



Polio Survivors Serving Each Other

Information & Inspiration
For All Polio Survivors and their Families
The PA Polio Survivor's Network

www.papolionetwork.org

September, 2021

Our Mission:

To Be in Service Providing Information to Polio Survivors, Post Polio Support Groups, Survivor's Families and their Caregivers.

Inside this Issue:

Stress, Pain and the Magic of Music. For the vast majority of us, the last 1 ½ years have been like no other. For polio survivors, increased stress can increase the painful symptoms of PPS (the late effects of polio). Listening to your favorite music doesn't just sound good – it may also be good for your mental health. Research shows that music can have a positive effect on emotional well-being that includes improving mood, decreasing anxiety, and managing stress.

We've brought you an article that not only explains, but provides outstanding ideas that can help guide you to "how" to give it a try. For more on this topic, take a look at the topic of "Psychology" in the [Encyclopedia of Polio and PPS](http://www.papolionetwork.org/brunoarticles). www.papolionetwork.org/brunoarticles

Our Newsletters have been published monthly since January, 2016.

We have covered a multitude of topics of interest to polio survivors and our caregivers. With thanks to our volunteer, Denise we have a complete Index of our newsletters available. When you see a topic of interest, just click on the newsletter date (highlighted in blue). That entire newsletter will become available in PDF format for reading and downloading.

You can find the Index and the complete list of newsletters on our [website](http://www.papolionetwork.org/newsletters-and-index).

www.papolionetwork.org/newsletters-and-index

Polio – The Virus and the Vaccines. These are two topics of critical importance to those of us who understand the truths of this terrible disease. The realities of the eradication effort can be very confusing. Realizing that World Polio Day is just a few weeks away (October 24th) we have taken the opportunity to share some of the outstanding information provided to us by the Global Polio Eradication Initiative. With all that is going on around us, the determination and ability to eradicate this disease once and for all is truly something to be grateful for.

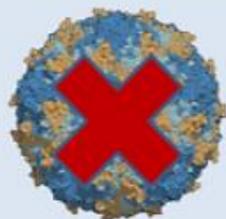


There has never been a better time to join [Team Survivor](http://www.papolionetwork.org).

We ARE a part of the solution.

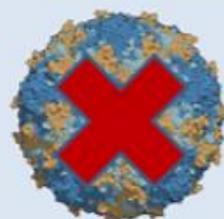
Eradicating Polio – By Eliminating One Viral Strain at a Time.

Type 2 Wild Poliovirus



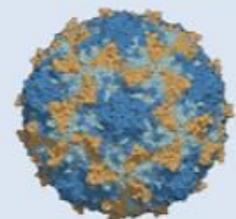
Last case 10/24/1999
Declared Eradicated
September 20, 2015

Type 3 Wild Poliovirus



Last case 11/10/2012
Declared Eradicated
October 19, 2019

Type 1 Wild Poliovirus



It's Next

Source: www.cdc.gov/globalhealth and www.polioeradication.org

Four Amazing Ways Music Can Heal You

By [Sari N. Harrar](#)

A 79-year-old stroke survivor learns to walk again as the "Battle Hymn of the Republic" guides his legs.

A woman with terrible insomnia now slips into dreamland courtesy of Pachelbel's timeless Canon in D.

In a hospital intensive-care unit, patients on ventilators who listen to music of their choice actually relax, while those who don't hear music grow more tense. Exciting research suggests that the brain responds to music almost as if it were medicine. It may regulate some body functions, synchronize motor skills, stimulate the mind—even make us smarter.



What Music Can Do For You

Clinical studies and anecdotal evidence from music therapists suggest that the sound of music:

- Manages pain
- Improves mood and mobility of people with Parkinson's disease
- Reduces the need for sedatives and pain relievers during and after surgery
- Decreases nausea during chemotherapy
- Helps patients participate in medical treatment that shortens hospital stays
- Relieves anxiety
- Lowers blood pressure

The right tunes (and a few deep breaths) can help bring your blood pressure down, according to research out of Italy.

- Researchers asked 29 adults who were already taking BP medication to listen to soothing classical, Celtic, or Indian music for 30 minutes daily while breathing slowly.
- When they followed up with the subjects six months later, their blood pressure had dropped significantly.
- Louder, faster music probably won't do the trick, but there's no harm in blissing out to an ambient track or two.

