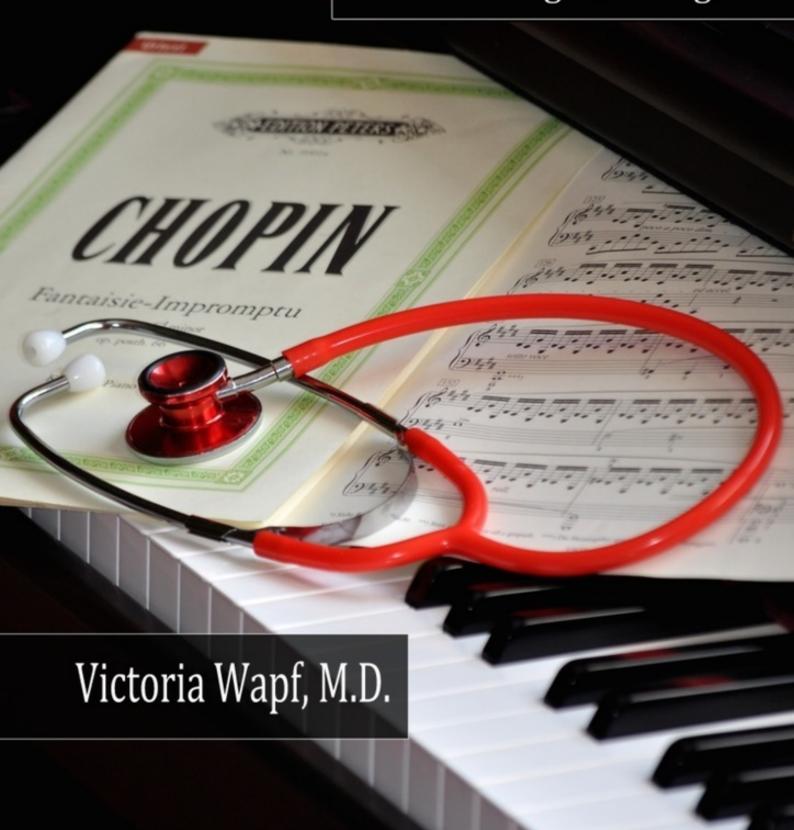
# THE DISEASE OF CHOPIN

a comprehensive study of a lifelong suffering



## Victoria Wapf

# The Disease of Chopin. A comprehensive study of a lifelong suffering

#### Wapf V.

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The life of the Polish-French pianist and composer Frédéric Chopin (1810—1849) was, to a great extent, influenced by his disease. Nevertheless, the diagnosis and differential diagnoses of his suffering remain a matter of debates in numerous biographical studies on the composer's life. This study shall conduct a systematization and overview of Chopin's medical history, in an effort to outline pathways to his most probable diagnosis.

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# The Disease of Chopin A comprehensive study of a lifelong suffering

### Victoria Wapf

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#### **Abstract**

#### Introduction

The life of the Polish-French pianist and composer Frédéric Chopin (1810—1849) was, to a great extent, influenced by his disease. Nevertheless, the diagnosis and differential diagnoses of his suffering remain a matter of debates in numerous biographical studies on the composer's life. This study shall conduct a systematization and overview of Chopin's medical history, in an effort to outline pathways to his most probable diagnosis.

#### Overview of methods

In this paper, the medical literature on Chopin's disease was examined to weigh up the existing evidence in the light of today's medical knowledge and to define possible ways to extend such evidence with modern diagnostic methods. The literature search included three steps. First, a thorough search for available publications was conducted to identify and acquire all medical documents describing F. Chopin's status and disease (s). The second step involved sifting of the reference lists in the articles retrieved from the first step. The third step was aimed at the retrieval of complementary documents of interest (for example, biographic, demographic or historical documents authored by specialists other than medical professionals) that may help to understand Chopin's disease in its historical, cultural and social context.

