Coach & Athlete resource: Pre-Performance Routines (PPR) for Olympic weightlifters

Created by Podium Psychology in association with Weightlifting Ireland
The aims of this resource are to:

1. Help you understand what a pre-performance routine (PPR) is.
2. How PPR benefits the athlete in preparation for competition.
3. The possible components of a pre-performance routine.
4. Examples of weightlifters pre-performance routine.
5. How to coach/teach a pre-performance routine.
6. When and how to change a pre-performance routine.
7. What a pre-performance routine is not.

What is a Pre-Performance Routine?

A pre-performance routine (PPR) is defined as the immediate preparation stage before the execution of a skill in a self-paced environment.

The term PPR should not be confused with a ritual or superstition before competition such as putting on certain socks or rubbing a lucky charm.

In the weightlifting context, it is an athlete’s purposeful preparation between their name being called, to the point of executing the lift.

Prior to a lift we see many different approaches being used by athletes in order to prepare themselves to perform. Generally a lifter will follow a certain pattern of behaviour which may involve specific movements, noises, words, thoughts and/or emotions. If you observe athletes preparing for a lift on a regular basis you may notice experienced lifters perform the same or similar actions for preparation. Additionally you may also notice that the beginner athletes may have an inconsistent approach and are less consistent in their routines. This could subsequently affect their performance and ability to lift in a competitive environment.

How does PPR benefit the athlete’s performance?

Due to a range of environmental factors, many of which can be distracting, an athlete’s performance at an event can differ anywhere from slightly to significantly. A PPR prepares the athlete by creating a familiar routine; it acts as a cognitive load (preparative thoughts,
feelings or movements) which prevents other unplanned thoughts from distracting the athlete whilst also focusing the athlete on the task at hand.

Essentially it is the pink elephant in the room. If you tell an athlete to not think of the pink elephant before they lift, their mind will be absorbed by images of the pink elephant. If you tell an athlete not to think of anything on the platform, they will be distracted by everything.

Interestingly the more experienced the lifter, the more they will benefit from a PPR. Research shows that the brain of an expert works differently to the brain of a novice. An example of this is the distractibility of novices compared to elite athletes. Elite athletes require less “brainpower” (cognitive processing resources) to perform their skill because it has become automatic. A beginner will require more “brainpower” because they are still learning and have to concentrate on each aspect and individual movement of performance.

As a real world example; consider the driver of a car. If a newly qualified driver is tasked with talking to a passenger, reading a map and listening to the radio, it will be nearly impossible to cope with these distractions. They will have to use so much brainpower to coordinate the brakes indicators watch for traffic etc.; this load could be catastrophic. However, for an experienced driver, they will probably be able to cope and deal with these distractions, as the process of driving has become automatic, second nature.

The following representative diagrams help us understand this concept. The yellow circle represents the brains resources, or available brainpower. The inner circle “Lift” is the amount of brainpower for the athlete to coordinate a lift. The yellow free space is then able to process other thoughts which may distract the lifter, the PPR is partially responsible for filling this space and it is common that with more experienced lifters with better technique that the need for mental preparation is greater.

![Expert Brain Diagram](image1)

![Intermediates Brain Diagram](image2)

![Beginner Brain Diagram](image3)
If we then look at the athlete who has a PPR we can then see that they use it to help focus by building a routine around the lift would be represented by the diagram below showing a minimised potential for distraction.

The simple answer is PPR benefits athletes in two ways: minimising distractions; and preparing the athlete to perform optimally. Research has shown that the areas of the brain activated when we image an action in our minds eye (visualise) are the same as those activated when we perform the skill. Visualisation prepares the action for execution increasing confidence and concentration in the athlete and research shows that visualisation has a significant effect on both quality and consistency of performance.

What are the Components of a Pre Performance Routine?

Research on PPR has established that there are certain, generally used, components of a routine that can serve to optimally prepare an athlete for execution of the lift/skill.

