



InSyBio

Intelligent Systems Biology

User Manual

[www.insybio.com](http://www.insybio.com)

# InSyBio Precision Chronic Pain Relief @Salonpas Tool: a first-of-its-kind tool for personalizing treatment of chronic pain patients

August 2021

Insybio Pain Tool v1.1

# InSyBio Precision Chronic Pain Relief @Salonpas Tool

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## Introduction

InSyBio Precision Chronic Pain Relief @Salonpas Tool is a first-of-its-kind tool that is able to stratify chronic pain patients into individuals who will benefit from the Salonpas® Pain Relieving Patch using as input a combination of demographics, clinical characteristics and other responses to a simple questionnaire.

The first version of this tool is available for a free trial usage by clinicians treating Chronic pain patients (get it from here: <https://relief.insybio.com/>) offering them the following features:


- Evaluation of chronic pain situation of patients through the completion of a user-friendly web form
- Monitoring the progress of chronic pain patients over the time (trends, graphical representation of their clinical and demographics characteristics etc.)
- Suggesting suitable patients for the Salonpas® Pain Relieving Patch
- Calculating pain scales like severity, interference and total drugs

Approximately 10% of chronic pain patients being administered with traditional topical analgesic therapies are non-responders and do not get pain relief from them. 7 out of 10 are estimated to be able to reduce their pain scores in 14 days after being treated with Salonpas® Pain Relieving Patch. Moreover, 6 out 10 patients using traditional topical analgesics and improving their pain condition will enjoy a further improvement and decrease of the total number of drugs administered to them when using the Salonpas® Pain Relieving Patch.

The available functionalities of the tool include an overview of My Patients with their Tests, New Patient addition, New Test addition and viewing Test results.

## Logging in

In the login page at [relief.insybio.com](https://relief.insybio.com), you enter your email and your password and press the “Log In” button.