- Eases depression
- Enhances concentration and creativity

The best part is that to take advantage of music's healing power, you don't need to take a prescription to your local music store. You don't even have to go to the music store at all. The home remedies you need are probably already in your music collection.

"Many years of research have shown me that there is no set prescription, no particular piece of music that will make everyone feel better or more relaxed," says Suzanne Hanser, EdD, chairperson of the music therapy department at Berklee College of Music and a music therapist at Dana-Farber Cancer Institute, both in Boston.

"What counts is familiarity, musical taste, and the kinds of memories, feelings, and associations a piece of music brings to mind. Some people relax to classical music, others like the Moody Blues. The key is to individualize your musical selections."

You can design your own musical "prescription." Just follow these guidelines, using your own favorite music or our suggestions, to cope with specific health problems.

To Cheer Up

Moods rose and depression fell for 20 people, ages 61 to 86, who listened to familiar music they selected while practicing various stress-reduction techniques—on their own or with the help of a music therapist—according to a study from Stanford University School of Medicine. Meanwhile, a control group who missed out on the music and the exercises saw no

continued

improvement during the 8-week study period.

If you feel depressed, see a doctor for treatment. But if you're simply stuck in a blue mood, try this musical approach:

Best music: Upbeat, energetic, rhythmic selections

Examples: Depending on your taste, that might mean a foot-tapping, big band number such as:

- Duke Ellington's "Take the 'A' Train,"
- the fast movements from a Baroque-era concerto,
- or a cheerful Beatles tune.

Listening strategy: While the music plays, perform gentle exercises, depending on *your* fitness level.

- Let the music move you.
- Keep your movements light and flowing.
- Breathe to the music. With each new phrase, find a new way to move.
- Gently come to rest at the end of the music.



To Get To Sleep

The research: Classical and New Age music helped 24 of 25 people with sleeping problems nod off more quickly, snooze for longer periods of time, or get back to sleep more easily after a middle-of-the-night awakening, according to a study from the University of Louisville School of Nursing.

Best music: Quiet, melodic pieces with a slow beat and few, if any, rhythmic accents

Examples: Many slow movements from classical music of all periods.

- Study participants listened to G.F. Handel's "Water Music," Pachelbel's Canon in D, and Vivaldi's "The Four Seasons."
- For New Age selections, try "The Fairy Ring" by Mike Rowland, which was used in sleep studies.

Listening strategy: Begin shifting into low gear after supper.

- Skip the after-dinner coffee, and avoid telephone calls and TV after 9 pm. Play softer and quieter music as bedtime approaches.
- Continue listening in bed with an iPod or CD player equipped with a silent on/off switch. Lie quietly, taking even, deep breaths.

The research: Many studies have found that soothing melodies can ease anxious feelings and quiet both blood pressure and heart rate—even under very stressful conditions.

- Everyday stress responds to music too, says Hanser, who leads music-therapy groups for patients, families, and staff at the Dana-Farber Cancer Institute. Here's her technique:

Best music: "Look for something that deeply focuses your attention, so that the worries of the day - your concerns about what's happened earlier and your plans for what should happen in the future - slip away," says Hanser. "You want to free your mind and distract yourself.

- The music must grab your attention and at the same time relax your body."

Examples: Anything goes.

- Slow music—a love song, a ballad sung by a great voice such as Ella Fitzgerald, Frank Sinatra, or Norah Jones, or a calm instrumental piece—may be perfect.
- *But* if a slow tune gives your mind time to fret or obsess, consider something livelier.

Listening strategy: Sit or lie down in a comfortable position, in a place where you will not be disturbed.

- After listening for a few minutes, add a relaxation exercise: Starting at your feet, gently tighten, then relax your muscles. "You can feel refreshed after listening for as little as 10 minutes," Hanser says. "Afterward, you may find that you're able to think more clearly and approach the rest of your day with a more positive, relaxed outlook."

To Relieve Pain

The research: Physical discomforts—from postoperative pain to chronic aches—can be eased with flowing melodies and distracting rhythms, music therapists and researchers say.

