

The senior flutist – learning to play the flute at an advanced age

Learning an instrument at advanced age can be very beneficial for someone's outlook in life and help them to stay healthy and active. The new connections formed in the brain through this multidimensional task of playing a musical instrument keep the brain and muscular functions in perfect training. The creativity and the enjoyment that comes with playing a beautiful melody release endorphins and happiness hormones, which are bringing a whole range of health benefits. The social aspects of playing music in a group provide a lot of opportunity to find a new focus in life after a busy professional career.

The therapeutic benefit of music in gerontology / geriatrics is quite apparent in two examples: Alzheimer patients, hearing and playing music can access stored memories lost in every day activities. Parkinson patients report the stopping of tremors once they engage in performing music, because the pathway of neuronal activity in the brain is so much different when we sing or play music. This talk, however focuses on the challenges an ageing flutist might encounter. While the ageing process might bring challenges to the adult performer, with the right activities the happy flutist may even slow this process down with accurate life style choices.

What is my experience with senior flutists?

I have met many senior flutists in workshops and flute exhibitions helping them finding an instrument that fits their needs best. Also, I have coached many students in teaching practice with their adult students and found it very enriching to introduce their life experience to the class. I often noticed that the setup of the older adult students was counter productive despite them having the best players as teachers. I firmly believe that there is a difference in setup requirement according to playing force applied (the outer edge of the embouchure hole must be closer for people who lack stamina and breath support of a professional flutist in full training). Professionals often forget the important fact, that not every flute player can use the same force of air be it because of less practice time or physical limitations due to older age. To create a better understanding for the student's need, I started to use a left handed flute for my flute pedagogy students to give them the opportunity to become complete beginners on their own instrument once again. After that experience many problems in teaching beginners are solved for good!

About symptoms and limitations I also have personal experience. In my personal story I had health issues to overcome in my 30es due to amalgam intoxication of a broken amalgam filling. Many of the symptoms mirroring symptoms of the ageing process (mild arthritis in fingers, problems with vision, numb fingers, fatigue, stiffness, posture problems, muscle pain and neurological symptoms. Therefore I can relate to some of the issues in this topic on a very personal level and know that improvement is possible. From 2017 to 2019 I also followed an intensive yoga regime which has helped me overcome flute playing related injury.

SIGNS OF THE NATURAL AGEING PROCESS

Ageing is a slow, continuous process starting at early adulthood. Historically (with most countries retirement systems) the starting point for "old age" is around 65 years. Starting their retirement, many people are looking for new activities to fill their new found freedom. The concept of "age" can be seen in three different ways:

- **Chronological age** is entirely based on passed life time and is just a number.
- **Biological age** takes the natural changes in the ageing process into account. Some people might be of old age at the age of 65 whereas others will live a decade more until they reach this category. The differences depend on lifestyle, habits and subtle consequences of illness
- **Psychological age** is based on a person's actions and feelings. Someone can be psychologically young despite an age of 80 or older if he/she is working, planning activities and living a full life.

Normal Ageing process and healthy ageing

Healthy ageing means to reduce unwanted side effects of ageing. The aim of healthy ageing is to keep the physical and mental health, avoiding illness and to stay independent and active. **Healthy eating habits, good nutrition**

Movement and sport

Staying mentally active and psychologically young

Life expectancy

If we look at life expectancy today a man at 65 is expected to live to about 83 years a woman at 65 to about 85 years. The average life expectancy is going up in years, but the maximal possible life span seems unchanged over the years. The probability to live to 120 is still very small. Madame Malmet (1875-1997) is still the longest living human with 122 years. Life expectancy is determined by **Genetics, Life style, Environmental toxins, Medical care**

... it should still be possible to fit Anders K Ericsson's 10.000 hours of flute practice to become an expert flute player if you start at 65!

What physical challenges will we encounter with adult amateur flutists ?

Older adult flute students...

... might suffer from impaired mobility of hands or fingers as mild to severe forms of arthritis are very common

... posture problems like a hunch, shoulder problems, impaired movement of joints

... decreased breath support due to asthma or lung problems and lack of endurance

... embouchure challenges due to less elasticity in the lips, dry mouth

... impaired vision

Apoptosis is the programmed cell death, a natural process. Cells are surrounded by telomeres, which shorten with every cell division. When a cell stops dividing it reaches **Senescenz** (cell ageing). The function of the organs of course depends on the function of cells in the organs. Most functions in the body are at a high point at around 30 years and slowly deteriorate, however mostly the capacity is higher than needed (**functional reserve**). First signs of ageing concern often **movement in joints. Osteopenie** is a slight loss of density of bone material (a high loss is called **Osteoporose**). This is due to hormonal changes after which Vitamin D and Calcium are not as well resorbed. Mostly this concerns **the vertebrae of the spine, femur, radius and ulna joints at the hand. Posture problems** can occur in the upper vertebrae of the spine, the head tilts forward and the throat gets jammed **so swallowing can become problematic**. The spinal discs dry up and people become shorter. The Cartilage around joints becomes thinner also through excessive movement and the joint can get injured easier, called **Osteoarthrose**. **The ligaments lose elasticity and feel stiff**. The conclusion is less mobility. Ligaments may tear easier and the healing process is slower because the cells are less active.