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E-mail

Password

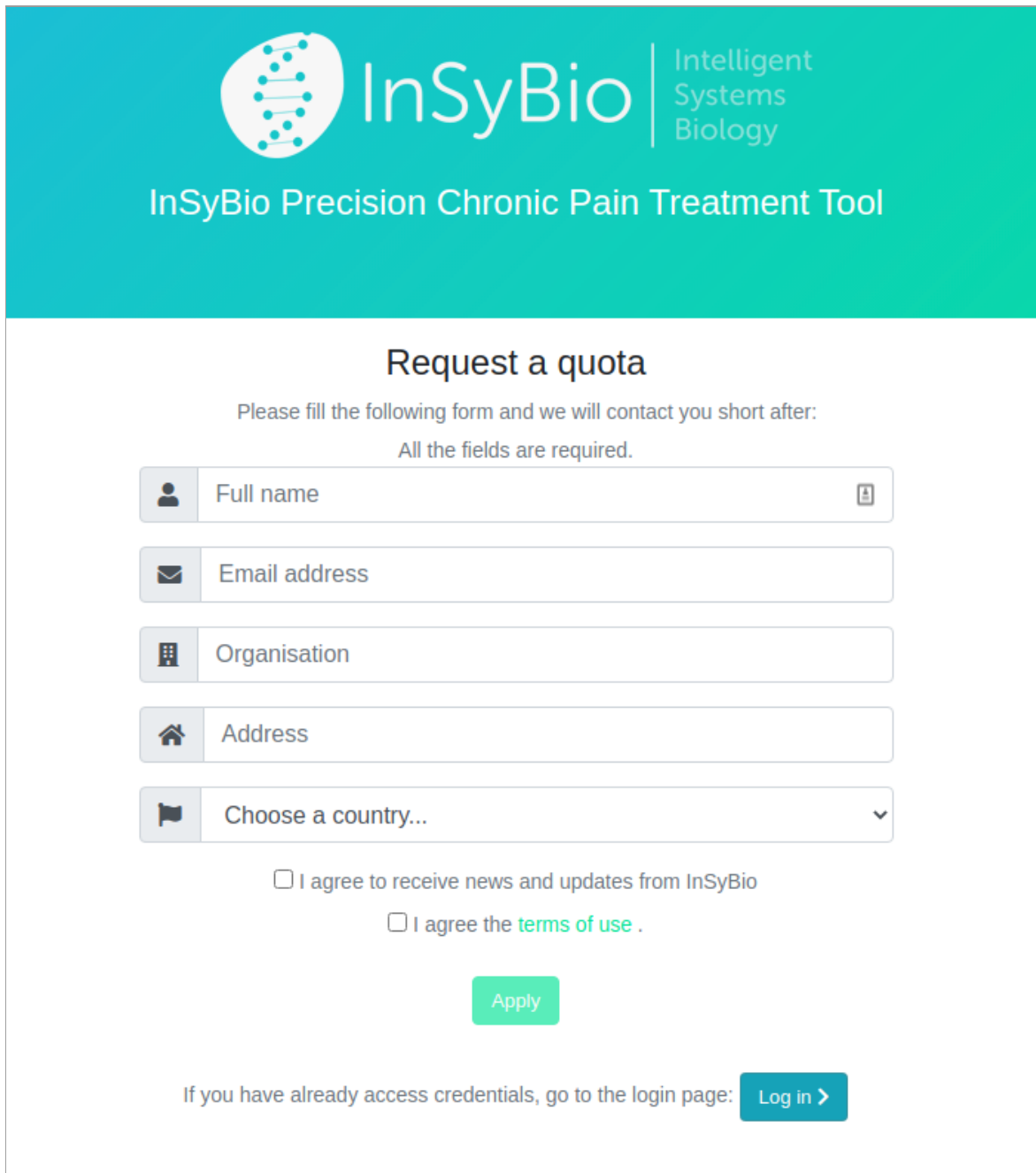
Log In

[Forgot your password?](#)

Don't have an account? [Sign up >](#)

InSyBio Chronic Pain Precision Relief @Salonpas Tool

If you don't have an account yet, you should click the respective button "Contact us!". This redirects you to a page where a registration form should be filled out.



The screenshot shows a registration form for the InSyBio Precision Chronic Pain Treatment Tool. The form is titled "Request a quota" and includes a sub-header: "Please fill the following form and we will contact you short after: All the fields are required." The form contains five input fields: "Full name", "Email address", "Organisation", "Address", and "Choose a country...". Below the fields are two checkboxes: "I agree to receive news and updates from InSyBio" and "I agree the terms of use". A green "Apply" button is located below the checkboxes. At the bottom, there is a link to the login page: "If you have already access credentials, go to the login page: Log in >".

In case you have forgotten your password, you can click the respective link. In the page you will be redirected to, you have to enter your email. After that a link where you can update the password will be sent to you.

## Forgot Password

Please fill your email address and we will contact you short after:

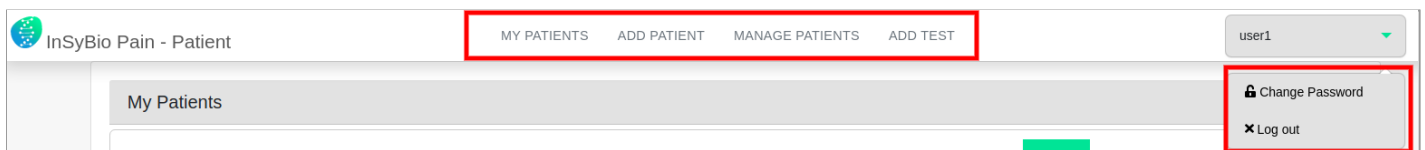
✉ Email address

Apply

Log in >

## Home Page

After logging in, you are redirected to the home page - the patient index view. The patient index view consists of three parts - My Patients, Create new Patient and Manage Patients part. In these parts you are able to view your patients with their submitted tests (baselines and follow ups), add a new patient and manage your registered patients (delete and update patient). In the top of the home page you can see a navigation bar that gives you the opportunity to go to every part of this page (My Patients, Add Patient, Manage Patients or Add Test) or under your name change your password or log out.



In case you want to change your password, you can click the respective link on the user dropdown menu. In the page you will be redirected to, you have to enter your old password and type and retype the new password in the relevant fields. After that you can sign in with your new credentials.

Home / Change Password

## Change Password

All the fields are required.

