

Ossgrow[®]
Bone Cell Therapy



Looking
forward to
LIFE

INTRODUCTION

Thank you for picking up this book about OSSGROW® Bone Cell Therapy. This easy-to-understand guide will provide you with general information about your treatment and basic dos and don'ts.

This guide has sections with information about cell therapy and questions to ask your doctor. Make sure you take notes. It will be helpful to write down all the answers the doctor gives you to review them later. You can use the Notes section in this guide to take down important points. Some words may be new to you, See the Health terms section in this book or call your doctor for clarification.

OSSGROW® bone cell therapy is an autologous, totally safe, and clinically tested cell therapy product. The product has been granted market authorization and manufacturing license by the Drug Controller General of India, Ministry of Health and Family Welfare, Govt. of India. In addition, OSSGROW® has been granted Orphan Drug Designation (ODD) by the USFDA and Orphan Medicinal Status product by the European Medicine Agency (EMA).



AVASCULAR NECROSIS



STAGE I



STAGE II



STAGE III



STAGE IV

What is Avascular Necrosis?

Normal bones in our body continuously break down and rebuild to stay healthy. When the blood supply to the bones is disrupted, the bone tissues begin to get damaged (necrosis) and the tissue collapses. Avascular necrosis (AVN) is the result of bone tissues breaking down faster than the body can rebuild. It can affect any bone, but mostly occurs in the joints such as hips. Other common joints include the shoulders, knees, and ankles.

Who gets AVN?

Avascular Necrosis occurs due to interruption of blood supply as a result of injury/trauma or smoking, alcohol abuse, or long-term use of steroids. This results in a cellular imbalance of new bone formation and resorption that ultimately leads to bone death and collapse of the hip joint. People between the ages of 20-50 are affected.

Symptoms

In the early stages, patients are usually asymptomatic. As AVN progresses, it may hurt when pressure is put on affected bones. Pain can also be caused when bearing weight and during excessive physical activity. In severe cases, the pain may limit the movement of joints. It can result in limping and disability of the hip.

Impact on everyday life

Common day-to-day activities such as walking, standing, climbing stairs, lifting of moderate to heavy objects, and full movement of affected joints become difficult. Pain may sometimes persist even while resting.

AVN Diagnosis

Usually, when AVN is suspected, an X-ray scan is recommended first. Once the diagnosis has been made, Magnetic Resonance Imaging (MRI) scan is used to determine the extent of tissue damage and the stage of AVN (Stage 1- Stage 4).

AVN is akin to cancer. Cancer has different stages that can progress rapidly without proper treatment. Similarly, AVN involves four stages (depending upon the extent of tissue damage) requiring immediate diagnosis and treatment. If AVN isn't diagnosed and treated on time, it can cause the bone to collapse (death of bone tissue). This can result in limiting the range of motion of your joint and can cause sudden and complete failure of the joint function. If a bone collapses in one of the hip joints, it is more likely to occur in the contralateral hip joint. Hence, it is important to get your hip pain diagnosed at the earliest to prevent hip disability. Depending upon your diagnosis, you may be suggested bone cell therapy.



BONE CELL THERAPY FOR AVN

When cells in your body cannot self-repair, it causes diseases. Cell therapy, in such cases, is useful for the removal of damaged cells and replacing them with newer cells. Many different types of cells may be used as part of a therapy to treat a variety of diseases and conditions.

It may be of two types:

- **Autologous cells:** Patient's own cells are used that are collected before treatment.
- **Allogenic cells:** A donor's cells are collected and isolated for use. Donors can be related or unrelated to the patient.

In AVN, bone-forming cells- osteoblasts are damaged due to a lack of blood supply. During bone cell therapy, new osteoblasts are implanted by your surgeon into the damaged area so that new bone is formed which restores the normal functions of your hip joint. The newly formed 3-dimensional bone will be useful in arresting the progression of the bone damage due to AVN and also enable you to move your joint freely.

When is it recommended?

