

Foreword

Most clubs induct new bowlers into the game. Some clubs work tirelessly to coach young bowlers. Few clubs however, for a variety of reasons, are able to meet the aspirations of those bowlers who wish to progress further. "It's just a draw!" puts into the hands of such bowlers a learning resource to assist that progress. Please enjoy it and send me your opinions, questions and comments by emailing me at milesp308@gmail.com. I will try to respond to them. It's just a draw is a freely available ebook on the subject of Indoor Lawn Bowling for you to download from the web.

The Author

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Introduction

The book is for aspiring bowlers, for those who recognise that the draw shot is the foundation of the sport and for those who want to improve their performance.

Specifically, it shows how knowledge from sports science was applied to the fixed delivery action. If the fixed action is not the one you prefer, study the book to see its relevance to your own delivery action.

Mechanics, Physiology and Psychology

Like all competitive sports, such as cricket, golf, athletics and snooker, improved performance can be achieved by applying knowledge from these three sports science subjects- Mechanics, Physiology and Psychology. Throughout the ebook these subjects will be identified by these colours.

Mechanics considers the movements you do in the delivery action.

Physiology considers mainly the general fitness, flexion and balance of your body.

Psychology considers the emotional and decision making parts of your personality.

If this is too much for you to consider don't give up. The mechanics is the most important of the three subjects. You only need to be aware of the other two. They only become important as you improve.

Something to keep in Mind

The speed of the bowl as it leaves the hand will determine the length it is bowled. If you can control the speed of the bowl you can control the length to which it is bowled. That would be something !



What do you know about speed? You can walk at 4mph; you can drive a car at 30mph. Four miles an hour and 30mph are speeds.

Speed equals the distance travelled divided by the time of the journey.

Now think about the bowl during your delivery action. The time taken between the beginning of the delivery action and the release of the bowl can be measured. The bowl also travels a distance during the delivery action. If you can control both its time and distance you can control its speed.

1..2..3 First try to control the time of the delivery action. Think about a clock with a second hand ticking, '1-2-3'. Most delivery actions take between 1 and 3 seconds. Now say '1-2-3' out loud.

Now practise bowling, saying to yourself '1-2-3'. Every time you bowl from now on, no matter to which length, bowl to the rhythm '1-2-3'. Now that wasn't hard! You have controlled the time of the delivery action. That only leaves the distance the bowl travels during the delivery action to be controlled!!

-----The Delivery Action-----

This ebook takes you on a journey and starts with a delivery action.

Get to know it well, practicing with a friend. Practice at home, bowling along a carpet towards a cushion.

I will assume throughout that you bowl with your right hand.

1. Decide on the location of your point of aim.
2. Check the bowl bias and place the bowl in your hand.



3. Take up a position on the mat body facing your point of aim. With straight legs place your right foot on the mat. Place your left foot one foot length forward of the right foot, feet shoulder width apart.



4. Keeping your left arm straight bend your body forward at the waist. Stop when the hand holds the left knee.



5. Keeping the right arm vertically straight bend your knees and left arm until the bowl is touching the carpet. As you lower your body bring the right knee a bit closer to the left knee.
6. Take the point of balance of your body on your heels.



7. The further the jack is from you the higher you will hold the bowl above the mat, by unbending the knees, before bowling.



8. Extend your straight right arm forward about one foot.

9. Check your balance.



10. a, b, c. Deliver the bowl saying '1-2-3' to yourself. This will help you develop a rhythm.

The ebook progresses one step at a time. Each step will introduce a new idea, or a refinement of a previous one. In this way you will be helped to become more accurate.

As you progress through the steps this delivery action will be gradually modified. At the end of the ebook you will be given the delivery action with all the modifications.

There are five mechanical variables which control the distance the bowl travels during the delivery action. These are:

a) The height the bowl is above the ground at the start of the delivery swing.

b) The length of the swing of the arm.

c) The length of the step forward of the left foot.

d) The amount of 'body weight forward' transference that is made in the delivery.

e) The strength of grip on the bowl.

If these variables, as well as the time of the delivery, can be controlled, then the speed of the bowl can be controlled.

Now most bowlers just sense the length to be bowled. This sense is partly something given to them at conception and partly something learned through life's journey.

In considering both what 'weight' to impart to the bowl, and how to do it, bowlers are trying to recall events in the past, both distant and recent, which are related to the task. Bowlers recall throwing balls underarm, playing skittles and boules, as well as bowling.

(Perhaps to 'makeup' for our shortcomings in this respect bowlers could play more throwing games. For example, when next in the garden throw a ball underarm to different targets; when next on a pebble beach pick up pebbles of different sizes and throw them underarm at the same target.)

So bowlers all have both natural ability to throw, and experience of doing so, in different amounts. "It's just a draw!" sets out to add to this ability and experience through getting you to ask questions like 'What happens if...?' What happens if, for example, you alter the height of your body, or the time taken for your arm swing or the strength of your grip? You will be encouraged to come to a practice with a question in your mind. Your practice becomes purposeful. You should keep a record of what ensued. In so doing you will draw with increasing accuracy, win more matches and find bowling more interesting.

And that's fun, triple fun!

STEP ONE

Getting to Grips with Variables

At home take time to practise bowling with a bowl along a carpet towards a cushion. As you delivered the bowl did you count '1-2-3'? What matters here is the time taken during the arm swing. It must be the same length of time for every delivery. Imagine a metronome, (used when learning to play a piano), or a clock pendulum, and let the idea of their regular rhythm help establish yours. In your spare moments, away from the club, 'step outside yourself' and, imagining that you are bowling, close your eyes and say '1- 2- 3'. Do you look good? Are you balanced? Remember, for every bowl say '1-2-3', even for short jacks.

Take yourself through the delivery action 1 to 9. Balance on your heels and then move forward to the 'soles' position. Do you feel your head moving forward? If so well done. This is something that also happens when a cricket batsman starts to play a forward stroke, when a sprinter moves from the 'on your marks position' to the 'get set' position. The head leads the body in this forward movement and, in bowls, helps achieve accurate line.