Old Password

Password

Retype Password

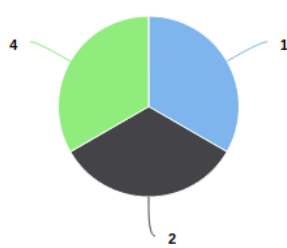
# My Patients

In the My Patients part you are able to view your patients with their submitted tests (baselines and follow ups). This part of the view looks like the following:

**My Patients**

Filters Active - 0 Clear All

**Tests count**



**Total tests** 🔍 × AA↑ #↓

1	1
2	1
4	1

Add test ▲	Patient Code	Date of birth	Gender	Comments	Total tests	Progress	Baseline	Followup 1	Followup 2	Followup 3
<span style="color: #007bff;">+</span> Add	patient 1	2021-04-07	Male	athlete	4	<a href="#">View progress</a>	Baseline <span style="color: #6c757d;">🗑</span>	Followup 1 <span style="color: #dc3545;">🗑</span>	Followup 2 <span style="color: #6c757d;">🗑</span>	Followup 3 <span style="color: #dc3545;">🗑</span>
<span style="color: #007bff;">+</span> Add	patient salonpas test	1999-08-19	Male		2	<a href="#">View progress</a>	Baseline <span style="color: #6c757d;">🗑</span>	Followup 1 <span style="color: #28a745;">🗑</span>	-	-
<span style="color: #007bff;">+</span> Add	patient 2	1981-05-08	Male	office job	1	<a href="#">View progress</a>	Baseline <span style="color: #6c757d;">🗑</span>	-	-	-

Showing 1 to 3 of 3 entries
Previous 1 Next

The above table shows all the basic information of a patient (Patient Code, Date of Birth, Gender, Comments) including the tests information (Total tests and the results of the completed tests) and the progress of the patient’s pain severity, interference, pain related complaints and drugs used through time. The first test of a patient is the Baseline test and every new one is called Followup 1, Followup 2 etc. In the field “Baseline” and “Followup 1, 2 etc” you are able to click the given link in order to view the results of each test. The green color on the test link indicates a reduction in patient’s pain severity, interference, pain related complaints and drugs used from the previous to the next test and the red color indicates an increase of them. By clicking

the delete icon next to the test's link you are able to delete the selected test. In the first field "Add test" you can create a new test for the patient.

Above the table there is a pie chart and a filter panel. By clicking at one or more lines of the filter panel you are able to filter the patients table according to the number of their submitted tests. For example, clicking on the line where Total tests is 0, you are able to see only those patients for whom you have not yet submitted tests. The pie chart shows the tests count of the patients presented in the table.

## Create new Patient

In the create new patient form you are able to fill out the basic information about a patient. A patient code, the date of birth, the gender and optionally some worth mentioning comments.

### Create new Patient

Fields with \* are required.







Patientcode *	Date of birth *	Gender	Comments
<input type="text"/>	<input type="text" value="08/19/2021"/>	<input type="radio"/> Male <input type="radio"/> Female	<input type="text"/>

After creating a patient you can see the patient's details in the table "My Patients" and add his first test (Baseline).



## Manage Patients

In the manage patients part of the home page you are able to update the information of a patient or delete a registered patient including his tests from the column Actions of the table. This part of the view looks like the following:

Manage Patients						
						Search: <input type="text"/>
Patient Code	Date of birth	Gender	Comments	Total tests	Actions	
patient 1	2021-04-07	Male	athlete	4	 	
patient 2	1981-05-08	Male	office job	1	 	
patient salonpas test	1999-08-19	Male		2	 	

Showing 1 to 3 of 3 entries Previous  Next

After deleting a patient there are also no more the patient's details and his tests in the table "My Patients".

## Create new Test

This page allows you to create a new test for a patient. The first test of a patient is the Baseline test and every new one is called Followup 1, Followup 2 etc. By entering this view you can see a simple questionnaire that must be filled out in order to identify if a non-opioid treatment is suitable for this patient and which one of the four supported formulations.

At first you should answer the questionnaire, then press the submit button, wait a minute without pressing anything and finally the results will appear on screen.

The test consists of 4 parts. The "Date of Survey", the "Primary Complaint/Diagnosis", "Severity/ Interference" and "Current Medication Usage".

