

Performing a Physical Demands Analysis

A Physical Demands Analysis (PDA) is a systematic procedure to quantify and evaluate the physical, cognitive, and environmental demands of the essential and non-essential tasks of a job.

PDA's can have a variety of uses in the workplace. They can be used *reactively* for rehabilitation and return to work purposes, and *proactively* to prevent injury.

For example, PDA's can be used to:

- Communicate the requirements of a job to the WSIB and health care providers
- Provide data for use in job matching and accommodation of injured workers
- Clarify benefit entitlement
- Identify suitable alternate work or modified work
- Assist in identification of jobs, work processes, and equipment that require further ergonomic analysis and intervention
- Assist in identification and prioritization of safety concerns
- Help discover ways to modify jobs and tasks
- Provide information for hiring and training purposes

Firms may choose to complete PDA's for all jobs, or they may choose to complete them as required (for example, after an injury has occurred). The format or PDA form used is up to the firm. It should be clear and concise and ideally include photographs to provide a visual image for the user.

Firms may complete the PDA using the expertise and knowledge of their own staff including workers, supervisors, and others. Alternatively, they may choose to seek the assistance of external parties. IAPA can provide the necessary training to assist firms to complete their own PDA's. IAPA Consultants are also available to complete PDA's for your company.

If compiling the necessary physical demands information after an injury has occurred, a firm may choose to use the WSIB form - [Physical Demands Information Form \(PDIF\)](#). The PDIF requires information on the physical requirements of the job related specifically to the injured body part.

No matter which method or form used, PDA's play an important role in returning injured workers back to work.

Instructions on How to Use the Physical Demands Analysis (PDA) Form

Getting Started

*The PDA Form has been designed to allow you as much customization as possible in a generic form. To download and save the PDA Form, right click on the link to the form and select "Save Target As". Save the form to your computer in a location you will remember. You can then use the form any time to prepare a PDA for a job. **It is strongly recommended that you test to see if you can "Save" a form with text entered into some of the fields before proceeding to complete a PDA. If you cannot save the file, please see "To Print / Save" at the end of this document.***

As this is a "fillable" PDF form, you are able to type your job-specific information into the boxes. The size of the box is limited, so if you have a lot of text, you may need to determine how you can describe the required elements as briefly and concisely as possible.

In order to clearly identify where you can type, find the "highlight fields" feature in your PDF viewer (e.g. Adobe Acrobat Reader) to make the fields more visible. Now you are ready to begin completing the form.

Page 1: Job Overview

The first thing you should do is customize this form to your company. To do this, insert your company logo into the box in the top right corner. This can be done by clicking on the outside edge of the box. You will then be prompted to locate and select the file you would like to choose to insert. If you choose not to insert an electronic logo, then simply highlight and type over the existing text with your company name and address.

Enter the Job Title / Position for the PDA you are performing. Under the Job Data heading, enter the corresponding data, including the department, the work hours (e.g. 7:00am – 3:00pm, 3:00pm – 11:00pm, and if applicable, you may wish to indicate if there are rotating shifts, etc.), the breaks provided (e.g. 2x10 min, 1x30 min), any personal protective equipment required to be worn, and any special training requirements.

In the Job Photo box, choose one photograph that will represent / show / illustrate the entire job. Choose whichever photo is most indicative of the job. Note: there is space at the end of the document to insert an additional 7 photos to provide the reader with a better visual representation and understanding of the job. To insert a photo, click anywhere inside the box. Follow the prompts to locate and select the required photo.

There are 3 lines under Purpose and Nature of the Job to enter text that will provide the reader (doctor, rehabilitation specialist, etc) with a brief overview of what the job entails.

The “Essential Tasks of the Job” and “Non-Essential Tasks of the Job” need to be recorded, along with the approximate percentage of time dedicated to each task. This is the most important section of the form and it needs to be accurately and concisely written. This is what the WSIB, rehabilitation specialists and/or doctors will use to determine if an individual is able to return to work, and this is what the rest of the PDA form is based on. The first task is numbered for you in the “Essential Tasks of the Job”, but there is enough room for you to include up to ten “Essential Tasks” and three “Non-Essential Tasks”. (Make sure the “highlight fields” box is checked to clearly show where to type the Essential and Non-essential task numbers.) There is one line allotted per task, however if you really must use more than one line, you can click on the box below and continue typing. Do not add an essential task number in the margin. There will still only be 10 lines allotted for typing.