- One study from Yale University School of Medicine found that people who listened to their favorite music while awake during a surgical procedure needed smaller amounts of sedative and pain medications than those who didn't hear music.
- Alicia Ann Clair, PhD, a board-certified music therapist and director of music therapy at the University of Kansas in Lawrence, has also found that the application of music can bring temporary relief from both short-term pain and long-term discomforts associated with chronic medical conditions. "Music won't eliminate the need for pain relievers," Clair says. "But it may help them be more effective."

Best music: Gentle, soothing stress-reducing selections.

- "You want to break the pain cycle by sending your body cues to relax and by occupying and distracting your mind," says Martha Burke, MT-BC (Music Therapy, Board-Certified), director of the Center for Music Therapy Research in Greenville, NC.
- "Gently flowing music or music with a slow, steady pulse can help promote relaxation, which can then alter your perception of pain."

Examples: You may respond to lullaby-like selections. Or, if you're feeling agitated, an up-tempo piece, such as a Broadway show tune, may distract you more completely at first. Then switch to something more soothing after 5 to 10 minutes. This can help lower your heart rate and breathing rate, further relaxing you. "The goal is to reduce the tension that comes with pain," she says.

Listening strategy: Sit or lie in a comfortable position while the music plays. "Take at least 15 minutes to concentrate fully on the music," Burke suggests. "This is more than background music for washing the dishes or reading the newspaper. Give it your full attention."

Source: www.prevention.com/life/a20463031/how-music-heals

Prevention



These Strategies Are Easy To Try.

This piece is available in the Encyclopedia of Polio and PPS for easy download.

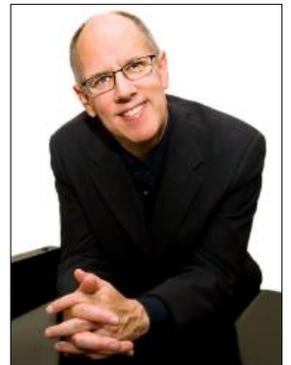
The Two Breath Time Out

Lyrics by Richard L. Bruno, HD, PhD

Featuring Maureen McGovern and music (written and performed) by Jeff Harris



Maureen McGovern, two-time Grammy and Tony Award nominee and founder of the "Works Of Heart Project for Music and Healing," has recorded something special for everyone who wants to annihilate stress. Maureen's soothing voice accompanied by the soft music of Jeff Harris guides you through Dr. Richard Bruno's relaxation exercise, "The Two Breath Time Out". These lyrics were originally published in his book "How to Stop Being Vampire Bait".



Feel free to download these audio files.

[Two Breath Time Out \(MP4 - Audio File\)](#)

[Two Breath Time Out \(MP3 - Audio File\)](#)

Available under the topic of Psychology: Stress Management
in the Encyclopedia of Polio and PPS

www.papolionetwork.org/brunoarticles

The Virus

Polio is caused by a human enterovirus called the poliovirus.

Polio can interact in its host in two ways:

- **Infection not including the central nervous system, which causes a minor illness with mild symptoms**
- **Infection including the central nervous system, which may cause paralysis**

Less than 1% of poliovirus infections result in paralysis. The virus is most often spread by the fecal-oral route. Poliovirus enters through the mouth and multiplies in the intestine. Infected individuals shed poliovirus into the environment for several weeks, where it can spread rapidly through a community, especially in areas of poor sanitation.

The poliovirus consists of an RNA genome enclosed in a protein shell called a capsid. There are three serotypes of wild poliovirus type 1, type 2, and type 3 each with a slightly different capsid protein. Immunity to one serotype does not give confer immunity to the other two. Outbreaks of poliovirus were largely unknown prior to the 20th century. However, with improved sanitation in the 20th century, the average age at which individuals were exposed to poliovirus increased. With progressively declining protection from maternal antibodies, poliovirus infection increasingly resulted in paralysis.