The amount of **muscles in the body** slowly reduces from age 30 due to hormonal changes with less testosterone and growth hormones. However, the ageing process only accounts for 10-15% of this loss. **With regular movement and sport, additional damage can easily be avoided.** At the age of 75 usually the percentage of **body fat is double.** Too much body fat comes with risk of health issues such as diabetes. Healthy diet and regular movement can counteract this process. **Eyes and Ears:** the lens becomes more rigid, so objects that are close are harder to see, the lens becomes more dense, seeing in darkness is harder, the pupil is slower in adjusting to light changes, the lens changes colour to yellow so colours appear differently, eyes produce less amount of tears and become dry, less nerve cells create less depth in the vision, mouches volantes. Higher overtones might not be perceived (Presbyakusis — age induced hearing loss), consonants can not be heard as well as vowels with hearing loss, background noise make it difficult to understand speech well. **Mouth and nose** less tasting cells, so less taste / smell, less saliva produced / dry mouth, gums are receding, teeth are more sensitive. **Skin** becomes thinner, less elastic and dry, loss of collagen and elastin, skin can break easier, less nerve endings in the skin, feeling less, vitamin D can not be produced as easily. **Brain:** less nerve cells in the **brain**, but the brain can compensate for this loss: new connections in the synapse, new nerve cells in certain parts of the brain — **the brain has more cells, than needed for most activities (redundancy)** less blood circulation in the brain, maybe slower reactions, need more time to complete a task. **Heart and Lungs:** Tendency to high blood pressure, **loss of strength, stamina, breathing muscles become weaker** (diaphragm, intercostal muscles), less alveoli and capillaries, less intake of oxygen. **Liver becomes smaller**, less cells, less blood flow, liver enzymes are less efficient, less power in detoxing. **Endocrinal system:** less aldosterone — dehydration, insulin less effective

Flute playing can also be a great way to keep fit and healthy and to reduce the ageing process as it

- **provides training for the breathing muscles**
- **exercises hearing and vision**
- **creates motor memory and new neuronal pathways in the brain across hemispheres**
- **exercises small muscle groups (embouchure, fingers)**

I would advise to incorporate the following life style choices for improving the effects of flute playing and especially for avoidance of flute related injury:

- **At the start of flute practice it is very important to strengthen the body first (see BKS Iyengar on Pranayama on page 10)**
- **Make up for the loss of absorption of certain nutrients: Omega 3, Vitamin D, B12, Zinc (for more information see Dr. Schmiedel's videos or discuss with your health service provider)**
- **incorporate detox routines in your life style (again discuss with your health care provider)**
- **hydrate well before / during practise and follow a healthy diet**

MOTIVATIONS AND SPECIAL NEEDS OF ADULT AMATEUR FLUTISTS

Other than health benefits, there are a lot of different motivations for learning the flute later in life:

Adult flute amateurs...

... might just be in love with the sound of the instrument

... might have started to play as a child, but had to stop with increased demand of time in family / professional life

... might have found the deserted instruments of their children at home

... might be eager concert goers and very knowledgeable about the repertoire of different musical epochs / styles

... might be proficient musicians on different instrument

... might want to take part in an orchestra or band

... might want to play together with their friends

The natural process of ageing comes in the area of creative activities with positive as well as negative side effects. The “flow” psychologist Mihaly Csikszentmihalyi explains that these side effects are still evenly balanced. **“Fluid intelligence” is waning at older age, which means, that one might not react as fast to new situations, but with the development of “crystallised intelligence” one can adjust very adequately to new situations and being more sensible in decision making.** This way of thinking is improved with age and comes with more life experience.

What can we as teachers take from this? What do our students want?

Yes, our “well aged” students have a lot of background knowledge which we want to find out and put it in perspective for them with our “flute world”, meaning a broad musical knowledge about different musical styles and periods. We want to create creative musical learning experiences in every lesson. The experience of making music together should be the focus in every lesson. For that we need a broad knowledge of the flute repertoire and the musical focus in each style. We need to create opportunity for **knowledge and skill transfer** from one lesson to the next; from one piece to the next. We need to enable adult students to **recognise patterns and chunks** in music theory and transfer these skills onto every piece or study. We need to enable our students to practise well and teach themselves. As an example I would introduce the three diminished 7th chords early on, so muscle memory can form and automatically solve problems when reading lots of sharps and flats arise in a study. Practice chunking to save stress, time and worries. Allow for relaxation breaks with the flute and away from the flute. And most of all be a partner in music making as much as possible!