You must continue the numbering through all of the “Essential Tasks” and continue the same numbering through any “Non-Essential Tasks”. The numbers here will be used in later steps to correspond with the tasks outlined here.

Below the essential and non-essential tasks are 3 additional headings to include pertinent job information such as the size and weight of the product handled, workstation dimensions or parameters, hand tools and/or any equipment used.

Page 2: Physical Demands

The physical demands listed include the most common, critical mobility and posture demands that may be required for most jobs. Two blank rows have been included below each subsection to include additional physical demands not captured (e.g. ulnar or radial deviation, or arm abduction or adduction).

Under the “Task #” column, type the corresponding Task # from the Essential/Non-Essential Tasks listed on page 1. Under “Frequency”, select the appropriate checkbox using the legend found at the bottom of the page. You also have the ability to include additional notes under “Describe Activity”. In this section, you should note additional factors for consideration such as distances, durations, and surfaces (e.g. walk 10 – 30 ft. on concrete floor, intermittently throughout the shift) that will provide the reader with a clearer understanding of the job.

Note: The “Posture – Reaching” and “Posture – Elbow/Forearm/Wrist” subsections also have drop down menu boxes (“Select” boxes) for you to use to indicate the arm used (i.e. Left, Right, Both, Either, None and blank) to perform the task. The blank option may be best chosen for any blank physical demand row(s).

Pages 3 and 4: Strength Demands of the Job and Hand Activity

At the top of page 3, you will find a drop down menu (“Please select” box) for you to use to indicate the overall strength demand of the job. This is best selected at the end of the analysis to ensure the overall strength requirement of the job is captured correctly.

There are also drop down menus located in each row for lifting, carrying and pushing/pulling, as well as for most hand activities. For each applicable hand activity select which arm(s) or hand(s) are used to perform the task.

Type the corresponding Task # in the associated box for all tasks noted in these sections. Maximum and average Forces/Weights can be entered into the corresponding box for each task listed. Be sure to include the units of measure. Use the legend located at the bottom of the page to select the letter to type under "Frequency and Duration". This is the same legend used on the page 2. There is additional space provided to include any pertinent information regarding the frequency and/or duration (e.g. lift 2 boxes/min for 1 hour of shift).

When entering information for lifting, it is important to indicate the height at the start of the lift (e.g. floor level) as well as the height at the finish of the lift (e.g. at shoulder level). You may wish to provide an exact measurement (e.g. 25 cm), since body landmarks may vary depending on the height of the individual. Landmarks do; however, provide a quick visual reference for the reader.

When entering information for carrying or pushing/pulling, you should indicate additional information such as the handle height, the distance the object is pushed/pulled/carried, if the person is required to push a cart up a ramp, etc.

For each row / physical demand, it is important to include information under the Describe Activity/Posture heading to provide the reader with a clearer understanding of the job and what activity the worker is performing (e.g. carrying a cylinder or a pail)

Page 5: Additional Conditions and Demands

In this section, click on the corresponding checkboxes to indicate the Environmental Conditions, Psychological/Mental Demands, and Sensory Demands of the job. Additional comments can also be noted in the comment boxes provided.

Document evaluation and approval procedures vary between companies. For this reason, four options have been provided for your use when indicating who has been involved in performing each PDA. You do not need to use all four boxes if it is not necessary for the procedures of your company. In the "Type Name" box, type the name of the individual who completed, evaluated, approved, or validated the PDA. The "Insert Signature" line gives you the option to insert a digital signature, or to sign the form manually after it has been printed. Beside each signature row, the date should be entered.

Page 6: Addendum

The addendum has been provided for you to include up to 7 photos (in addition to the one included on page 1) of the job being performed. It is not necessary to include additional photos for all jobs – but a visual representation of the job being performed adds value to the analysis,

and can be useful for a reader who is unfamiliar with the job. Below each photo box is a text box. Click in the area below each photo to indicate a caption of what the photo depicts.

To Print / Save

Once satisfied that the PDA has been completed, return to page 1 and click on the “Print Form” button in the top left corner of the page. You can print one or more hard copies of the PDA on your printer, or save an electronic version.