The most common reasons for recommending

bone cell therapy are-

- Severe hip pain
- Limping on the affected joint
- Loss of function of the affected joint
- Pre collapse or minimal collapse of joint
- Activities like bending, rotation, squatting become excruciatingly painful.

You are the best person to judge the amount of pain and extent of loss of joint function. If this interferes with normal daily living, it's time to seriously consider treatment. It is generally recommended in the early stages to tackle the progression of the disease and ease the pain.

The procedure of Bone Cell Therapy (Autologous)

STEP 1: Tissue Biopsy

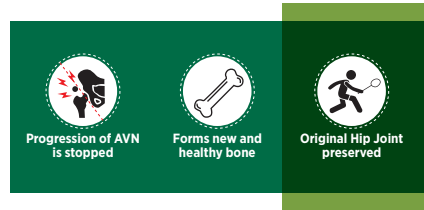
Bone cell therapy starts from your own bone marrow. Tissue biopsy is a simple day-care procedure involving the extraction (biopsy) of a small quantity (4 ml) of your bone marrow. The procedure lasts for 10-15 minutes. You will be given local or general anesthesia. The bone marrow sample is aseptically transported to a centralized GMP-Certified cell culture laboratory. The bone-forming cells (osteoblasts) are cultured within 25-30 days.



STEP 2: Bone Cell Implantation

It is important to first remove the damaged bone inside your joint and then replace it with new cells. This can be done through core decompression. It involves surgical drilling into the area of dead bone near the joint. This procedure relieves pressure within the bone, increasing blood flow and allowing new blood vessels to form. Curettage is

performed to remove damaged bone tissue by scraping or scooping with a curette. The osteoblast cells cultured in the laboratory are then implanted into the damaged area.



Benefits of Bone cell therapy for AVN:

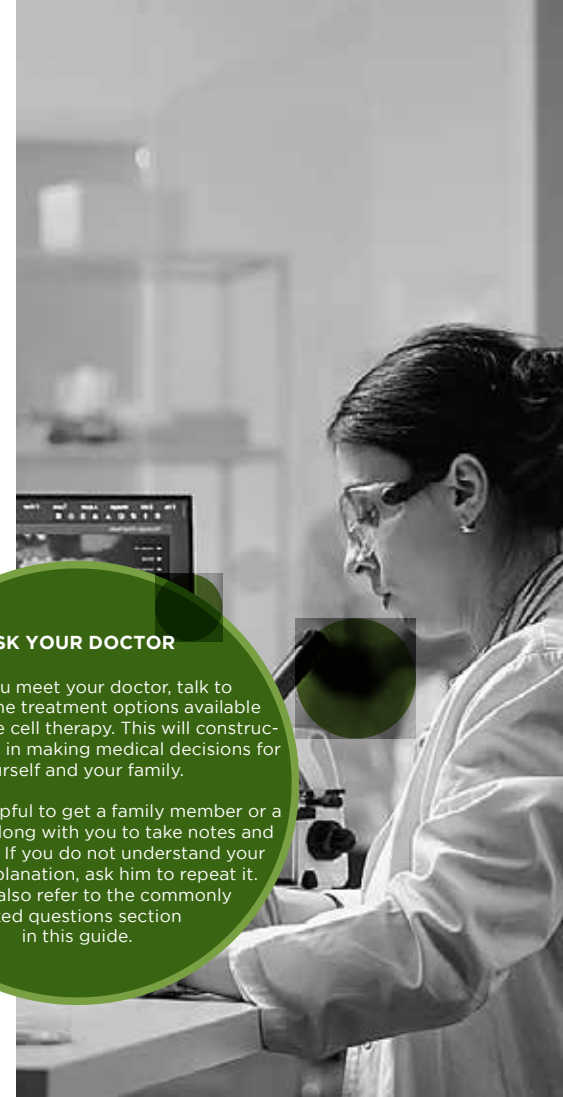
- Biological treatment using patients' own cells
- One time therapy that arrests disease progression
- Free from pain and hip disability
- Resume physical and sports activities
- Return to active normal life

ASK YOUR DOCTOR

When you meet your doctor, talk to him about the treatment options available including bone cell therapy. This will constructively help you in making medical decisions for yourself and your family.