How can we solve some of these issues?

1) Posture – Balance

First - pick the right instrument / head joint and set it up for success. Consider the Rockstro position as an option (for about 75% of flute players it is a good solution for better balance, better tone and less loss of energy). On www.petramusicflute.com you can find a very detailed article on this topic. I will work with all the participants individually to find the best setup. Then use any help the player can get – thumb rests, finger saddles, maybe lefrique sound bridges, in more severe cases use “loop instruments” or modified flutes and flute holders. Here we will look individually at the players needs. The stretch of the left arm is often a big problem for people with injured shoulders. On the

baroque flute or piccolo of course it is already a lot more comfortable. I would advise people to forgo this stretch in practice and use props to relax the left elbow in practice (at least a small part of the practice time).

Allow for alternative fingerings as often as possible (see Debost's article on fingering). The pinky of the right hand is only essential for e and eb and other than that of very little use. In one diminished seventh chord it is possible to keep the 4th finger of the right hand down to provide more stability. Changes from c-d also can be played with fingers on the right hand. c# to be in tune can also benefit of additional fingers.

2) Endurance, Breath

BKS Iyengar was Yehudi Menuhin's Yoga guru. His health yoga method is today a widely acclaimed and accepted healing method. In his book "Pranayama" the master explains the unimaginable healing power of breathing work. But at the very beginning he cautions the reader stating, that this great healing method can also burn and destroy the individual when not used in the correct way: First the body must be strengthened enough by the practice of the most common yoga positions so the body is strong enough to deal with the breathing work. When we then look at the way the different breathing techniques are used it becomes clear, that all of these are very similar to the different tasks, that we perform on the flute. Reading this was an eye opener for me and I would never teach a flute student without passing this advice on! Especially with adult amateurs I find this extremely important. The yoga positions in Iyengar yoga are practiced with props and modifications so that everyone can benefit from them regardless of their physical challenges or limited strength. There are also medical breath trainers, breathing bags and devices which can help with these issues and improve breath volume significantly.

3) Limited movement in fingers, hands, joints

Baoding balls or two to three golf balls in one hand are a good way to exercise the hands before flute practice. The joints become flexible in this practice and I have also used them successfully with small children. The well known flute pedagogue Feresh Teh Rahbari from Vienna uses this method very successfully with small children. Historically, people of all classes and ages used Baoding balls, from emperors and soldiers to children and artisans. Originally, a pair of walnut shells was rolled in one hand to increase strength and dexterity. This exercise **builds hand strength through resistance training and trains the mind to use the hands with deftness and patience.** It's a simple practice – one holds both balls in a single hand and carefully rotates them. Fine muscles and tendons in the hand come alive to carefully grip and manipulate the balls over one another, which stay in contact throughout. As the hand gains strength and the user becomes more adept, the balls can be rotated without touching one another, and manipulated in a variety of increasingly challenging ways. Depending on their desired effect, heavier or larger balls can be used, and some varieties even sport textures like ridges or ripples that add extra challenge. While your hand muscles work, your brain is engaged, strengthening the mind-body connection and focusing awareness to tune out distractions. Though sometimes called "meditation balls," these can seldom be used in formal sitting practice as they would be too distracting. However, using the balls can become a form of meditative practice in itself, stilling and centering the mind in a similar way to worry beads or a voiced mantra. Even today, some Chinese doctors will prescribe practice with Baoding balls to boost flagging energy levels. The simplest motion to master first is to rotate the balls – push on both balls simultaneously to switch their position, so the ball nearest the pinkie moves up and over, and the other ball is pushed down and along the palm by the thumb. Spend some time getting familiar with the weight of the balls and the sensations

against your palm as you experiment with different movements. It's OK if the motion is inelegant at first, or if you drop the balls. Have patience and try again! With time, both the muscles in your hand and the neurons in your brain will fine tune themselves for increasing precision and control. As the motion becomes smoother, you may like to increase the challenge by changing direction, or attempting to maintain a space between the balls throughout, so they no longer clink together. This requires greater concentration, more strength and a deeper stretch across the hand. Once you are comfortable with this, you can practice using heavier or bigger balls, or try a pair in a different material or texture for extra stimulation of acupuncture points.

Also, changes in diet and supplements can provide relief in this area. With the help of a health expert, these issues can improve over time and the exercise provided with flute playing will further benefit. At the beginning of flute practice of course, these issues might flare up. Here it is important to find relaxation and a playing position as comfortable as possible. Ring keys can be covered with tape and keys can also be lengthened if necessary.