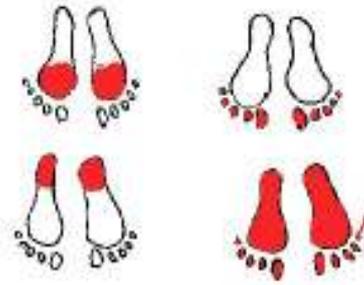
Transferring your 'body weight forward', from your heels to the 'soles' position, is adequate for giving you a sense of moving forward. So the variable 'body weight forward' is controlled; it becomes a constant.

You can test the alternatives. Take care! The further the head moves forward into the 'get set' position the further you will bowl.



Body Weight Forward

The Four Points of Balance: Weight on heels, full feet, soles and toes



Keeping Balanced

As you transfer your weight forward in the delivery you must maintain your balance.

These exercises will help you:

- a) Wearing slippers stand with one tennis ball under each foot. Try to keep your balance as you move backwards and forwards.
- b) Take up a golf putting stance, balance on one foot, and go through the putting action, with or without a putter! Change to the other foot.

Help with that Clutch Moment

All who drive a manual car will know the expression 'holding the clutch'. As a bowler you also have this 'clutch' moment.

It is the moment between delivery 9 and 10, between 'get set' and 'go', just like a sprint start in athletics. The moment is crucial. Here you must learn to leave your 'thinking' outer self behind and embrace your 'feeling' inner self.

My '1-2-3' will help you with this. It helps move you from 'thinking' to 'feeling' the delivery. So during the '1-2-3' phase of the delivery enjoy the sensation of doing a beautiful movement. In your imagination, when away from the club, see yourself bowling. Focus on each phase of the delivery in turn. Enjoy doing it...beautifully.

STEP TWO

When to Breathe

You need to decide what you are going to do about your breathing during the delivery. You may ask 'Does it matter?' Does it matter whether I breathe in, breathe out, breathe in and hold, or not breathe at all during the delivery? In my opinion everything you do both prior to, and during, the delivery does matter. I suggest that before the delivery you both breathe in to the count '1-2-3' and then breathe out to the same count. Do this at delivery 8. As always test the alternatives.

Making Breathing Easier

Learn to breathe deeply and calmly. Work to develop a slow breathing rhythm. This will help you both to relax in the delivery and reduce tension.

The following exercise will help you:

Put a scarf around your ribs and cross it at the front. Gently pull the scarf tight. Breathe in and allow the scarf to expand. Breathe out. A squeeze of the scarf will help your lungs to empty. So you breathe in, and then out, before you bowl.

Exercise 10x, x2 i.e. do the exercise ten times, rest, and then repeat it .

How to become less Tense

Sometimes you will have one of two problems during a match; becoming tense, and 'not feeling bothered'. Where either of these is left unchecked you are unlikely to play to your potential.

If you are tense in a match either of these ideas will help:

- a) You inhale slowly and deeply, and then exhale, before you bowl.
- b) Tightening your stomach, leg and arm muscles for five seconds while waiting to bowl. Over anxiety produces over tightening in the muscles and this exercise will reduce it. If 'not feeling bothered' is your problem then you will find something to help you at Step Nine.

STEP THREE

Point of Aim

At the exact moment of delivery what are you looking at? The diagram locates four common points of aim. A, B, C and D

There are advantages and disadvantages for each of the four points.

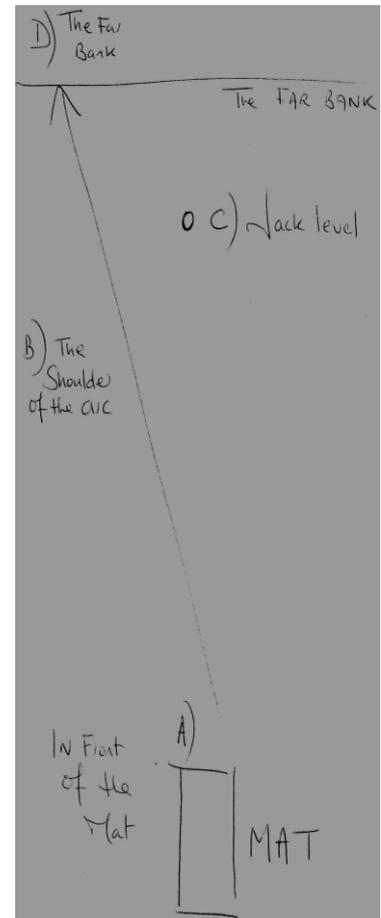
My point of aim is on the far bank, D, for three reasons.

- 1) The further the point is from you the less will be the margin of error.
- 2) It is easier to both find, and concentrate on, a point on the far bank compared to a point on the carpet surface.
- 3) I have more chance of keeping the head still which helps to keep the point of aim in focus. (This is like the snooker player keeping the head still for as long as possible when cueing.)

You are going to bowl through your point of aim, (not just towards it, or even to it).

Imagine your point as an entrance to a road tunnel.

You will bowl through the tunnel. Remember '1-to-through'. Oops! Did I mean '1- 2-3'? Well you choose.



Relax your shoulders

You will improve your arm swing and follow through if you learn to relax your shoulders.

Stand holding a scarf above and behind your head, hands one metre apart. Raise and lower the scarf behind the head. Think about your shoulder blades controlling the movement. Exercise slowly; lower the scarf breathing in, raise the scarf breathing out.

Involving your Feelings



To help you concentrate on the road tunnel, 'see' the lights of the tunnel, 'imagine' the land beyond, 'feel' the bowl hugging the road into the tunnel. Encourage your feelings to become interested in the point of aim. In this way you will calm the analytical 'am I swinging in a straight line?', 'have I transferred my weight forward sufficiently?' mind which can cause over tightening of the muscles.

STEP FOUR

Practicing Your Delivery

Ranked sportspersons practice on most days. This does not mean you have to go to the club every day! Do you practice at home? If not please reconsider. It will pay dividends, and it's free! If you have a padded footstool you can put this on its side and bowl to it, rather than using cushions. The advantage here is that the bowl rebounds to you!