It might be helpful to get a family member or a close friend along with you to take notes and support you. If you do not understand your doctor's explanation, ask him to repeat it.

You can also refer to the commonly asked questions section in this guide.





PREPARING FOR THE TREATMENT

Before the treatment, you will undergo a checkup to make sure you are healthy for the procedure. To find out if you are a good candidate for the procedure, the doctor will consider:

- Your general health
- Your medical history
- Results of physical check-ups and medical tests
- Type and stage of the disease
- Psychological assessment/mental fitness

When you have cleared all the checkpoints, the doctor will instruct you accordingly.

Before surgery, your healthcare team will review the medical records and may order certain lab tests or studies to ensure that you are in the best possible condition. The team will make sure everything is well prepared for the treatment.

It may be useful to consider the following points:

- Complete any dental treatments
- Find someone who can take care of your pet.
- If you have children or are a single parent, arrange someone to look after them.
- Complete any personal/work trips.

OSSGROW® is covered under cashless and reimbursement schemes for all major Private/Government and State Health Insurance Schemes. For further information, please contact Regrow at 1800-209-0309 or put in an inquiry on the official website (www.regrow.in) or Facebook page.



ONE MONTH BEFORE THE TREATMENT

Medical Tests

Medical tests are important for the preparation of the treatment. They are useful in the diagnosis of the treatment and to make sure you are healthy enough for the treatment. Some tests may include:

- **X-ray:** An X-ray can help doctors diagnose, monitor, and treat many medical conditions. In most cases, you won't need to take special steps to prepare for them. Depending on the area to be examined, you may want to wear loose, comfortable clothing that you can easily move around in.

They may ask you to change into a hospital gown for the test. They may also ask you to remove any jewelry or other metallic items from your body before your X-ray is taken.

- **Magnetic resonance imaging (MRI):** An MRI is a type of scan that uses magnetic fields and radio waves to produce detailed images of the parts inside of the body. An MRI scanner is a large tube that contains powerful magnets. You will have to lie inside this tube. Before the test, you can eat normally and continue to take your usual medications, unless otherwise instructed. They may also ask you to remove any jewelry or other metallic items from your body before

your test.

- **Urine tests:** It is useful for detecting and managing a wide range of bodily functions. This test is also beneficial for ruling out pregnancy for women of childbearing potential.

Assign a Caregiver

Ideal caregivers can be your spouse, sibling, partner, parent, adult child, or any close friend. Having a caregiver is very helpful. Patients who undergo the treatment need an adult caregiver to provide support and care. He/she should be with you at all times especially after you are discharged from the hospital. The caregiver can help get the home environment ready before the treatment and help attend appointments. Members of your healthcare team will instruct the caregiver on the necessary roles and responsibilities to support you. You may also avail at-home nurse service according to their convenience.

When you return home, your caregiver can help you with the following:



Ensure medicines are taken on time, in right doses



Monitor health & report to the doctor



Ensure hygiene at home



Cook healthy meals



Assist with daily activities & finances



Provide emotional support, track mental health

What to Eat?

Adequate nutrition is important for overall good health and also for preparation for the treatment and healing after. Patients who do not have proper protein, vitamin, and mineral intake are more likely to have post-operative problems. A well-balanced and nutritional meal before and after treatment can help in a better overall outcome.

Eat enough protein. Protein provides building blocks for our muscles, bones, and immune system. You want to be as strong as possible going into the treatment.

Stock up on fruit and vegetables. Include fruit and vegetables at most meals and snacks. More specifically, greens. Greens are great for your skin and repair muscles, bones, and cartilage because they contain loads of vitamins and minerals including vitamins C, K, and magnesium.

Include whole grains. Be sure to include good sources of whole grains to give your body all the B vitamins it needs to combat stress.

Eat less of these. Consider reducing or eliminating additional sugars,

caffeine, and alcohol from your diet. These create more stress on the body and remove nutrients from the body to metabolize properly.

JUST BEFORE THE TREATMENT

What to Eat?