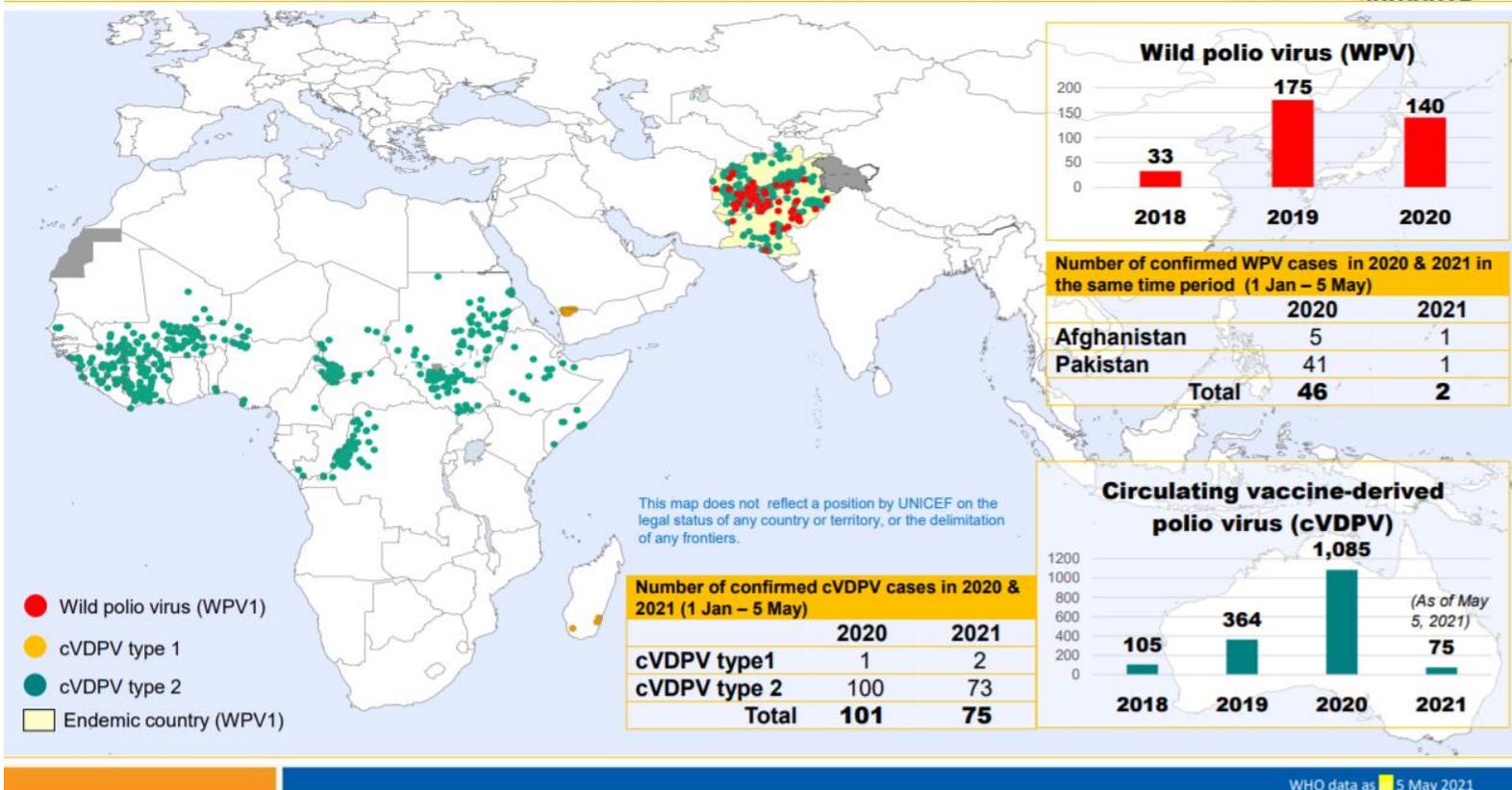
Type 2 wild poliovirus was declared eradicated in September 2015, with the last virus detected in India in 1999. Type 3 wild poliovirus was declared eradicated in October 2019. It was last detected in November 2012. Only type 1 wild poliovirus remains.

Testing for polioviruses

All cases of acute flaccid paralysis (AFP) among children under fifteen years of age are reported and tested for wild poliovirus or vaccine-derived polioviruses within 48 hours of onset. AFP is caused by a range of factors. The Global Polio Laboratory Network tests upwards of 100,000 AFP samples a year, of which a very small portion are positive for poliovirus.