Practice the delivery routine, especially 1 to 5. Bend forward at the waist until the left hand reaches to just above the left knee. Hold that position and, keeping the right arm straight, bend the knees until the bowl touches the carpet. Keep the left hand on the left knee throughout the delivery action. It will help to control the height of your body in the delivery action and make your action more stable.

Practice your routine. Take your time. Bowl through the point of aim. You may have to pencil mark a point of aim on a wall. Can you see the road tunnel? Remember '1-to-through'. In this practice your point of aim will be on the wall, not on the cushion or footstool, so keep your head up. In your practice strive to keep the forearm, wrist and hand in a straight line as the arm swings forward. Once the downswing is finished keep the head still until the arm has finished its straight follow through.

Observe other sports. Movements in other sports can be similar to the bowls delivery action. In golf the club back swing is much slower than the downswing. The club head also accelerates through the downswing. These features are also present in the snooker cue action and in javelin throwing. So during your '1-to-through' sequence swing slowly backwards to the word 'to' and accelerate the swing forwards to the word 'through'. This acceleration helps achieve accurate line.

Flexible Hips

You will improve if your hips are more flexible, so try this exercise:

Lie on your back, legs bent. Pull the left knee up towards your chest and extend the right leg flat to the floor. Hold this position of the legs for 5 seconds. Reverse the position of the legs.

Exercise 10x Repeat x3

Imagery

Away from the club imagine yourself playing the draw shot. Look at the bowl as it travels and see where it ends. Concentrate on each phase of the delivery e.g. transfer of weight forward, staying low in the delivery, keeping a long, low position in the follow through and bowling through the point of aim. Enjoy doing this!

STEP FIVE

Controlling Your Height of Stance

Go through the delivery bowling routine. (The further the jack is from you the higher you will raise your body before bowling.)

Don't alter the 'bend your body forward' position you reached at delivery 5.

Delivery 7. The body weight is now on the heels.

Imagine that beside you on the carpet is a ruler held vertically. Unbend the knees slowly in steps, each step being about 1 inch. Imagine the bowl going up the ruler. Count these small steps as you do it. 1-2-3-4 etc

The more you unbend the knees, the higher you will stand and the further you will bowl.

You will need to practice this movement, keeping the small steps the same distance apart.

From now on this is part of your delivery action.



Every Little Bit Helps

You will improve if you take your general fitness seriously. Choose cycling, swimming or brisk walking. Build up slowly, never exhausting yourself. Enjoy it knowing it is also doing you good. How is it doing you good? If you are fitter you will resist illness and injury more, will recover from them quicker and you will sustain a higher level of performance longer.

Every little bit helps! But don't overdo it. For example don't go for a tough cycle ride a day before an important match.

Listing Important Things

When competing you may perceive things negatively. You may play a poor shot, the marker may be awkward or your opponent may indulge in gamesmanship. Make a list of such things and add to it as you gain in experience. Forewarn yourself and so be forearmed. Make a list of the important things. It will help you to focus on that which is truly important.

Your list may be:

- a) The next bowl, (which will be the best you have ever bowled).
- b) The the sequence of the delivery
- c) The point of aim
- d) '1-2-through'.

STEP SIX

Swinging Straight

Lean a long mirror against a wall. You are going to bowl a plastic ball towards the mirror from a distance of about 10 feet. Angle the mirror and you will see yourself bowling. Try to get a reflection of a vertical line, (this could be an edge of a door or furniture or part of a wallpaper pattern), in the mirror.

Position your body so that as you swing the right arm the bowl will seem to move down the vertical line reflected in the mirror.

Practice the delivery routine.

Think about the point of aim. Can you see the road tunnel? Bowl through the road tunnel. Remember the timing is '1-2-through'.



Try to position your head so that it is looking down the length of the right arm so the head is at one end of the arm and the bowl is at the other end. Ideally your line of sight is the same as the delivery swing of the arm. Does this help the accuracy of your line bowling?

In darts, snooker and golf putting, the head is in the same position relative to the dart, snooker cue and golf ball as my preferred head position is to the bowl. If you are convinced that this is a good idea add it into your delivery routine at number 6.

Avoiding Collisions

Are you still exercising your hips?

This exercise will help you to bowl in a straight line and also reduce the incidence of the bowl hitting the body during the swing:

Stand in an upright position, hands on hips.

Put the weight of your body on the right leg, straight left leg forward and onto the toes.

Rotate the whole of the left leg outwards from the hip joint and then back inwards X6 Repeat X3. Then reverse the legs

Putting Bad Luck in the Dustbin

When things are going against you in a match you will often hear comments like 'bad luck', 'it's the rub of the green', and 'it's all on the day'. Now we all know that unlikely shots sometimes happen in a bowls match. We can use words like fluke and freak to describe these unlikely shots. Don't let these shots take you by surprise. Forget them, put them into an imaginary dustbin and remember to put the lid on!

Play these games. They will help you for when 'bad luck' strikes.

- a) Play with three bowls against an opponent's four bowls. Here your opponent will both start and finish the ends.
- b) Play against an opponent with four bowls, bowling your first two deliveries with your eyes closed.

The world is wonderful and immensely fascinating. It was not created by chance. This ebook has been one response to that belief. The outcome of a match is not found in the saying 'it's all on the day'. That sounds like a deadly fatalism. As with all bowlers I bring to a match a God given talent. He has also enabled me to bring technique, physical and mental preparation. I am what I am today because of yesterday and the days before that. If I win it is because I am better than my opponent in some of these respects, and vice versa. So rid yourself of fatalism and work to improve your technique, your fitness and your mind games.

STEP SEVEN

Practice, Practice

Practice the delivery routine. Each part is important. You may have a 0-1-2-3-4-5-6' vertical ruler scale' (where 0 is on the carpet) from Step Five.

Practice bowling with both a '2' and a '6' position, i.e. two woods for each body position. In future practices vary the 'height' positions. Now remember to take your time in practice. Count slowly and carefully. Emphasise bowling through your point of aim, 1-to-through'.