Date of survey

08/19/2021



### Primary complaint/ Diagnosis

(Check all that apply)

**Arthritis**

Hands  Feet  Hips  Knees  Neck  Shoulders  Back  Other

**Neuropathy or  
Radiculopathy  
(Radiating pain)**

Hands  Feet  Neck  Back  Sciatica  Other

**Myofascial/  
Musculoskeletal Pain or  
Spasm**

Neck  Shoulder  Back  Hips  Other

**Tendinitis**

Shoulder  Elbow  Knee  Wrist  Hip  Other

**Other**

Office Staff Verification of Primary Pain Complaint Diagnosis

**What type of pain do  
you have?**

Mild  Moderate  Severe

**How long have you had  
this pain?**

< 1 month  1 month - 3 months  3 months - 1 year  > 1 year

Please indicate the average amount of time (in hours) of your pain Per Day for the last 3 days:

Enter number of hours from 1 to 24

How many times during the Past Week did you do:

1. **Light physical activity for 30 minutes of more:** (Examples: Gardening, housecleaning, bowling, fishing, playing a musical instrument)

Enter number of times

2. **Moderate physical activity for 30 minutes of more:** (Examples: Gardening, housecleaning, bowling, fishing, playing a musical instrument)

Enter number of times

3. **Heavy physical activity for 30 minutes of more:** (Examples: Running, Intense Biking, Intense Swimming, Aerobic Exercise, Weight Lifting, Football, Basketball)

Enter number of times

### Severity/ Interference

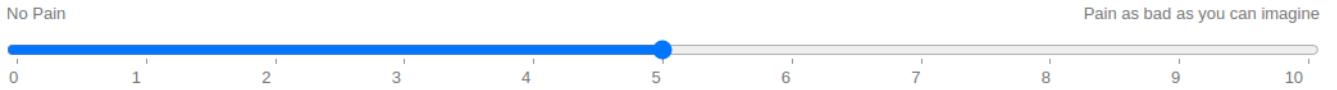
1. Throughout our lives, most of us have had pain from time to time (such as minor headaches, sprains, and toothaches). Have you had pain other than these everyday kinds of pain today?

Yes  No

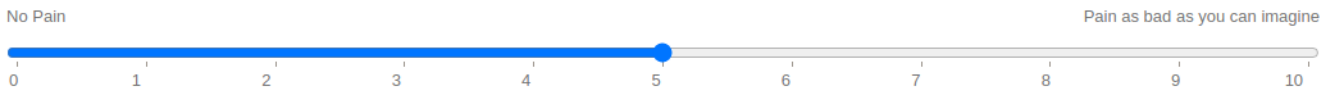
2. Select the areas where you feel pain.

Ankle  Elbow  Foot  Hand  Head  Hip  Neck  Shoulder  Knee  Upper Arm  Upper Leg  Wrist  Lower Arm  
 Lower Leg  Back

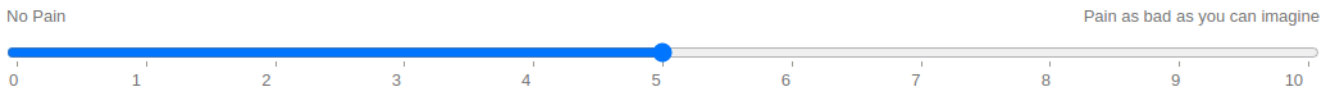
3. Please rate your pain by selecting the one number that best describes your pain at its worst in the last 24 hours.



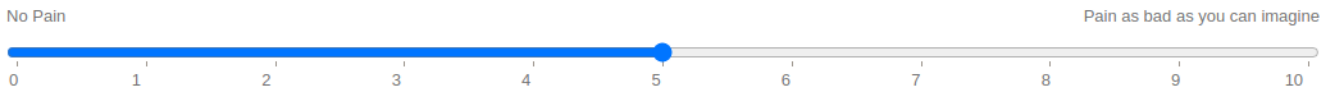
4. Please rate your pain by selecting the one number that best describes your pain at its least in the last 24 hours.



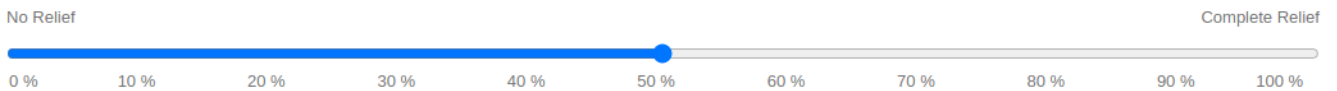
5. Please rate your pain by selecting the one number that tells how much pain you have on the average.



6. Please rate your pain by selecting the one number that tells how much pain you have right now.



7. In the last 24 hours, how much pain relief have treatments or medications provided? Please select the one percentage that most shows how much relief you have received.