You will be given local or general anesthesia before the collection of cells. Some patients react to anesthesia by vomiting. This is not favorable and can be dangerous. Your stomach must be empty so nothing is expelled from your mouth or into your lungs. You must not eat or drink anything - not even water- certain hours before the surgery. If you eat or drink anything after midnight, your treatment may be postponed. The only exception is for medications, taken only with the doctor's approval.

We realize you may need medications for other conditions and we want to make sure you are safe during your surgery. Your doctor and his team will review your medications and decide if you should be allowed to take anything before your surgery or if it would be safer to wait until a few days.

You may consider the following:

- Plan to arrive two hours before the appointment time.
- Leave money and other valuable items at home or with your caregiver.
- If you wear a hearing aid, glasses, dentures, or contact lenses, please bring them with the containers.
- Make a list of all your allergies and any ongoing medications you are on, and also the last time you took a dose. Kindly do not carry any medications with you.



DAY OF TISSUE BIOPSY (STEP 1)

After arriving at the hospital

Meet the team

When you arrive at the hospital you will be greeted by our staff. A nurse and a nursing assistant will care for you. They are well trained to care for patients who have had similar procedures. The unit's physical therapist may also come in to discuss your rehabilitation plan and to start your therapy soon after your arrival.

Nursing care

Your nurses will be monitoring your vital signs (blood pressure, breathing, temperature, and heart rate), as well as your circulation to your leg. They will report to your doctor any abnormal findings. In the beginning, the nurses will do a complete assessment of your

whole body, looking for anything that would delay your progress.

Communication with the staff

Good communication between patients and caregivers is important. We will discuss your goals for the day and talk about your recovery, your therapy, and your discharge planning. The nurse will discuss your pain management and when your next dose of medication is due.

You may also use a call button to communicate your needs. The hospital staff will answer your call as quickly as possible. They will also follow up with a call to make sure your needs are addressed. If you have questions, you may have your nurse write them down, and of course, you may also write questions in this book.

Waiting room

You will be directed to a room to prepare you for the procedure. A family member or your caregiver may accompany you to the waiting room. You will be given a hospital gown to change into. You may give your clothes to the caregiver to hold for you. If privacy is needed, you may ask the person to step out of the room before you change.

You will be transferred to the operating room by a registered nurse or an orderly, who will stay with you throughout. The room will be cool and somewhat noisy. The noise is caused by the laminar flow fans, which will help keep the room sterile. You will be given local or general anesthesia. Tissue biopsy may take about 15 minutes.

Instructions for the caregiver

It is best if your caregiver can help you check in. If your caregiver is planning to meet you at the hospital, give his/her name to the receptionist. Please have him/her check-in after his/her arrival at the hospital. After surgery, the caregiver will be contacted by the doctor to let him/her know how things went and when to expect you out of the room.

After Step 1, there would be a gap of about 3-4 weeks before Bone Cell Implantation, make sure you are having enough rest and adequate nutrition. You may carry out regular physical activities in moderation.

DAY OF BONE CELL IMPLANTATION (STEP 2)

The instructions remain the same as your first visit. However, on your second visit, you will be admitted for several days considering your overall health considerations.

Post implant period

After the procedure, you will be transferred to the post-anesthesia care unit (PACU) where you will be closely monitored. Your doctor will contact your family/caregiver(s) in the surgery waiting area to discuss your surgery and your condition. After your surgery, you may be a little thirsty or may feel a little sick. Some patients may experience nausea for a while. This usually fades after a while. There is a medicine that helps alleviate those symptoms. Please let your nurse know if you are feeling nauseated or have any signs of discomfort. They will do everything they can to make you feel more comfortable.

Pain management:

Your nurse and other staff will be available for your assistance if you feel any discomfort. It is normal to experience pain after the procedure. We will try our best to make you comfortable.



Ways you can help relieve your pain:



- Don't try hard. Let your nurse know you have pain.
- Oral medication takes time to work, don't wait for your pain to rise.
- Call for help when walking and getting out of bed.
- Stay properly medicated to tolerate your therapy sessions better.