Test Time

It's a good idea to check your progress. This procedure will get you started. Keep the mat 2 yards from the ditch. In place of a jack fold a clean white handkerchief and position it at full length.

Choose to bowl either backhand or forehand.

Bowl four bowls.

You are aiming to bowl within 1 foot of the handkerchief. Using a rink chart like the one at Step Ten record the number of bowls you bowl within 1 foot. Use a calibrated metal bowls tape for this.

If not the length of your forearm, plus fist, will do.

For each succeeding end reduce the length by one yard.

What's your average? Next time you will aim to do better.

Keeping your Hands Happy

Flexible hands will help achieve a good grip. Keep your hands happy. Try these exercises.

a) Put your arms straight out in front of you. Flex your hands. Separate the first and second fingers from the others creating a gap. Breathe in as you bring your hands towards you. Breathe out as you extend your hands in front of you. RepeatX5. Try different finger separating combinations.

b) Push through your wrists, flexing the hands towards you. RepeatX5.

'Seeing' and 'Believing' it Happen

You will need all the help you can get to rid your mind of negative thoughts during the delivery. In fact anything that will rid the mind of analysis from delivery 9 onwards will help.

As you approach the mat prior to delivery 'see' your bowl sitting just behind the jack. That is where it will end its arc. Don't tell me 'you hope it will be there'. Believe it yourself. You are to be so confident of this that you can see yourself picking up the bowl when the end is finished. If this is helpful put it into your delivery routine.

STEP EIGHT

The Variable 'Strength of Grip'

For short jacks, particularly if you are using small bowls, relying on the 'height of stance' variable to help give you accurate length, may not be enough. I suggest you also use 'strength of grip'. So what does 'strength of grip' mean? A cricket batsman uses the phrase 'playing with soft hands'. When playing defensively, not wanting the ball to travel far, the batsman relaxes the grip on the bat handle. Similarly if you use a 'softer' grip the bowl will not travel as far.

Hold the bowl in your hand and place it on the carpet. Just hold the bowl without it slipping. This is 1 on your 'strength of grip' scale. Tighten your grip slowly, counting as you do so. Count 1-2-3-4. Practise this. You need a grip strong enough to keep control of the bowl when bowling to a long jack but not over gripping, one cause of 'throwing'. (see Step Nine) To start you off, and for most jack lengths, I suggest you count to 2. Now go through your delivery routine. Add this 'strength of grip' into your routine at delivery 5.

Periodically check that the size of bowl you are using matches the size of your hand. After a few months you may find that, as you do flexion and strength exercises, your hands get bigger! There may be occasions when you can't grip the bowl securely. If this is a problem for you try this procedure:

Before bowling rub the bowl with a cloth. The friction thus caused warms the surface of the bowl, increases adhesion between the fingers and the bowl, as well as keeping your hands supple. You can also try using a moist chamois leather to rub the bowl prior to bowling.

You Need Strong Hands...

In Step Seven you were given exercises for increasing hand suppleness. You also need your hands to be strong.

Kneel on the floor. Take up a position to do a press-up. Start with the palms of your hands flat on the floor. Do press-ups Repeat x5, x2.

As you gain confidence take the weight of your upper body on the fingertips! As you get stronger, from your kneeling position, move the knees further back and away from your arms. Remember, as with all exercises, don't overdo them but do them regularly.

...and a Strong Mind.

At Step Five you learnt how to counter perceiving things negatively. Remember 'to be forewarned is to be forearmed'

You will also need a mental strategy in place to cope with:

- a) A close match,
- b) Being well in the lead,
- c) Being a long way behind.

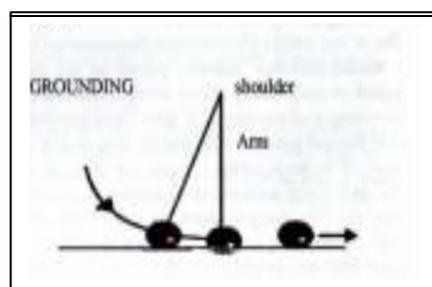
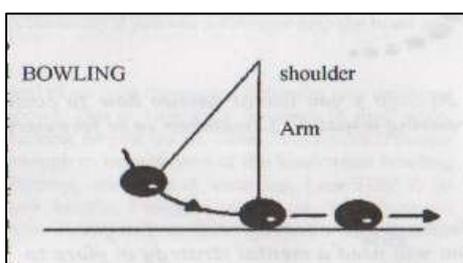
This is not unlike the problems encountered by a middle-distance runner. Learn to see the match as only one of many along a journey to becoming a champion. It is your hard training that has got you into this match. You owe it to yourself to keep going. If you are in a) or c) above it is still only the next bowl to be considered. However two dangers lurk for you if you are well ahead in a match. You can quicken up your delivery action and, what is worse, begin to show off!. Slow yourself down. Remember that the object is to win the match, not to show your opponent how brilliant you are.

STEP NINE

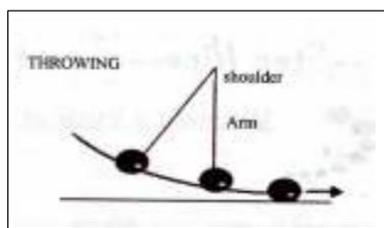
'Bowling', 'Grounding' and 'Throwing'

Practice your 'strength of grip' scale on a bowl. Feeling and seeing the difference between strengths 1 and 2 may be enough for you. You don't need any jacks. Just bowl using the same stance height but vary the grip strength.

You are aiming to bowl every bowl along the carpet as it leaves the hand, i.e. at the bottom of the arm downswing the bowl will be at the level of the carpet. Now when using the 'vertical ruler scale,' as part of the delivery action, your bowl is coming down to the carpet from different heights. So sometimes instead of 'bowling' your bowl you either 'ground' or 'throw' it.

