no means the total list, simply the ideas that were generated at the Fiji conference, with some experimentation by conference participants in the water. More ideas have subsequently been added. Of note, it is important to acknowledge that these movements may assist in integrating the primitive reflexes.

1. Rolling - helpful in particular for integrating ATNR, STNR, Neck and Body Righting Reaction, to develop smooth sequential rolling (i.e. not log rolling).

• Have the student roll along a mat or on the sand into the water.

• Using a flotation device (noodle), or inside an inner tube, have the student roll in the water.



• Have the student try rolling in the water holding on to your hands for support or using a kickboard, holding onto a step or the side of the pool. Have them try rolling underwater 'corkscrews'



2. Gliding - Tonic Labyrinthine Prone ATNR STNR if arms are flexed at elbows

- Hold the student under their tummy while they extend their arms and legs.
- Have them try to hold the same position while holding on to edge of the pool or a kickboard and kicking.



- Still holding on to the pool edge or a kickboard, have them practise breathing bilaterally.
- Have them try to hold on to the edge of the pool with their feet while on their tummy.
- Have them try balancing on their tummy on a board.
- Have them try gliding underwater.

Diving can also be a great way to incorporate gliding.



3. Unilateral Flip Flops- getting one side to work together for reaching and crawling. ATNR Neck and Body R R's Amphibian Reflex.

- Have the student do the unilateral flip flop movements (see DVD or 'Ten Gems for the Brain') in the shallow water.
- Have the student do the unilateral flip flop movements in the water while supported under their tummy by you or by a flotation device like a tyre or boogie board.

Games like 'crocodiles' in the shallows can incorporate some of these movements, as can breast stroke swimming.





4. Cross Pattern Flip Flops -left and right working together, ATNR,

Amphibian Reflex, Neck and Body R R's, preparation for crawling

- Have the student do the cross pattern flip flop movements in the shallow water.
- Have the student do the cross pattern flip flop movements in the water while supported under their tummy by you or by a flotation device like a tyre.
- Have them try it lying on a board on their tummy and have them pull themselves along with their arms and legs.

Games like 'turtles under water' can incorporate some of these movements.





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5. Stomach Crawling- shoulder and hip strengthening, muscle tone, moving against gravity and resistance, - Palmar, Plantar and Babinski Reflexes, Tonic Labyrinthine prone, ATNR, Neck and Body R R's, Amphibian Reflex, Spinal Galant.

- This can be easily done in shallow water, 'Salamanders in shallows'
- Have the students cross crawl through water on stomach and back.

Swimming strokes like the Australian crawl, 'dog paddle' and side stroke can incorporate some of these movements.





6. Back crawling- Tonic Labyrinthine supine, Spinal Galant and Amphibian

Reflex Neck and Body R R's

• This can be great to do on the edge of the water at the beach or in the water with support or a flotation device.



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Back stroke also incorporates some of these movements.



7. Rocking - STNR, Palmar, muscle tone, vision, joint development, - promotes well developed palm muscles
This can be fun to do in shallow water, and it's a good opportunity to incorporate some bubble blowing or face in.



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8 & 9. Unilateral and cross lateral crawling - ATNR, Amphibian Reflex, Neck and Body R R's, Palmar and Rooting reflex muscle tone, vision, joint development, flat hands inhibit Palmer - promotes well developed palms.

- Again, great to do this in the shallow water, 'hippos in the water.'
- Try having them follow a trail or counting objects on the bottom.

Crawling on the sand provides wonderful tactile stimulation as well. Get them to crawl in to water from beach edge, off mat into pool.





10. Cross pattern walking - (refining all the reflexes except the face and palmar reflexes or at least dependent on their integration)

• This can be done on the sand and in varying depths of water from the shallows to neck deep.

• It can also be adapted into treading water both independently and whilst hanging over a noodle or tyre.

Try having the student cross pattern walk along the steps of the pool or turn it into a game getting in to the pool.





Well, we hope that this has given you a few ideas on how to utilise the wonderful possibilities of water for a creative learning experience.

Have fun!



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