If you are using a professional edition of a PDF viewer,

Select “Save As” and give each PDF a meaningful name. With the addition of many photographs, the file size will likely be quite large. To decrease the file size, you can create a PDF of the fillable form. To do this, select File > Print > and choose Adobe PDF instead of your regular printer.

Warning: You will no longer be able to edit this file. Therefore when prompted, ensure to give it another name so as not to save over the fillable version.

If you are using a free version of a PDF viewer,

You may not be able to save the completed form as an electronic copy without first installing PDF creation/converter software. There are many free versions of PDF creation/converter software available on the internet to allow you to do this.

If you remain unsure of how to save an electronic version of a completed PDF, please contact IAPA at 1-800-604-4272 or 905-614-4274 and ask to be directed to the Research Inquiries Line.

Physical Demands Definitions and Tips

Mobility

Walking – to move about on foot (greater than 2 steps).

Standing – to remain on one's feet in an upright position without moving greater than 2 steps.

Sitting – to remain in a seated position.

Crawl – to move about on ones hands and knees.

Driving – to operate a motorized vehicle, non-motorized vehicle (such as bicycle), forklift, backhoe or other piece of equipment.

Posture – Back

Bending Forward – to bend forward and downward by bending the spine at the waist.

Bending Backwards – to extend the back, backwards (arching the back).

Twisting – twisting the upper body (trunk) or bending the upper body to the side (lateral bending)

Posture – Reaching

Above shoulder level – moving hand(s) **and** arm(s) in any direction so that the hand(s) is/are above the shoulders (while handling objects less than 5 lbs.).

Chest to shoulder level – moving the hand(s) **and** arm(s) in any direction so that the hand(s) is/are between chest and shoulder level (while handling objects less than 5 lbs.). If the upper arm(s) is/are hanging vertically at ones sides, this is not considered reaching.

Below chest level – moving the hand(s) **and** arm(s) in any direction so that the hand(s) is/are below chest level (while handling objects less than 5 lbs.). If the upper arm(s) are hanging vertically at ones sides, this is not considered reaching.

Behind the body – moving the hand(s) **and** arm(s) anywhere behind the body

Posture – Elbow/Forearm/Wrist

Elbow Flexion/Extension – to bend and/or straighten the arm, moving about the elbow joint.

Wrist Flexion/Extension - to bend and/or straighten the hand, moving about the wrist joint.

Wrist rotation – to twist / turn the wrist (as if to open a door handle).

Posture - Neck

Forward Bending / Flexion – to curve or flex the neck forward / downward towards the chest.

Backward Bending / Ext. – to curve or extend the neck backwards as if to look up (i.e. towards the ceiling).

Twisting / Turning / Tilting – to look / turn the neck sideways towards the shoulder, or to tilt the head so that the ear moves closer towards the shoulder.

Posture – Hip/Knee/Ankle/Foot

Crouching/Squatting – bending the body forward and downward by bending the knees and spine/hips

Kneeling – bending one or both knees, to come to rest on the knees.

Climbing (stairs/other) – ascending or descending stairs, ladders, scaffolding, poles, equipment or other apparatus using the feet and legs, and/or hands and arms.

Jumping – to spring up from the ground or down to a lower level using the foot and leg muscles.

Foot Pedal/Action – to use one or both feet to activate a foot pedal, or some other foot action / movement required

Lifting – raising or lowering an object from one level to another (including holding an object in a static position)

Carrying – transporting an object from one location to another by moving ones feet 2 or more steps, usually holding the object in the hands, arms or on the shoulder.

Pushing/Pulling – exerting a force upon an object so that the object moves toward or away from the force (includes exerting force to hold an object in a static position and jerking an object).

Gripping / Grasping – seizing, holding, turning or otherwise working with the hands.

Pushing (palm press / finger) – using the open palm or fingers to apply force to an object. Some examples may include using the palm as a hammer, using one or more fingers to insert small parts into small openings.

Pinching – pressing the thumb and one or more fingers together to hold an object, examples of such activities may include turning butterfly bolts, pulling fabric, turning a key.

Fine Finger Movement – using the fingers to manipulate / handle an object(s), examples of such activities may include typing, sorting papers, activating buttons, sorting / separating small parts.

Writing – to inscribe or trace words, letters, numbers, symbols, etc., using a pen, pencil or other writing instrument.