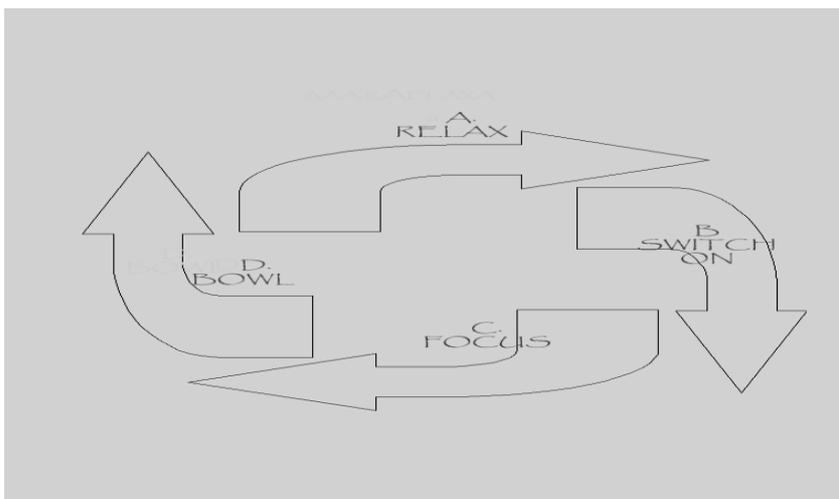


In 'grounding' the bowl reaches the carpet before the lowest point of the arm swing. Some of the energy given by your movement to the bowl is absorbed into the carpet. This results in you bowling shorter than the intended length.



In 'throwing' the bowl is released in the air above the carpet. This is caused either by the bottom of the arm downswing being above the carpet or by keeping hold of the bowl too long. So at the moment of release gravity will pull the bowl downward. Energy is absorbed into the carpet. Again this results in you bowling short. To help you with this problem look at the carpet from delivery 5 to 8. This will give your brain more visual information about the height your bowl is above the carpet.

You Need a Cycle of Delivery



You need to control every delivery. Learning a 'cycle of delivery' will help you to achieve this. Study the cycle shown.

A) RELAX. You have just bowled. Wind down. Now consider some of

these things. Think about your last bowl. Warm or dry the next bowl. Do one of the tightening/stretching exercises, or do a pretend delivery. Look at your opponent's last bowl.. Decide upon your hand/ point of aim/length/ position on the mat. Check your bowl bias. Look at the potential movement for distracting you on the adjacent rink. You must only bowl when there is little or no movement on that rink

B) SWITCH ON Breathe in and out slowly.

C) FOCUS Carefully put your body in the correct 'on your marks' position on the mat by going through the movement sequence 1 to 9.

D) BOWL Move into your delivery action 10. At this point, mechanically, you can switch off. You know your outer self 'on your marks' and 'get set' positions will 'deliver' for you. Now switch on to your inner self. Think, feel and imagine your point of aim. Concentrate on 'seeing' through the point of aim to the land beyond. 'See' your bowl going through the road tunnel. Enjoy knowing it will not touch the sides of the tunnel. Bowl saying '1-2-through'. ('Fast forward' to Step Twelve to help you understand more about your inner self.)

Strong Legs

With stronger legs your balance will improve. With stronger legs and improved balance you will 'bowl' your bowls more often. Lie down with knees bent. Place a folded cushion between your knees. Breathe in. Squeeze knees together as you breathe out to the count of 10.

Repeat x 3

Not Feeling Bothered?

At Step Two you began to learn how to cope with being tense. You will also, at some point in your bowling career, have to counter a 'not feeling bothered' problem during a match. There are several causes of this. You may be preoccupied, be feeling outclassed, be unwell. You will first have to recognise what is happening. Try to slow things down. Dig deep into your memory bank. Remember yourself at your best. Think about the matches you have won. Think about the people who care about you; the team, your club. You're not alone! Try either 'shadow boxing' or sprint run on the spot for 5 seconds. If you are really desperate ask permission to go to the toilet and have a short scream.

STEP TEN

Making and using a Rink Chart

A rink chart will assist you to bowl accurately. Use a club scorecard to make one. Imagine that you are standing on the mat at the two yards marker with the scorecard (chart) in your hand. The numbers down the middle of the chart represent the distances (yards) in from the far ditch. Most of the time you only need to use the numbers 2-9: 2 being full length.

Most indoor clubs have a bar at one end and a clock at the other end. I have written 'bar' and 'clock' on the chart. When I am bowling away from the bar end of the rink I write numbers in the column under 'bar'. So when bowling away from the clock end of the rink I write numbers in the column under 'clock'.

A) RINK		B) ACE SIZE 5		C) VECTOR SIZE 2			
bar	clock	bar	clock	bar	clock		
2		6-2	2	6-2	4-2	2	3.2
3			3	5-2	3-2	3	2-2
5			5	3-2	1-2	5	1/2-2
6		2-2	6		1/2-2	6	0-6
7			7	1-2	0-2	7	0-5
8		0-2	8		0-1	8	0-2
9			9	0-1	0-1	9	0-1

Rink charts B) and C) were made by the author for the same rink. Studying rink chart B) Taylor Ace size 5, and C) Taylor Vector size 2, will help you to understand what to write on your chart. The first number under both the 'bar' and 'clock' columns is the 'height of stance'; the second is the 'strength of grip'. Taking Taylor Ace from the bar end as an example the 6 represents the height of the body on the 'vertical ruler scale', the 2 the strength of grip, for a jack positioned 2 yards from the ditch.

Taylor Ace size 5 is 165g heavier than Taylor Vector size 2. So a higher stance is needed on the mat when bowling with the size 5.

For most jack lengths the strength of grip is the same. With shorter jacks, and with smaller bowls, you could decrease the strength of grip.

Usually less force is required to bowl towards the bar end than towards the clock end. The difference can be significant.

The temperature, pressure and relative humidity of the air can change during a match. If this happens you will need to alter the speed of the bowl. Two examples of these changes, which can be sudden, are:

1. An increase or decrease in the number of people congregating at the bar end of the rink,
2. The warm air heating system coming on.

In addition you may find that as you tire you need to stand higher on the mat.

You need to react quickly to these changes.