Children paralysed by polio: 2018–2021 (as at 5 May 2021)

POLIO GLOBAL ERADICATION INITIATIVE



Sources:

P. 5 www.polioeradication.org/polio-today/polio-prevention/the-virus

P. 6-7 www.unicef.org/executiveboard/media/5501/file/2021_AS-SFS-Polio_Global_Overview-Information_note-EN-2021.05.20.pdf

VACCINE-DERIVED POLIOVIRUS

Global efforts to immunise children with the oral polio vaccine (OPV) have reduced wild poliovirus cases by 99.9% since 1988, and of the three strains of wild poliovirus, only one remains in circulation – wild polio virus type 1 (WPV1). OPV is safe and effective and interrupts person-to-person spread of polio. However, on rare occasions, and only in under-immunised populations, the live weakened virus in OPV can circulate in a community for an extended period of time and mutate into a form that causes paralysis, known as circulating vaccine-derived poliovirus (cVDPV). cVDPVs are not related to, nor indicative of a re-emergence of wild poliovirus. cVDPVs have emerged as a key challenge in the final stage of eradication efforts; however, outbreaks can be stopped using the same proven tactics that stop wild poliovirus: strengthening polio surveillance systems and ensuring high vaccination coverage. For example, despite protracted conflict and instability, a 2017 cVDPV outbreak in Syria was successfully stopped in a matter of months by utilizing these tactics. If a population continues to be fully immunized, it will be protected against the spread of both wild and vaccine-derived polio.



POLIOVIRUS TYPES	DEFINITION	RISK FACTORS	TO STOP TRANSMISSION	STRAINS
WILD POLIOVIRUS (WPV)	Infectious virus that invades the nervous system. Can cause paralysis or death.	Low immunisation rates, poor sanitation, high population densities.	Vaccinate all children under five years of age with OPV.	Type 1: Causes 100% of current cases Type 2: Eradicated in 2015 Type 3: Eradicated in 2019
CIRCULATING VACCINE-DERIVED POLIOVIRUS (cVDPV)	Rare, circulating virus mutated from the weakened virus contained in OPV, which can only emerge in under-immunised populations.	Low immunisation rates, poor sanitation, high population densities.	Vaccinate all children under five years of age with OPV	There are three types of cVDPV – Types 1, 2 and 3, with Type 2 currently causing the vast majority of cases.

ERADICATING POLIO FOR GOOD REQUIRES ELIMINATING BOTH WILD AND VACCINE-DERIVED POLIO

Current The Global Polio Eradication Initiative (GPEI) will continue working with countries to strengthen efforts to reach every child with OPV and improve virus surveillance—the same tactics used to stop WPV. The program has also unveiled a new Endgame Strategy (2019-2023) that includes tactics to address cVDPVs, focusing on preventing cases in high-risk communities with populations that may be underimmunized due to conflict, insecurity or weakened health infrastructure. This strategy continues to prioritize early case detection and timely outbreak response.

The program will phase out use of OPV after WPV transmission has been stopped. At that point, the inactivated polio vaccine (IPV) will be used to maintain population immunity levels. Additionally, an innovative new tool, the novel oral polio vaccine (or nOPV), could potentially be used to address cVDPV outbreaks. nOPV is designed to provide children with the same protection as the current oral vaccine while having less risk of mutating and causing paralysis. Early trials for nOPV have shown positive results, and if further studies are successful, nOPV could be used as early as 2020 to prevent cVDPVs in communities with low immunity. nOPV could be kept in stockpiles and used in case of an outbreak in the near future or after eradication.

Future



POLIO VACCINES

OPV and IPV have important but distinct advantages, and both vaccines are necessary to end polio for good. Unlike IPV, OPV protects both the individual and the community, making it an essential tool to stop wild poliovirus transmission.

IPV will continue to be a critical tool in strong immunization systems to achieve and sustain a polio-free world and has been introduced in all countries as of May 2019 as part of preparations for OPV cessation. As part of the polio eradication endgame, all countries will stop OPV use. At that point, only IPV will be used to maintain population immunity levels. Together, OPV and IPV – and potentially nOPV once proven effective – are vital to securing a future in which no child has to suffer from this paralyzing disease.

TYPES OF POLIO VACCINE

ORAL POLIO VACCINE (OPV)

CONTAINS Mixture of live, weakened poliovirus strains. Trivalent OPV*: All three poliovirus types Bivalent OPV: Types 1 and 3 Monovalent OPV: Any one individual type *No longer in use as of 2016 due to the eradication of type 2 wild poliovirus.