#### Results

Based on the existing data, it was found that the diagnosis of tuberculosis still outweighs the cystic fibrosis version in Chopin's case. However, various noxious factors during his life may have shaped the course and severity of the disease. Fully inadequate – by today's standards – and often potentially harmful treatment (including bloodletting, herbal remedies or other potentially toxic substances) as well as a prolonged exposure to tobacco smoke (passive smoking) could have played a crucial role in Chopin's pathology, bringing the pianist and composer closer to his death.

#### **Conclusions**

The total body of evidence gathered from the current and historical literature allows for a strong presumption of tuberculosis as Chopin's diagnosis. However, other primary diagnoses, comorbidities, as well as consequences of an iatrogenic exposure should still be regarded and may not be fully discounted.

An analysis of existing tissue specimens could yield additional valuable information and help to resolve the decades-long discussion about Chopin's diagnosis.

#### List of abbreviations

AAT – alpha-1-antitrypsin

ABPA – allergic bronchopneumonic aspergillosis

CF – cystic fibrosis (mucoviscidosis)

CVID - common variable immunodeficiency

EGPA – eosinophilic granulomatosis with polyangiitis

GPS – anti-glomerular basement membrane disease (Goodpasture's syndrome)

HHT – hereditary hemorrhagic telangiectasia

PAH – pulmonary arterial hypertension

PAVM – pulmonary arteriovenous malformations

PCD – primary ciliary dyskinesia

PH – pulmonary hemosiderosis

PID – primary immunodeficiency

SERPINA – serine proteinase inhibitor

GPA – granulomatous polyangiitis

Key words: Frederic Chopin; tuberculosis; cystic fibrosis; lung diseases; differential diagnosis.

#### Introduction

Chopin – again not seeking gain But improvising off the wing — Alone works with chance and clay From likelihood to one true thing. B. Pasternak, 1935

Mortui vivos docent
("the living learn from the dead")
Latin saying.

Both life and creative endeavors of Frédéric Chopin (1810—1849), a pianist and composer of French-Polish origin, were in many ways shaped by his disease. Chopin's chronic condition still remains not clearly identified and evokes debates. Given the scarcity of medical-biographic data, Chopin's symptoms provoked a number of thoughts and discussions both in the historical and medical community. However, despite the obvious interest in this topic, and a number of recent publications – especially around the recent bicentennial (2010) of the pianist/composer – there were no broad review of his possible and probable diagnosis in the recent time. The classic work, Chopin's pathography by Edmond R. Long (1956)<sup>1</sup> was focused on tuberculosis only. Later scholars explored further possible diagnoses, with cystic fibrosis (O'Shea, 1987)<sup>2</sup> being the most known. Nevertheless, virtually all reports on the composer's life and disease were centered on one or two possible pathologies only. In this comprehensive review, the medical and historical literature on Chopin's disease and on the medicine of that era was examined to evaluate tuberculosis and cystic fibrosis, as well as other possible conditions for their significance in influencing the health of the innovative musician during his lifetime. It was found that though tuberculosis remains the usual suspect, several other hypotheses cannot be discounted either, especially if further exploratory methods may potentially become available. Chopin's situation is unique, because in his case a tissue specimen could possibly shed further light on his disease, and, consequently, on our understanding of his life and works.

Moreover, the study of Frédéric Chopin's medical history is an exciting opportunity to gain additional insights into the nineteenth century medicine, in the physician-patient relationships, and to see how the progress of medical science in the newer times has contributed to diagnostic and treatment of formerly fatal diseases. While working on this review, clear preference was given to the studies and interpretations of Chopin's life and disease done by medical professionals – physicians, medical historians and pathologists. Other sources, such as personal communication of Chopin himself and his family and friends were used as well.