More Thoughts about the Delivery

a) Recall Step Five 'controlling your height of stance'. For long jacks you can try this method.

Go through the delivery 1 to 4. Now bend your knees to a count e.g. 1-2-3-4-5 as before. Then continue the delivery from 8. You may find that for long jacks, lengths 2, 3 and 4, you move your body down and for medium and short jacks you move your body up.

b) On longer, or very slow, rinks you may need to stand higher on the mat. At delivery 4 slowly slide the left hand up the leg. Count 1-2-3 etc. This both heightens the stance and controls the amount of bending at the waist.

c) Occasionally try a different delivery. Try this one at your home. Place the bowl in your right hand as usual. This time also place the left hand on the bowl. Go through the delivery to 6. Now take both arms forward and upward until the bowl is level with the head. Encourage the left hand to take the weight of the bowl. Just before you start to bowl take the left hand away. Keep the time of the delivery the same. When practicing this delivery action at the club vary the distance you take the arms forward after delivery 6. What difference does it make to the length you bowl it?

d) Most bowlers are less accurate on short jacks. If this is true for you try this method. Bear with me and use the fixed delivery action. I seek to control the height of stance by bending both at the waist and the knees. (numbers 4 and 7 on pages 5 and 6.)

Reread p.15 'Controlling your height of stance'.

Now at home go through the delivery action (p.5, up to number 5.)

Using step 2 (p15) as an example unbend your knees slowly to the count of 1-2.

Now bowl. (p.6 delivery action numbers 8, 9 and 10.)

In doing this you probably bent your knees to get the bowl down to carpet level.

Don't!

Keep the knees locked after your count of 1-2.

As you deliver lower your bowl to the carpet by bending forward at the waist.

In this method you will have more control over both 'bend your body forward' position (p.15) and unbending the knees. You will bowl with greater accuracy to short jacks.

NB. A great American golfer was gradually dropping down the ranking list. Suddenly he regained his former high ranking. A golf writer was firmly of the opinion that this was the result of him having to articulate (meaning 'to clearly express') his technique for an instructional DVD.

If you have ideas on how to improve your game, test them and record your observations. Articulate your technique!

Stretching your Hamstrings

Exercise your hamstrings. Then you can really stretch out in the delivery action. Lie on your back, knees bent. Raise one leg vertically upwards and hold for 15 seconds. Then reverse the legs. RepeatX3.

In the relax phase of the 'Cycle of Delivery' try the following stretch exercise:

With straight legs bend forwards from the waist and reach down, slowly and gradually, trying to touch the ground with your hands. Visualise your delivery action stretching out in the follow through.

All the Good Things

You need to be mentally prepared for any match worth winning.

Make a list of all the good things in your life. Yes I know it's a long list. It makes you happy just seeing how long it is. Have you included all of the following? Your job, your health, the 'significant others' in your life, your pension, getting the bowl on the jack that day, your successes, both in the distant and near past, the times when everything seemed to be going well. Not only remind yourself of them, learn them. Now when a match is going against you focus on your list.

STEP ELEVEN

Building the Rink Chart

Use a rink chart. You need two white handkerchiefs, clean and folded, one for each end of a rink. Place them at different jack positions, i.e. the distances (yards) from the far ditch. Just use one preferred rink hand. Let's have the forehand bowling away from the bar end and backhand bowling away from the clock end. Start with 2, that is 2 yards from the ditch, (full length), and progress through 3-4-5-6-7-8-9. You may find that 'height of stance' 9 is needed for 2 yards. Then try 8 for 3 yards and so on. You can also use one of the two examples given at Step Ten to get you started. Once you are sure about 2 yards you can progress. For each length record the 'height of stance' number on your rink chart. Take an average of the four bowls. Take your time. Don't be distracted. If you tire take a rest. In this way you are building up a picture of one rink at your club. Use your rink chart next time you visit the club. If you are on another rink, or at another time of day or with different air conditions what changes do you notice? Keep a record of them.

Warm Up Routine

A warm-up routine, no matter how brief, will settle you into a practice or match quicker. A sensible blend of stretching, balancing, hand warming and breathing exercises, together with high self esteem stories/mental pictures will prepare the body, activate the mind and heighten your resolve.

You rarely see bowlers warming up before a practice or match. The following has been my experience. You may think that it is relevant to you. (This is only for those bowlers with high general fitness).

1. At home. Bowl 20 bowls against a cushion, bowling from different 'heights of stance'. Record the number of times you 'ground' or 'throw', as opposed to bowling the bowl.
2. Get changed, jog, run or cycle, for 20 minutes, leisurely.
3. Back home go through a flexion, breathing and balancing exercise routine for 10 minutes.
4. Repeat 1 above. In my experience the incidence of 'throwing' and 'grounding' is greatly reduced.

I am not necessarily advocating a warm-up routine of 2 and 3 above. But like any ranked sportsperson you are advised to consider this aspect of the

game seriously. As always through this book I am suggesting that you experiment. Find out what is best for you.