These components serve the function of:

- Physically preparing the mechanics of the movement (Positioning/ Readying).
- Directing visual focus on task relevant cues or to a visual point to reduce distraction.
- Projecting an image in your head related to the skill or lift (Imagery/Visualisation).
- Focusing concentration.
- Emotional control (raising or lowering arousal levels commonly referred to as “psyching up” or “calming down”).
- Using key words, cues or meaningful statements to moderate an aspect of performance aka self-talk.
- Physically relaxing the body or specific areas of the body (Relaxation).
• Raising confidence.
• Creating physical tactile awareness.
• Creating a quiet mind to execute the skill.

An athlete may use some of these techniques but does not have to use any or all of them, nor do they have to be in a specific order.

It is critical to realise that each athlete is different in how they get ready to lift. The PPR is adapted to fit the athlete. It is not the athlete that has to adapt to the PPR.

Examples of weightlifters Pre Performance routine

For the purpose of this resource we have interviewed some lifters who have shared their own PPR, you may find it interesting and helpful in developing or adjusting your own.

The following discussions on PPR have been taken from both a female and a male weightlifter.

(The excerpts below are the summary of a two person discussion, edited for purpose of understanding for the reader.)

Lifter One

“I swagger about, I chalk up and the next thing I know the lift is done. When I think too much, I am trying to check all the boxes, that’s when I will miss a lift. When I don’t think about it I can make some really, really, freaky lifts that I otherwise wouldn’t be confident about. I do visualise the lift, and when I do, once that’s done I just do it. My mind just goes blank. I find in the warm up I like to go a bit crazy and get psyched up. But when it comes up to the platform it is all about calming myself. I couldn’t care if there are bears on the platform I’m just so calm, I’m fine about it. I take a caffeine tablet just before the snatch and another one before the clean and jerk. For the clean and jerk I kind of need to be a bit more wound up than for the snatch. I find that helps. When I go out to the platform it’s all about calming myself down. It’s about telling myself I’m not going to die and that feeling in my
stomach is supposed to be there. Trying to be as confident as possible so swagger, I smile, oh that’s another big one, I have to smile. I have to smile like a lunatic, just to kind of get that confident happy feeling. I don’t care, it’s going to happen, I own this bar, I got this. It’s good to remind yourself: I’m here ’cause I enjoy it. It’s not always automatic you have to kind of remind yourself. Even if I miss a lift I have to say I don’t care I will get the next one. I’m not a very ‘I don’t care kind of person’, things do upset me normally if they go wrong but when it comes to lifting I can’t let that happen.

Going back to the visualisation I project it out there when I’m going up to the platform, then I see myself stepping into the image and performing like that. Actually my coach first told me to do that. It’s handy for giving my mind something to do. So then my brain knows “we are going to do this and then this and then” and then my brain is going to switch off.”

Lifter Ones PPR in stages would be;

1. Warm up “crazy/ psyched up”, (aggressive confident).
2. Begin to calm down or regulate arousal using self-talk in call area.
3. Enter stage smiling and swaggering with confidence.
4. Chalk up .
5. Visualise lift .
7. Evaluate positively even if missed “next lift”.

Lifter Two

“I’m usually fairly pumped in the call area, the nerves are flying. I normally sit with my eyes closed visualising and focusing on one technical point of the lift, or even just telling myself “make it feel good”. I chalk my hands up in a specific way each time, it makes me feel comfortable. Before I step on the platform, I will loosen the arms and this makes me relax more. (The lifter then goes on to describe a detail checklist of movements which he carries out in sequence before lifting). There is very little going through my head at the point of lift. I don’t want anything going through my head at the point of lift. All the checklist does is to clear my head of absolutely everything. If I am thinking about it I’m not going to do it right.
If I’m comfortable and fluid I’m going back to the thing I have practised time and time again. I’m going back to the thing that has worked for me and I’m just so much better. It’s just about getting yourself as comfortable as possible for that environment, which is basically a stage. Every action I take makes me feel comfortable to the point that the bar feels like a part of me. I do visualisation of the lifts when I am waiting to be called. It’s almost like watching yourself in the 3rd person. I see the curved path the bar takes and feel the speed, if the bar is moving like that I know that feeling, I can see the plates on the bar I know the weights of each lift I’m going to take. It's funny I can’t actually remember when I do a competition lift. It’s just being so focused on the movement. But if I have missed it I know why I have missed it …... It’s that point when you catch the lift in the rack or overhead that you become aware of where you are again. I think that it’s far too quick to consciously think yourself through a lift; you have to go by feel. If I do a really really good lift and it feels just right I will go for that feeling again.”