This study is divided into several chapters. It starts with a nearly forensic review of Chopin's medical history, following a standard pattern of a patient examination. The primary purpose of this chapter is to provide as many clinically relevant data as possible in order to lay a foundation for diagnosis and differential diagnosis. The following two chapters contain information about Chopin's physicians, their professional profiles, and modes of treatment. A profound understanding of Chopin's disease history would only be possible with knowing on who treated him and which principles each treatment was based on. As it is often the case throughout the whole human and medical history, a treatment itself may become an aggravating factor or even the cause

<sup>&</sup>lt;sup>1</sup> Long, E. (1956), "A History of the Therapy of Tuberculosis and the Case of Frederic Chopin". Lawrence: University of Kansas Press, 1956.

<sup>&</sup>lt;sup>2</sup> O'Shea, J. (1987), "Was Frédéric Chopin's illness actually cystic fibrosis?". Med J Aust. Dec 7—21; 147 (11—12), 586—9.

of the patient's suffering. Chopin, as a patient with chronic disease (s), had an extensive list of medications, many of them with a potential for toxicity or interactions. That is why his treatment deserved a separate chapter here.

Following the examination of Chopin's medical history is a discussion on the terminal period and post-mortem exploration of the composer's disease. Chopin's case is standing out because at least in theory, a further exploration with today's instrumental methods is technically possible thanks to the existence of the tissue specimen.

The next chapter is the most crucial one. It is focused on the diagnosis and differential diagnosis of Chopin. Beginning with an outline of two leading hypotheses for Chopin's most suspected diagnoses, namely tuberculosis and cystic fibrosis, other, less known or less probable diagnoses and discuss possible comorbidities will be reviewed and described in detail. Finally, an attempt to lay out an examination plan with the twenty-first century methods of analysis will be undertaken in order to advance our understanding of Chopin's disease.

#### 1.1 Methods: detailed description

The literature search for this study involved three steps: the search criteria, the timeframe and what information to extract – all this was set prior to the start of the study. The first step of the literature search took place between October 16<sup>th</sup> and November 16<sup>th</sup> 2013 and had the following objectives:

- databases search and retrieval of relevant documents
- quality assessment of those documents
- weighing up the total volume of evidence for CF and TBS
- identification of knowledge gaps, i.e. subjects of search at the step III.

At this step, a search for available publications was conducted to identify all medical documents describing Chopin's status and disease (s). The following search criteria were employed with strong preference for academic journal articles as sources:

- records by attending physicians if any such exist;
- records by other medical and/or paramedical professionals (coroners, pathologists etc.) if any;
- publications at the PubMed and other medical/scientific databases (Questia, Science Direct, MedlinePlus, Cochrane Library, CHBD (Circumpolar Health Bibliographic Database), the Directory of Open Access Journals, Web of Knowledge, Worldwide Science, and Index Copernicus);
- other relevant publications by medical professionals (such as biographic, demographic or historical documents);

The search languages were English, German, French, Polish, and Russian. Though valuable and interesting publications exist in such languages as Norwegian and Hebrew, they remain outside of the scope of this review. Since it would be obviously technically challenging to do a comprehensive search in a greater number of languages, this search was limited to those languages spoken/written by Chopin himself. Following words were used for the search in all databases: <Frederic Chopin disease>, <Fryderyk Chopin disease>, <Frederic Chopin Krankheit>, <Frédéric</p> Chopin maladie>, <Fryderyk Chopin choroba>, <Фредерик Шопен болезнь>. Additionally, the PubMed database was searched for < Frederic Chopin > and for < Frédéric Chopin >. Following information was set to extract: symptom descriptions, treatments descriptions, dietary preferences, lifestyle details, quality assessment of studies. Inclusion criteria at the first step were: date of publication later than 1948 (the year when Chopin's heart tissues were made available for research); a provision of justified (i.e. based on official archive documents or similar sources) hypotheses. The first step's exclusion criteria were lack of references, languages other than those ones listed above, wrong author (not a medical professional or a medical historian or a related official, for example a coroner). Hence, the standard set of reasons of rejection included wrong topic, wrong specialist, and wrong language.