Try Humming

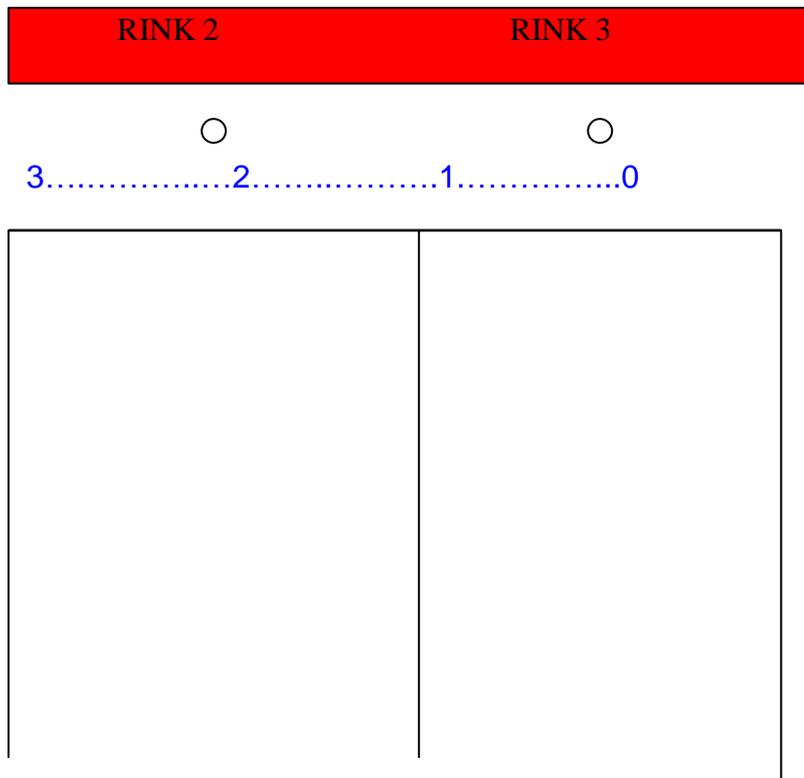
Sometimes you feel tension in a match. This tension is linked to some of your muscles not working properly. This results in a poor performance. A 'humming' technique may help you in this. Hum to yourself as you deliver the bowl. You may notice that there is a change in the pitch of the hum as you do so. This is a sign of over tightness in the body. Persevere with this technique; the humming will become more evenly pitched, your delivery will be smoother and your line bowling will improve. As you get used to the technique make the humming less audible!

STEP TWELVE

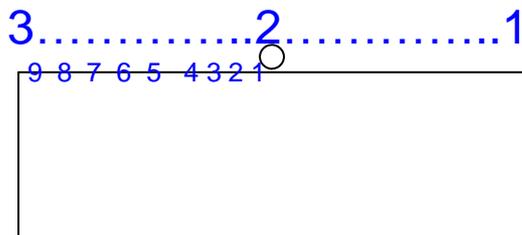
Locating your Point of Aim

You will recall the work you did on the line that the bowl takes, particularly bowling through the point of aim, at Step Three. You need to locate this point of aim, quickly and accurately.

Look at the drawing of the two rinks. Imagine that you are to bowl the backhand on rink 3. You imagine a number line, on the far bank, going from the centre of rink 3, to the left. So, for example, the centre of rink 2 is 2 on the number line. It may be this will be your point of aim. If however you need a point between 2 and 3 try this method.



'Exploded drawing' of Rink 2



Bowling
the
backhand
from here.

On the 'exploded' drawing of rink 2 the space between 2 and 3 on the number line has been divided into tenths. So halfway between 2 and 3, for example, the point is 2.5. If you find that your line is just to the left of 2 your point is 2.1. This method can quickly locate your point of aim on all rinks. In future make a note of this on your rink chart. If your point of aim is nowhere near 2.1 don't worry. The drawing is just an example to help you understand the principle.

Some bowlers don't find the line constant for all lengths. For me both the longer lengths 1 and 2, and the shorter lengths 8, 9 and 10, often take a wider line. So recording this on the rink chart is a reminder to me.

A Strong Tummy will Help

Your abdominal, (tummy), muscles are the fulcrum around which your delivery action works. Even a small increase in their strength will make you more stable during the delivery action.

Lie on your back, legs bent. Fold your arms in front of you. Curl your upper body forwards x5. Repeat x2.

Getting in Touch with your Inner Self

You began to read about your outer and inner self at Step One. Delivery 1-9 represents the thinking, analytical, outer self part of you. This outer self will help your progress through the delivery 1 to 9. It is like the sprint start in athletics. Your outer self will guide you through the 'on your marks' and the 'get set' phases of the delivery action. Your outer self has now finished its purpose.

Delivery 10 is all to do with your inner self, the feeling, imagining part of you. The inner self uses 'awareness words' to help do its work. You have already used awareness words such as 2 - towards 3- through the point of aim.

Try to develop your Inner Self.

- a) Feel the delivery action rather than 'seeing' the end result
- b) Feel and predict where the bowl will stop after your delivery.
- c) Feel the part of your body that caused any error. If you can you will be better placed to correct it.

Try to become interested in everything related to your delivery, e.g. the shape of the bowl in the hand, the feeling that the fingers generate as the bowl leaves the hand, the shape of the arc as the bowl travels across the carpet. If you are really interested it will help you to concentrate.

STEP THIRTEEN

Test Time

Reread 'Test Time' at Step Seven. Vary the test from time to time. Try a jack at full length and take the mat up one yard at a time. Learn about your strengths as well as your weaknesses. Are you weak on short jacks? Why do you think you are weak? Is it to do with your strength of grip, not believing you have to take a different line or losing balance as you transfer your weight forward or something else?

There is a reason for your weakness. Address the problem, locate the problem and resolve to put it right. Most indoor bowls clubs can afford to buy a video camera. Renting it out to members will give enjoyment, improve performance and raise income.

The Mat is Going Up

Keep the jack at full length. Bowl end after end taking the mat up one yard each time. By taking the mat up one yard the length is now 3 on your rink chart. Taking the mat up three yards the length is now 5. As you continue to take the mat up the line narrows. You can record this line information on your rink chart.

Strengthened and Stretched

(Continued from Steps Four and Twelve.) You will improve if you continue to strengthen your abdominal muscles and learn to 'stretch' your spine and limbs.

Lie on your back with bent legs. Breathe in slowly. As you breathe out slowly extend your left leg along the floor, at the same time raise the right arm above and behind you to touch the floor. Breathe in as you return arm and leg to the starting position. Repeat with the right leg and the left arm. Repeat x10 x 2.

Help with your Positive Thoughts

Step Ten emphasised the need to come to a match with positive thoughts. There will be times when you need to remind yourself of these thoughts. Choose one such thought, one that really matters to you, and forcefully remind yourself of it when it's needed. Here are a few examples of positive thoughts:

- a) 'I've trained hard for this and I'm not going to let that go to waste.'
- b) 'I will play my next bowl as if it's my last, slowly, carefully, my best ever'.
- c) 'I've played an inspirational bowl before and now is the time to repeat it. That will make my opponent think.'