While on the medication you have an increased risk of falling. We recognize that before surgery you might not have needed assistance, but now you must take precautions to be safe.

Please call for help before any physical activity.

It is normal to have some hip swelling after bone cell therapy. Ice may be applied to your hip for comfort, to help reduce this swelling and to decrease your pain. Your nurse, doctor, and pharmacist will work together for the best pain control plan.

Notify your doctor immediately if you develop any of the above signs.

Warning Signs

- Persistent fever (higher than 100°)
- Shaking chills
- Increasing pain with both activity and rest



PREVENTIVE MEASURES

Prevention of falls

After the procedure, your risk of falling is high. We do not want you to trip and fall. Please use your call light to request help to get out of bed at all times during your hospital stay.

Bowel elimination

As a side effect of the pain medication and decreased activity, you may have constipation. We will encourage you to drink plenty of liquids, give you stool softeners, and teach you about foods that have a higher fiber to ease bowel elimination with less strain. If constipation continues to be a problem, there are other remedies to help, and we will discuss these options with you.

DISCHARGE FROM HOSPITAL

You will be ready for discharge from the hospital when:

- Your body is healthy enough to produce a sufficient number of healthy blood cells and platelets.
- There are no signs of infection.
- Medications (if any) are tolerable.
- You can eat and drink without any discomfort.
- You are physically able to function outside the hospital with some assistance.

Your caregiver should contact the hospital immediately if the following symptoms are seen:

- Fever/chills
- Coughing, sneezing, runny nose, sore throat, shortness of breath.
- Vomiting and nausea.
- Blood in urine or discomfort in urination
- Rash or cold sores
- Oozing blood from the operated site.
- Excessive amount of drainage from the dressing.

Planning for discharge

You need to be prepared for going home. We believe a good plan for this starts from the very beginning of your treatment and continues through your hospital stay. Your doctor will recommend appropriate equipment (e.g., walkers, canes, commodes) and the

course of follow-up therapy. Your nurse will provide you with written discharge instructions and information regarding your next doctor's appointment, medication, and incision care. The nurse also will go over your recovery plan.

Final discharge instructions from your nurse will include:

- Prescriptions for discharge medications
- Availability of your equipment
- Reasons to contact your physician
- Follow-up appointment with your physician
- Follow-up appointment with the lab for close monitoring of your blood

The hospital transport team will assist you during the discharge procedure.

After the discharge, more than one follow-up appointment with the doctor may be needed. During these visits, doctors will analyze blood test reports. As patients regain more strength, daily activities can be resumed. The recovery time is different for each person. On average, it takes around 1-2 months.

WHEN TO CALL YOUR DOCTOR

Call your doctor if you experience any of the following:

- Chest pain and/or shortness of breath.
- Call 1-0-2 for ambulance service or go to the hospital emergency room
- Increased pain or swelling at the operated site
- Drainage from your dressing
- Fever of 101 Fahrenheit or any unusual symptoms that you don't understand
- Wound opening





NUTRITIONAL INFORMATION

What to eat?

It is important to eat a well-balanced diet after bone cell therapy. Foods that are rich in proteins will help in this process. If you do not consume the necessary amount of protein and calories, the body will take energy from its muscles, causing further weakness and fatigue. Caregivers must consult the doctor if your food and drink intake are lacking, inappropriate, or even harmful.

Protein-rich food

Protein is important in the maintenance and repair of body tissue, especially wound healing. You get adequate protein by consuming milk and milk products, meat, poultry, fish, and eggs.

Good vegetable

Protein sources include beans, legumes, soybeans, lentils, nuts, seeds, and peanut butter.

In case of special diet

If you are on a special diet, such as diabetic, renal, cardiac, or texture-modified diet, consult your health professionals regarding your nutrition plan. You may also ask your

doctor to refer you for a nutrition consultation.

What if I have a poor appetite and am not eating well?

Eat small, frequent meals and snacks to ensure adequate nutrition. Make sure the meals are rich in protein and calories. You may also want to try over-the-counter oral supplements for additional nutrition.

Do I need vitamin supplements?