The next (second) step involved sifting of the reference lists in the articles retrieved from the first step. The inclusion criterion at this step was a provision of justified (i.e. based on official archive documents or similar sources) hypotheses. At this step also publications by authors other than medical professionals were included (for example, biographic, demographic or historical documents authored by specialists or family members). The step II exclusion criteria were a lack of references and wrong languages (i.e. other than those listed above).

Finally, the last step of search was aimed at a retrieval of additional documents of interest that may not fit into the step I and II criteria, but may help to understand Chopin's disease in its

historical, cultural and social context. A hand search was attempted for the genealogical data and for original publications by Chopin's attending physicians.

The first step of the literature search (between October 16<sup>th</sup> and November 16<sup>th</sup> 2013) was aimed at identifying of all medical documents describing Chopin's status and disease (s). Six publications were found at PubMed³. Sixteen publications were found with additional key words at PubMed: "Frederic Chopin"<sup>4</sup>. With a "related citations" option: 152 publications were found in a PubMed search⁵. Both PubMed and Go PubMed searches yielded the same results as the PubMed search. A Cochrane library search brought no results, as well as the CHBD (Circumpolar Health Bibliographic Database, the Directory of Open Access Journals, Worldwide Science, Index Copernicus (this database includes over 700 journals from Poland), and the Medline Plus. A search in the Questia database yielded twenty-two books and two academic journal articles⁶. A search at the Web of Knowledge: twelve results<sup>7</sup>. Sixty-two more results were found at the Science Direct database.

After this three-step search was completed, the gathered information was systematized in a form of medical history.

<sup>&</sup>lt;sup>3</sup> Search results, retreived on 16. October 2013 at: [битая ссылка] http://www.ncbi.nlm.nih.gov/pubmed/?term=Frederic +Chopin+disease.

<sup>&</sup>lt;sup>4</sup> Search results, retreived on 16. October 2013 at: [битая ссылка] http://www.ncbi.nlm.nih.gov/pubmed/?term=Frederic +Chopin.

<sup>&</sup>lt;sup>5</sup> Search results, retreived on 16. October 2013 at: [битая ссылка] http://www.ncbi.nlm.nih.gov/pubmed.

<sup>&</sup>lt;sup>6</sup> Search results, retreived on 16. October 2013 at: http://www.questia.com/searchglobal?q=keyword!frederic%20chopin%20disease!allwords#0000Book.

<sup>7 .</sup>Search results, retreived on 16. October 2013 at: [битая ссылка] http://apps.webofknowledge.com/summary.do? SID=Z1oHXp5Dd8JgXZBKJ5H&product=UA&qid=2&search\_mode=GeneralSearch.

#### **Medical history**

#### 1.2 Identification and demographics

Frédéric François Chopin (Frydrych Franciszek Chopin, Fryderyk Franciszek Chopin) was born on the 22nd of February or [битая ссылка] 1st of March or 5<sup>th</sup> of March<sup>8</sup>,<sup>9</sup> to a Polish mother – Justyna Chopin and a French father, Nicolas Chopin. Multiple name versions originate in the differences of pronunciation and spelling in Polish and French languages. Most Chopin's biographers agree upon the 1<sup>st</sup> of March as the birth date of the composer, although his baptism certificate states 22 February as his birthday. As a regular practice at that time the baptism certificate was issued on the basis of mere recollections of his father. Justyna Chopin, on the contrary, insisted that March 1 was his birth date<sup>10</sup>. Not only there are controversies regarding Chopin's day of birth, but even his year of birth is not entirely free of doubts: though 1810 is the birth year mentioned in most biographic studies, some scholars suggest that Chopin could possibly have been born in 1809<sup>11</sup>.

Chopin's birthplace, a village named Żelazowa Wola, belonged to the Duchy of Warsaw, in 1810 the Duchy was a semi-independent political entity, ruled by a Prussian king, Frederick Augustus I of Saxony based on a peace treaty with Napoleon.