8. Select the one number that describes how, during the past 24 hours, pain has interfered with your:

**A. General Activity**

Does not Interfere

Completely Interferes



**B. Mood**

Does not Interfere

Completely Interferes



**C. Walking Ability**

Does not Interfere

Completely Interferes



**D. Normal Work (includes both work outside the home and housework)**

Does not Interfere

Completely Interferes



**E. Relations with other people**

Does not Interfere

Completely Interferes



**F. Sleep**

Does not Interfere

Completely Interferes



**G. Enjoyment of life**

Does not Interfere

Completely Interferes



**Current medication usage**

(Check all that apply)

**1. Over-the-Counter (OTC) Pain Medication**

- Advil®, Motrin® (ibuprofen)
- ALEVE® (naproxen)
- Aspirin (acetylsalicylic acid)
- Tylenol® (acetaminophen)
- Other Pain Medications(Creams, gels, roll-ons, sprays, patches, rubs, Icy Hot, Biofreeze, Aspercreme))

- List names

Other

**2. Anti-Inflammatory (Prescription)**

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Anaprox (naproxen sodium) | <input type="checkbox"/> Feldene (piroxicam)    | <input type="checkbox"/> Toradol (ketorolac tromethamine) |
| <input type="checkbox"/> Celebrex (celecoxib)      | <input type="checkbox"/> Indocin (indomethacin) | <input type="checkbox"/> Vimovo (naproxen/ esomeprazole)  |
| <input type="checkbox"/> Clinoril (sulindac)       | <input type="checkbox"/> Lodine (etodolac)      | <input type="checkbox"/> Voltaren (diclofenac)            |
| <input type="checkbox"/> Daypro (oxaprozin)        | <input type="checkbox"/> Mobic (meloxicam)      | <input type="checkbox"/> Other                            |
| <input type="checkbox"/> Disalcid (salsalate)      | <input type="checkbox"/> Naprosyn (naproxen)    |   |
| <input type="checkbox"/> Dolobid (diflunisal)      | <input type="checkbox"/> Relafen (nabumetone)   |   |

**3. Muscle Relaxers**

- Robaxin® (methocarbamol)
- Flexeril®, Amrix® (cyclobenzaprine)
- Skelatin® (metaxalone)
- Other

**4. Opioids and Anti-Convulsants**

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Avinza®, Kadian® (morphine)             | <input type="checkbox"/> Lorcet®, Lortab®, Norco®, Vicodin® (hydrocodone)                           | <input type="checkbox"/> Other: Neurontin® (gabapentin) Lyrica® (pregabalin) Ultram® |
| <input type="checkbox"/> Demerol (meperidine)                    | <input type="checkbox"/> Opana® (oxymorphone)   |  |
| <input type="checkbox"/> Dilaudid®, Exalgo® (hydromorphone)      | <input type="checkbox"/> Oxycontin®, Oxyfast®, Percocet®, Roxicodone® (oxycodone and acetaminophen) |  |
| <input type="checkbox"/> Duragesic®, Fentora®, Actiq® (fentanyl) |   |  |

When you answer the questions for your patient, you submit the test and wait a few seconds to be redirected to a result page with all the detailed information, graphs and predictions about the respective patient.

## View Test

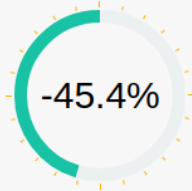
In the view test page you can see the results of a test with the submitted answers of the questionnaire.

At the top of the screen, you can see a concise result of the submitted test. The patient is predicted to be either a responder or a non-responder for the Salonpas® Pain Relieving Patch. The percentage shown on the result page of responders and non-responders shows the predicted average reduction (or increase) in the patient’s pain severity, interference and drugs used with the best performing a salonpas patch treatment:

*Responder for the Salonpas® Pain Relieving Patch*

**This Patient is predicted to be a responder for Salonpas Patch.**  
Benefit is expected in all examined metrics from using Salonpas Patch for treating his chronic pain condition by an average reduction of 45.4% in his pain severity, interference and drugs used.