STEP FOURTEEN

Timing your Delivery Action

It is important to keep the time of the delivery action the same. To help you in this I suggested saying to yourself '1-to-through', or '1-2-3', as you delivered the bowl. You could also experiment with a '1-2' rhythm, i.e. one which is faster.

At Step Eleven I also introduced an alternative 'humming' technique. Now choose one of these techniques -the one you prefer.

Get a friend with a good stopwatch to time your delivery. You are going to bowl four bowls from each of the 'height of stance' delivery positions 6-5-4-3-2-1. In total you will bowl 24 bowls. Time and record each delivery. Make it clear that the stopwatch starts when the bowl starts to move backwards, at delivery 10, and finishes when the bowl leaves the hand. This practice is important. Take it seriously. Bowl through the point of aim. Take the average time for each height of stance position. You are working towards the average time, for each height of stance position, being the same. This practice will help make you more confident of your delivery routine.

The Delivery Action with a Weight

The weight of my bowl is 1.5kg. Using a 4kg dumbbell I 'bowl' towards a mirror. I go through each of the 'vertical scale' positions. The heaviness of the weight encourages my body to exaggerate the downswing and follow through phases of the delivery action. You can start with a 2kg weight. Don't let go of it!

Watch the Best

We can all learn from observing the best players. Record them from televised matches. Choose one player whose delivery action you particularly like. Study it at normal speed and, if possible, in slow motion. Write down the features of the action you like. Focus on those aspects you believe to be mechanically sound. Try to give a reason why the bowler is successful. When you identify a 'good' movement imagine that you are doing it as you watch. Also observe how the bowler behaves in a match? How does the bowler hide disappointments?

You may find one particular bowler an inspiration to you. Watch a video or DVD of that bowler before you have a big match.

----The Delivery Action- Revisited----

(The alterations are in italics.)

1. Decide on the location of your point of aim.
2. Check the bowl bias and place it in your hand.
3. Face your point of aim and position your right foot on the mat, legs straight. Place your left foot at least one foot length forward of your right foot.
4. Bend your body forward at the waist until the straight left arm reaches and rests on the left knee.
5. Keeping the right arm vertically straight bend your knees until the bowl is touching the carpet. *As you bend bring the right knee closer to the left knee. Decide on your strength of grip. Now keep looking at the carpet until 8.*
6. Balance your body on your heels. *Move your head to the right so that you are looking down the length of the right arm to the bowl.*
7. *Count up on your vertical scale.*
8. *Breathe in, and then out, both to the count 1-2-3.* Extend your right arm forward 1 foot and now look at your point of aim.
9. *Take your point of balance forward from the heels to the 'soles' position.*
10. *Swing the arm back to the count of '1-2'. Now as the right arm swings forward to the count of 'through' move the right knee even closer to the left knee. Bowl 'through' the point of aim.*

Stepping back to the beginning

At the beginning of the journey I raised the prospect of you bowling accurately and consistently. With regard to length this was to be done by controlling the speed of the bowl at delivery. First by keeping the time constant and second by controlling the distance travelled during the delivery. These five distance variables had to be controlled:-

- a) The height of the bowl above the ground at the start of the delivery swing.
- b) The length of the swing of the arm.
- c) The length of the step forward of the left foot.
- d) The amount of 'body weight forward' transference that is made in the delivery.
- e) The strength of the grip on the bowl.

Step One suggested a way of controlling d). Step Eight dealt with e). Number 3 of the delivery action dealt with c) Number 8 of the delivery action dealt with b). So that just left us with a). This variable, which can be consciously controlled, is allowed to vary and is the main means used to bowl accurate length.

From time to time I have suggested that you experiment. If you do it will add to your enjoyment of practice. Here are two experiments to get you started.

- a) Vary the position of the left foot in relation to the right foot e.g. 2, 4 or 6 ins. in front of the right. What difference does it make?
- b) In the 'get set' position keep the height of stance constant. Take the bowl in both hands and, keeping the arms straight, take the bowl forward of the body and upward. Vary the amount of upward movement and see what effect it has on bowl length.

The mechanical thinking then, which underpins this book, if applied, will have led you to bowl line and length more accurately. But without a serious consideration of the physiological and psychological elements, which contribute to a higher level of consistency, you will always under perform. That's why I end the ebook by writing

Final Step.

Particularly for young, middle aged and active elderly bowlers, and for those who have both a high natural ability and a desire to play at the top level, attention to physiology and psychology is a must. The Steps of "It's just a draw!" give bowlers a sound mechanical understanding of the draw shot. The physiology and psychology knowledge in the book is only basic and is only intended as a taster for you. If you are content with being an average or even a good club player, and have only a vague hope of representing your county, your country or appearing on TV, taking the attitude 'if it happens it happens', then there's nothing wrong with that. Just carry on enjoying playing at that level. On the other hand, if you long to play at a higher standard, consider this story.

Several years ago a young man appeared in English county cricket. He was tall, long limbed, had good basic running speed and bowled fast, very fast. He possessed several of the natural talents needed to be a successful fast bowler. He won selection for England. His high bowling action made his good length deliveries rear up at the batsmen. Even the best batsmen in the world were soon hopping out of the way. Yes he took wickets but he continued to be described as a 'loose-limbed tear away' i.e. he was erratic. Then a transformation took place in his performance which ranked him as one of the best fast bowlers in the world. So what were the reasons for that transformation? Firstly he learned and applied the fitness training methods he observed at his local Premiership soccer club. Secondly he sought out and worked with a coach. He is now a more consistent bowler. Does that ring any bells for you? How often have you said 'I'm fairly accurate but I'm inconsistent'. The answer lies in being committed to a fitness programme which emphasises strength, flexion and balance, learning techniques from sports psychology and seeking the help of an experienced coach. That's what the cricket bowler in the story did. It changed him from being a 'loose-limbed tear away' to, as one journalist described him, a 'skilled assassin with a nice line in terror'.

Don't sit there telling me 'there can only be one world bowls champion.'
Why shouldn't it be you?

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