If you are eating a balanced diet and eating enough, most likely you are getting adequate nutrition from your diet. However, if you are not eating well, you may want to consider taking a multivitamin supplement. Please consult your doctor or dietitian.

Food Safety

Always prepare food on a clean surface, with clean hands and utensils. Be sure the food is well cooked. For your safety, raw or undercooked unpasteurized eggs (such as homemade egg, nog or poached eggs) may not be served at any time.

Exercise

After the treatment, many patients find exercise and physical activities like walking, riding a bicycle, and basic yoga help in alleviating fatigue and increasing energy levels.

HOME SAFETY CHECKLIST

-  Be aware of uneven surfaces.
-  Avoid rushing to answer your phone
-  Maintain adequate lighting in all areas
-  Use night lights
-  Be cautious with wet floors
-  Select right size of footwear
-  Use chairs with armrests
-  Keep shelves and counters that are easy to reach
-  Use counter-level appliances to avoid bending
-  Check your bed/mattress height, keep it at or above your knee level

HOME SAFETY STRATEGIES

- Make sure your home is set up to create a safe environment for recovery
- Rearrange furniture so it's easier to get around.

- In the bathroom aids like a shower hose, a tub seat, and a raised toilet seat can help you stay safe

LONG TERM CARE

Long-term follow-up care is important for ensuring your safety and well-being. It helps doctors monitor patients for disease effects or recurrence. You may talk to your doctors about how often to have follow-up visits. Ask the doctor what type of tests will be needed and how often the tests must be taken.

Keep a record of your treatment including drugs so your doctor can follow up on long-term effects associated with your treatment.

The doctor may advise longer periods between follow-up sessions if you are free from any signs of complications and concerns and do not need any additional medical care treatment for any long-term effects.

ASK YOUR DOCTOR

- If there are any side effects later, how can the healthcare team be reached?
- What can I do to ensure life-long follow-up care?
- How often shall I see the doctor?
- How can I be monitored for the long-term and late effects of treatment?
- What treatments may be needed in the future?



TAKE CARE OF YOURSELF

- Keep all appointments with your doctor.
- Discuss how you feel at each visit. Ask any questions related to side effects.
- Eat healthy foods each day. You can eat 4 to 5 smaller meals instead of 3 bigger meals.
- Contact the doctor about tiredness, fever, or any other symptoms.
- Quit smoking and avoid alcohol. Get additional help if required.
- Get proper rest.
- Follow an exercise routine. Talk to your doctor before starting an exercise program.
- Maintain a proper healthcare file. Keep all the copies of lab reports and treatment records.
- Seek medical advice if you feel sad or depressed and your mood does not improve over time. Depression is a serious illness and it can be treated with proper support and advice.

If you are happy with the treatment, you may give a testimonial and spread the word

COMMONLY ASKED QUESTIONS

Why is OSSGROW® a good treatment option for AVN?

OSSGROW® is a curative treatment option for AVN that addresses the root cause of the disease. Osteoblast implantation helps to normalize the natural bone remodeling process by forming healthy bone tissue.

How does OSSGROW® help in the formation of new bone?

In AVN, the cellular remodeling process of bone is disturbed. Injected osteoblasts transform into mature bone tissue. New bone formation restores the cellular balance in the bone.

Which types of bone get formed after OSSGROW® treatment?

With the help of OSSGROW® treatment, the necrotic site of bone is treated; it helps to regenerate tissue lost due to degenerative bone disease (avascular necrosis). OSSGROW® therapy can help regenerate all types of bone tissue lost due to degenerative bone disease.

Does bone formed with OSSGROW® have the same strength as the original one?

The bone formed with OSSGROW® therapy slowly restores the structure and function of the hip joint, and you can perform daily physical activities such as exercise and sports after treatment.

What conditions respond to OSSGROW®?

Conditions that involve the death/ deformity of bone cells such as AVN require treatment through bone cell therapy.

Who is an ideal candidate for OSSGROW®?