<sup>&</sup>lt;sup>8</sup> Kubba, A., Young, M. (1998), "The long suffering of Frederic Chopin". Chest 113 (1), 210—6.

<sup>&</sup>lt;sup>9</sup> Sorbie, S. (2010), "Frédérick François Chopin". Orthopedics. Vol. 33 (3), pp. 146.

<sup>&</sup>lt;sup>10</sup> Marek, G.R., Gordon-Smith, M. (1978) "Chopin". New York: Harper & Row,:15,

<sup>&</sup>lt;sup>11</sup> a). Ganche, E. (1926) "Frédéric Chopin: Sa Vie et Oeuvres". Paris, as cited in Kuzemko, J. (1994), "Chopin's illnesses", J Roy Soc Med **87**, 769—772. b). Böhme, G. (1981), "Medizinische Portrats berühmter Komponisten: Wolfgang Amadeus Mozart, Ludwig van Beethoven, Carl Maria von Weber, Frederic Chopin, Peter Iljitsch Tschaikowski, Bela Bartok". (German Edition), G. Fischer. c) Mysakowski, P. (2010), "Fryderyk Chopin: The Origins". The Chopin Institute.

#### 1.3 The case description

A reconstruction of Chopin's medical history today is based on scarce archive documents that include personal letters and official documents, but few, if any, medical records that survived till our days.

#### Perinatal period

No known sources describe Justyna Chopin's pregnancy course. Chopin was not a robust healthy newborn. Most likely he has had serious health problems that threatened his life right at its dawn. His baptismal certificate issued on 23rd of April 1810 states that an earlier christening ceremony was already held at home. Such home baptizings were performed if the baby could die shortly upon birth<sup>12</sup>.

Chopin was born at home, in his parents' bedroom in the presence of a midwife. This was the most common setting for a delivery at that time. The midwifery and obstetrics in early 1800s has just started to gain moment for the further development. Following the Thirty Years War (1618—1648) the Europe was faced with a threat of depopulation. A human life – and a newborn's life in particular – gained in perceived societal value. At the same time mass prosperity grew along with increased industrial productivity. As a result many larger cities in Europe took efforts to reform midwifery provision and to improve the perinatal care. One of the midwifery textbooks of that era, the "Burn's Principles of Midwifery: including the diseases of women and children", published in London in 1809 and in Philadelphia in 1810<sup>13</sup>, provides important insights into what kind of treatment Chopin and his mother might have received. Though archaic and even harmful from today's viewpoint (for example, a bleeding is strongly recommended there for pain relief), the "Burn's Principles of Midwifery..." is certainly an example of an effort to improve the midwifery training and to streamline the care.

A glimpse into the midwife's records or recollections of Chopin's family members on the circumstances of his birth would be of an enormous help. But in the absence of such documents it is not possible anymore to elucidate what exactly perinatal issues may have led the parents to believe that their newborn was at risk of dying and to perform a quick christening at home.

#### Childhood and adolescence

Virtually all biographers agree that Frederic was a delicate, thin, sensitive child, who tired easily and had low tolerance for strenuous physical activities – such as walk excursions in the countryside<sup>14</sup>. However, it is interesting that various narrators have sometimes polar views of Chopin's health condition in his early years. The majority of Chopin's biographs believe that he was not seriously ill, but Dr. Wilms has challenged this view in 1934<sup>15</sup>, pointing out that Chopin was such a frail child, that he wasn't even allowed to attend a school due to the health concerns and was home-schooled till the age of 13.

<sup>&</sup>lt;sup>12</sup> Myslakowski, P. (2010), "Was Chopin born 200 years ago?". Magazyn Chopin.

<sup>13</sup> Retrieved from [битая ссылка] https://archive.org/details/2544080R.nlm.nih.gov at the 1st of February, 2014.