Lifer Twos PPR in stages would be;

1. Eyes closed visualising one point of the lift in the call area
2. Enter platform when called, Going through a very specific checklist to make lifter feel comfortable including, chalk hands , kick shoes , feel grip, feel positions.
3. Execute lift with empty mind.
4. If lift was good retain that feeling and try to achieve it again.

Some key features of the two routines which resonate with scientific understanding are;

- The use of a routine to empty the mind from distractions.
- Acting confident to increase confidence.
- Smiling to increase feeling of happiness and enjoyment facilitating performance.
- Diverting task focus from failed attempts to the next lift.
- Viewing the feeling of nerves in the stomach as a positive rather than a negative.
- Using the visualisation to focus on the lift to be performed.
- Focusing on achieving the feeling of a good lift.
How to coach/ teach a Pre Performance Routine

There is little in the way of scientific research as to how PPR develops in athletes. Anecdotal evidence would appear to show that PPR has been either taught, learned or self-developed. A coach or sport psychologist may have given an athlete cues to go through before a lift, or an athlete may have developed their own routine through their own experience and discovering what “fits” for them.

As we have laid out the components of what is involved and examples of what some current lifters do you may realise you have similar aspects already within your lift preparation.

The first thing to do is assess what you currently do, write it down and think it through.

- Do you have a regular routine you perform before lifting, both in practice and at competition?
- What stages do you have?
- What do find useful?
- Are you missing any stages or components? Would you find it useful to add them in?

If you don’t have a regular routine, or if it is not working anymore, it may be worthwhile experimenting with it. Slowly, over a period of 5 training sessions, change one aspect every 5th session and see how it works. Changing too much too soon is more likely to cause performance deterioration. Change in PPR may be more rapid with the help of a sport psych, due to incorporating their understanding.

When and how to change a Pre Performance Routine.

A pre performance routine can become redundant when the routine becomes so familiar that it no longer takes up the brains cognitive resources. As we know our brain, just like our bodies, becomes better at doing the things we repeatedly do, this is known as neuroplasticity.
Anecdotal evidence suggests that elite athletes may change or alter their routine every 12-18 months. If you feel that your current routine is not working it is advisable to change it in an off season or in a weightlifters case as far away from the next major competition. Initially, spend time embedding it intensively (the same way you practice a skill). It is most certainly not ideal to make changes to it in the weeks prior to a competition.

This diagram represents an athlete becoming automatic with PPR which frees up brain resources for processing distractions.

What a Pre Performance Routine is not

A pre performance routine is not a ritual, superstition or mannerism. The components of a PPR form functional aspects to moderate the athlete’s state and enhance performance.

Stepping onto the platform with your right foot instead of your left, wearing the same unwashed socks for each competition, clapping your hands three times or spitting on your shoes and spinning round 3 times are rituals or superstitions.

A PPR will effectively prime you physically and mentally for the task at hand. Your lift will not be affected by the colour of your socks.

There is a thin line between having a routine and forming a ritual, which both athletes and coaches have to be aware of.
If the action doesn’t have a function then it’s not needed, however if you find that spitting on your shoes and spinning round optimally sets you up for PB lifts then send us a video on YouTube.

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We are always interested in feedback or questions about PPR or Sport Psychology in relation to coaching and performance enhancement, get in touch with either of us.

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