OSSGROW® is a bone-forming cell therapy option for curative treatment of early stages (up to Stage 3) of AVN. If the hip has collapsed or the necrotic zone is more than 50% of the hip joint, the outcomes are variable. However, patients with Stage 1 & 2 AVN have better clinical outcomes.

Is OSSGROW® safe?

OSSGROW® is an Indian FDA and DCGI approved biologic and personalized drug, thus completely safe for administration into humans for clinical use. The product has been tested through the successful completion of clinical trials in India.

Is there any risk with OSSGROW® treatment?

As OSSGROW® is an autologous (patient's own cell) cell therapy product, no risk can be associated with it, such as GVHD (Graft vs. host disease), Graft rejection, and chances of infection. Thus OSSGROW® is a completely safe cell therapy product.

What are the minor side effects of OSSGROW® treatment?

In the clinical trial, no minor/ major product-related side effects were observed.



COMMONLY ASKED QUESTIONS

Are there any adverse/ serious adverse events that occur with OSSGROW®?

OSSGROW® is an autologous, totally safe, and clinically tested cell therapy product. There are no product-related adverse events observed during the clinical study.

Is there a need to take other medications after OSSGROW® therapy?

There is no need to take any other medicine after OSSGROW® therapy. However, some people might experience pain, bruising, or redness at the site of injection. Such effects of the injection are addressed by over-the-counter pain and anti-inflammatory drugs.

Can OSSGROW® be performed after previously failed procedures?

Yes, upon detailed analysis and screening by the orthopedic surgeon, the patient may undergo OSSGROW®.

Is OSSGROW® performed in India and where?

Yes, OSSGROW® is performed at all major private, government, and state hospitals across all cities in India.

What is the difference between Hip Replacement and OSSGROW® therapy?

Hip Replacement is the process of replacing your original hip joint with an artificial implant (metal in most cases), whereas OSSGROW® is a completely

natural and safe procedure that involves the implantation of the patient's own bone cells.

What is the success rate of OSSGROW®?

The success rate of OSSGROW® is more than 80% in treating up to Stage 2 and more than 70% in Stage 3 Avascular Necrosis.

What is the recovery time after OSSGROW®?

Depending on patient to patient, one can start light weight-bearing activities/movement within 1 - 3 weeks postoperatively.

How much does the OSSGROW® cost? Is it covered under Insurance?

For OSSGROW® cost please contact Regrow at 1800-209-0309 or put in an inquiry on our website (www.regrow.in) or Facebook page. OSSGROW® is covered under cashless and reimbursement schemes for all major Private/ Government and State Health Insurance Schemes.

How can I find a surgeon specialized in this therapy?

To find a surgeon in your area, please contact Regrow® at 1800-209-0309 or put in an inquiry on our website (www.regrow.in) or Facebook page.

Can I get back to an active lifestyle after treatment?

Yes, within 6-12 weeks one can return to all regular functional activities and exercises. Sports activities

COMMONLY ASKED QUESTIONS

can be initiated at 12-24 weeks post-treatment depending upon your surgeon's advice.

How many weeks after OSSGROW® treatment can I start walking with support?

With the help of a proper rehabilitation program, you will be able to walk with support within 1-3 weeks.

How many weeks after OSSGROW® treatment can I start walking without support?

With the help of a proper rehabilitation program, the patient will be able to walk without support within 3-6 weeks.

Can I do daily tasks such as household/office work/walk/sports after OSSGROW® treatment?

Yes, you can perform daily tasks such as household/office work/walk/sports after OSSGROW® treatment.

How many weeks after OSSGROW® treatment can I start cycling?

With the help of a proper rehabilitation program, you will be able to start cycling from the 12th week onwards.

Will I go to a rehabilitation center or my own home?

That depends. Many people can go home after their operation. However, the main factor in the decision is your support structure from your

family, friends, and coach, as well as your living situation and environment. The physical therapist will also perform a safety evaluation, then we will discuss this with you in detail. Decisions are made on a case-by-case basis.

Will I need more physical therapy?

Yes, you will need to continue building and strengthening your affected hip. Your therapist will teach you exercises to practice to help you in your recovery.

When can I go back to work?