Average expected change in all metrics in 1 month of Salonpas Patch usage



-45.4%

Severity 😊

**From 5.5 to 3.4**

↓ Expected change in 1 month of Salonpas Patch usage

Interference 😬

**From 5.6 to 1.3**

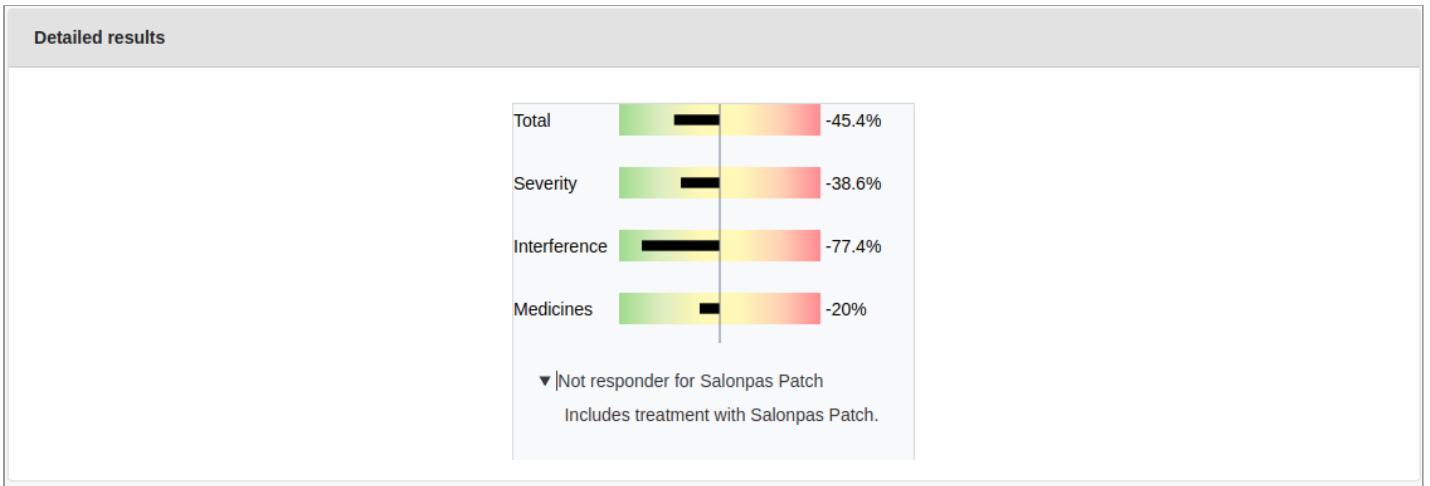
↓ Expected change in 1 month of Salonpas Patch usage


Medicines 💊

**From 2 to 1.6**

↓ Expected change in 1 month of Salonpas Patch usage

Furthermore a “Detailed results” part shows detailed results:



In the final part of the result page you are able to view the submitted responses of the patient's questionnaire. In this part you have also the opportunity to delete the submitted test by clicking at the bottom of the page the relevant button  :



**View submitted responses**

Date of survey

2021-08-19



**Primary complaint/ Diagnosis**

**Arthritis**

- Hands  Feet  Hips  Knees  Neck  Shoulders  Back  Other

**Neuropathy or Radiculopathy (Radiating pain)**

- Hands  Feet  Neck  Back  Sciatica  Other

**Myofascial/ Musculoskeletal Pain or Spasm**

- Neck  Shoulder  Back  Hips  Other

**Tendinitis**

- Shoulder  Elbow  Knee  Wrist  Hip  Other

**Other**

Office Staff Verification of Primary Pain Complaint Diagnosis

**What type of pain do you have?**

- Mild  Moderate  Severe

**How long have you had this pain?**

- < 1 month  1 month - 3 months  3 months - 1 year  > 1 year

**Please indicate the average amount of time (in hours) of your pain Per Day for the last 3 days:**

Enter number of hours from 1 to 24

# How to get InSyBio Precision Chronic Pain Relief @Salonpas Tool

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To purchase InSyBio Precision Chronic Pain Relief @Salonpas Tool contact us at [info@insybio.com](mailto:info@insybio.com).

## About Us

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InSyBio Ltd is a bioinformatics pioneer company ([www.insybio.com](http://www.insybio.com)) in personalized healthcare, that focuses on developing computational frameworks and tools for the analysis of complex life-science and biological data in order to develop predictive integrated biomarkers (biomarkers of various categories) with increased prognostic and diagnostic aspects for the personalized Healthcare Industry.

InSyBio Suite consists of tools for providing integrated biological information from various sources, while at the same time it is empowered with robust, user-friendly and installation-free bioinformatics tools based on intelligent algorithms and methods.

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