4) Embouchure challenges, dry mouth

Hydration is of course very important, so my advice would be to make sure you are well hydrated. Water alone can be problematic, also sweet juices are counter productive. Water with lemon is excellent in hydrating the body. The issue of "Dry mouth" is also related to nerves, so also a calm environment is the key to happy fluting. Adrenalin is a special topic — keep eating a piece of fruit every few hours, before a performance bananas are a great secret! With a relaxed setup and a good flute technique the air speed and air volume is regulated in the body rather than in the embouchure. With good technique and air management / support embouchure problems become less apparent.

5) Impaired vision

Not only for senior flutists an A3 copy machine can provide a lot of relief. When we read music on small print our eyes become strained and this strain follows through the entire body. Making an enlarged photocopy of the music can be the key to a relaxed playing experience also for younger players. Playing by ear and memorising can also be very beneficial to adult learners. Without the connection to the sheet music it is easier to listen to the tone and rotate your focus to all areas of flute playing. Using improvisation and loops can also be a fun way to overcome this issue. Mouches volantes can be irritating, when reading sheet music. Easy steps: Bifocal glasses, better lighting (3x more as needed for a 20 year old), more contrast and larger print in sheet music (no blue background, no blue print).

Gadgets and instrument options:

Flute cushion

https://www.adams-music.com/en/accessories/thumb_rests/flute_cushion_flute

Lefreque Sound Bridges

<https://www.lefreque.com/>

Jupiter Loop Flutes

<https://www.jupiter.info/loop-konzept>

Solexa Thumbports

<http://www.thumbport.com/product.html>

Links:

Time for basics / Rockstro position in depth article with many original sources by Petra Music

https://www.petramusicflute.com/files/ugd/4ee36b_6f578f989f4c4d34bdda93022e3f40f7.pdf

BKS Iyengar: Light on Pranayama (see page 10)

<https://mantrayogameditation.org/wp-content/uploads/2019/12/Iyengar-BKS-Light-on-Pranayama-OCR.pdf>

Baoding balls for stretching exercises for the hands

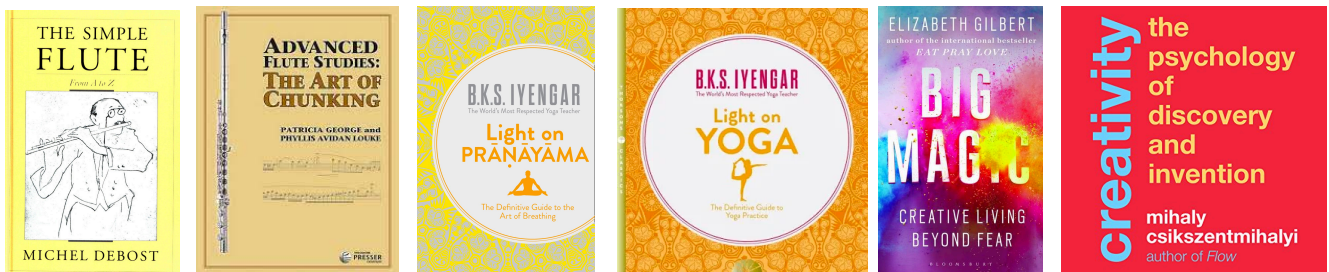
<https://insighttimer.com/blog/baoding-balls/>

Dr. Schmiedel, specialist for nutrition and orthomolecular healing

<https://www.dr-schmiedel.de/>

Theory of healthy ageing:

<https://www.msmanuals.com/de/heim/gesundheitsprobleme-bei-%C3%A4lteren-menschen/alterserscheinungen/%C3%BCbersicht-%C3%BCber-alterserscheinungen>

Reading:

Dr. Petra Music teaches flute, chamber music and performance teaching at the Mozarteum University Salzburg / Department for Music Education Innsbruck. A busy concert schedule is leading her as a soloist, chamber musician and in orchestra-, new music-, and opera projects to festivals in Europe, USA, Australia, China and Taiwan. Petra is also a sought after masterclass/workshop teacher for flutists of all playing abilities which she conducted in cities such as Moscow, Amsterdam, Berlin, Munich, Taipei, Cologne, London, Luxembourg amongst others. She serves as adjudicator for initiatives such as Dutch Flute Competition (2021) My Flute Konkurs, Moscow (2012-2016) and judged and coordinated the Azumi flute competition from 2009-2011. She completed her studies in 2008 at the KUG Graz (Austria) under Dieter Flury and the University of Illinois at Urbana Champaign (USA) under Jonathan Keeble (DMA in Performance and Literature Flute, MA Artist Diploma and MA Performance Teaching) and obtained her Master's degree in baroque flute at the Conservatorio dell'Abaco Verona studying with Marcello Gatti and Marco Brolli in 2022. She published many flute and flute pedagogy related articles in Flöte Aktuell, Flute Talk and Pan. Her publications and music can be found on her website: www.petramusicflute.com