Everyone heals at a different pace, and each job differs in its physical demands (sedentary versus active job). Discuss this with your doctor at your follow-up appointment and physical therapy appointments. In general, most people take 6 to 12 weeks to recover and return to work.

How long will I have to take pain medication?

Everyone heals at a different pace. You will most likely need pain medicine for a few weeks after your treatment.

When can I travel?

You may travel when you feel comfortable. It is a good idea to walk and stretch in between sitting positions to prevent blood clots.

When can I expect to have a normal range of motion?





Everyone heals at a different pace. You will be informed about different exercises that you can practice while in the hospital. The staff will help you practice your exercises, which will allow you to recover better and faster.

Is this feeling of depression normal?

It is not uncommon to have feelings of depression after any treatment, due to several reasons, such as limited mobility, discomfort, increased dependency on other people, and/or medication side effects. Typically, these feelings will fade as you return to your normal routine and activities.

Seek professional advice or talk with your doctor if this concerns you.

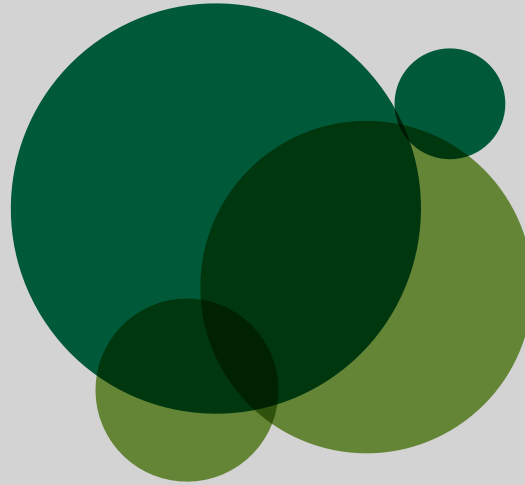
I can't get to sleep. Is this normal?

This is a very common complaint. Some medications may be helpful. If you continue to have sleepless nights, please call your doctor for a prescription sleep aid.

HEALTH TERMS FOR YOUR EASE

- **Tissue:** Tissues are groups of cells that have a similar structure and act together to perform a specific function. Groups of tissues make up organs in the body such as the brain and heart.
- **Stem cells:** Stem cells are the body's raw materials, cells from which all other cells with specialized functions are generated. Stem cells can differentiate into other cells.
- **Autologous stem cells:** Stem cells derived from the patient's own body.
- **Allogenic stem cells:** Stem cells collected from a donor and transplanted to the patient.
- **Bone marrow:** Bone marrow is the spongy tissue inside some of your bones, such as your hip and thigh bones. It contains stem cells. The stem cells can develop into red blood cells, white blood cells, and platelets.
- **Necrosis:** The death of most or all of the cells in an organ or tissue due to disease, injury, or failure of the blood supply.
- **Collapse:** Break down completely, disintegrate

NOTES



+91 9930 896 160

www.ossgrow.com

www.regrow.in

Disclaimer:
This document contains confidential and proprietary information of Regrow Biosciences Pvt. Ltd. which is intended for personal use of treating physicians or specialists and it intends to serve as a guideline ONLY and not an absolute recommendation for implantation of osteoblast cells. This information can only be used for educational and training purposes and in no way, it intends to define or suggest surgical protocol. The treating physician or specialist determines appropriate protocol and techniques required for implantation of osteoblast cells. The treating physician or specialist should be familiar with the contraindications of performing the implantation of osteoblast cells. Treating physician's or specialist's judgement is required to consider patient's risk factor prior to performing the implantation of osteoblast cells. Regrow Biosciences Pvt. Ltd., its officers, directors, agents, attorneys, employees, shareholders, consultants and affiliates do not take any responsibility or liability if the manual is used by anyone for any other purpose. Regrow and logos containing Regrow brand mark are trademarks of Regrow Biosciences Pvt. Ltd. Other brands are trademarks of Regrow Biosciences Pvt. Ltd. or their respective owners. © Copyright 2022. Regrow Biosciences Pvt Ltd. All Rights Reserved.

Version No. 1.0 June 2022