HOW IT WORKS Body produces antibodies in the blood and gut in response to the weakened virus. Helps stop transmission by limiting the virus's ability to replicate in the gut and spread to infect others.

ADMINISTRATION Easy, oral administration can be conducted by volunteers and is part of many countries' routine immunisation programmes. Used extensively in immunisation campaigns to root out poliovirus. Costs less than US\$0.15 per dose.

USE Extremely effective in protecting children from WPV and cVDPV. Nearly every country has used OPV to stop wild poliovirus transmission because it prevents person-to-person spread of the virus, protecting both the individual and the community.

CVDPV RISK On rare occasions, in areas with under-immunised populations, the live weakened virus contained in OPV can mutate and spread, causing cVDPV. More than 10 billion doses of OPV have been given to nearly three billion children worldwide since 2000, and just over 1,000 cases of cVDPV paralysis have been registered during that period.

VAPP RISK For every million vaccinations with OPV, there are 3-4 children who experience vaccine-associated paralytic polio (VAPP) cases - which cause polio-like symptoms in the child vaccinated - per million births. VAPP cannot spread between individuals, so an outbreak response is not necessary.

INACTIVATED POLIO VACCINE (IPV)

Mixture of inactivated, killed strains of all three poliovirus types.

Body produces antibodies in the blood in response to the inactivated virus. Protects the individual, but induces a lower level of immunity in the gut than OPV.

Vaccine injection is administered primarily through routine immunisation programmes by trained health workers. Per-dose cost starting at US\$1 for low-income countries, through Gavi mechanisms.

Extremely effective in protecting children from polio disease due to WPV and cVDPV, but cannot stop spread of virus in a community.

Cannot cause cVDPV.

Cannot cause VAPP.



Join Team Survivor 2021

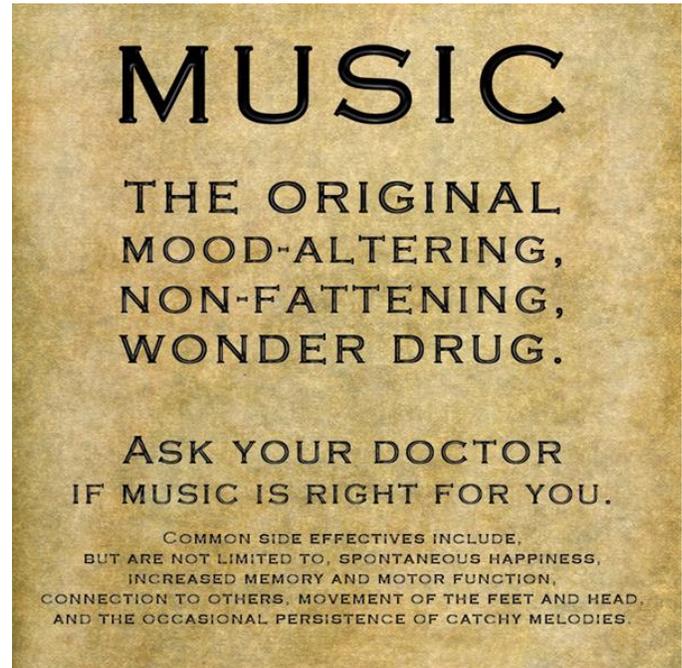
**We are proud to be actively supporting these determined and very effective Polio eradication efforts.
What can YOU do?**

- Make a Donation to the Rotary Foundation for Polio Eradication.
 - Online – There are two ways:
 - Directly to the [Rotary Foundation](#)
 - Through our [PA Polio Survivors Network](#)
 - By US Mail:
 - Make your check out to The Rotary Foundation
 - Mail it to: PPSN Team Survivor, PO Box 557, Doylestown, PA 18901

You will receive a confirmation of your donation from BOTH us and from Rotary International.
For every dollar you donate, the Gates Foundation will turn it into three.

- Call your local Rotary Club. Tell them you are a polio survivor and are grateful for their ongoing participation in Polio Plus.
- Are you a Rotarian? Email your photo to info@papolionetwork.org

**We have become part of the solution. Join Us.
(Feel Free to share this information with your family and friends).**



Always feel free to contact us.

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