<sup>14</sup> a) Gomis, M., Sanches, B. (2000), "Music and infectious diseases". Clin Microbiol Infect. 2000 Nov; 6 (11):575—8. b) Kuzemko, J. (1994), "Chopin's illnesses". J Roy Soc Med 87, 769—772. c) Böhme, G. (1981), "Medizinische Portrats berühmter Komponisten: Wolfgang Amadeus Mozart, Ludwig van Beethoven, Carl Maria von Weber, Frederic Chopin, Peter Iljitsch Tschaikowski, Bela Bartok". (German Edition), G. Fischer. d). Majka, L., Gozdzik, J. (2003), "Cystic fibrosis – a probable cause of Frederic Chopin's suffering and death". J Appl Genet. 2003; 44 (1), 77—84, referring to Sieluzycki, C. (1981), "Frederick Chopin's diseases. Their pathogenesis and treatment". Arch Hist Med (Warsz). 1981;44 (3—4):237—56.

<sup>&</sup>lt;sup>15</sup> Böhme, G. (1981), "*Medizinische* Portrats berühmter Komponisten: Wolfgang Amadeus Mozart, Ludwig van Beethoven, Carl Maria von Weber, Frederic Chopin, Peter Iljitsch Tschaikowski, Bela Bartok". (German Edition), G. Fischer. p.111.

Marek (1978)<sup>16</sup> stated that from his earliest years Chopin was "attended by doctors and did not enjoy good health". Breitenfeld (2011) also mentions symptoms "associated to the lung", such as hemoptysis, fever, headache, bronchitis, laryngitis, cough, recurrent diarrhea and body weight loss yet in childhood<sup>17</sup>. Gomis (2011) adds that "from an early age [Chopin] carried out a daily bronchial toilette... and suffered from arthralgia" Majka (2003), referring to Sieluzycki (1981), depicts Chopin's frail health and multiorgan complaints that started early in the childhood and were accompanied by frequent respiratory tract infections<sup>19</sup>.

Still, Franzen (2010) holds a slightly different opinion:

"During his childhood and adolescence no abnormalities found in Chopin's medical history. This [was] despite of colds, rhinitis and "catarrhal affections", frequently mentioned in Chopin's letters<sup>20</sup>.

Ganche (1935) describes a fourteen years old Frédéric as having a frail body and a bony face, emaciated and white<sup>21</sup>. Ganche quotes the first letter of adolescent Chopin, dated by the 10<sup>th</sup> of August 1824 where the boy reveals that a bottle of pills is sent to him by his parents during his stay in the countryside, and it should last for almost a month.

Further authors draw a line upon those accounts: "From 15 years of age *the* composer was never without some evidence of respiratory disease... foggy or wintry weather provoked both respiratory disease and paroxysms of coughing<sup>22</sup>, with significant frontal headaches and respiratory symptoms<sup>23</sup>. Also Erlinger (2010) refers to 1826 as the year of the first exacerbation of Chopin's illness<sup>24</sup>. Erlinger lists following clinical symptoms:

"...repeated episodes of productive cough, asthenia, fever and hemoptysis...at that time, he has an illness lasting 6 months, with respiratory complaints, and severe headaches".

Kubba and Young (1998), describing the same episode, noted that this illness has even endangered Chopin's life<sup>25</sup>. Chopin was described as "frail, slim, with sunken cheeks". He was said to "die early as many geniuses before him did", and he was always coming after physical activity "tired and without any breath"<sup>26</sup>. On February 12<sup>th</sup> 1826 Chopin writes to his friend Jan Bialoblocki that he is sick (as "everybody else") and his glands are swollen<sup>27</sup>. However, Chopin

<sup>&</sup>lt;sup>16</sup> Marek, G. (1979) "Chopin". New York: Harper and Row, 1979, cited in Kuzemko, J. (1994), "Chopin's illnesses". J Roy Soc Med **87**, 769—772.

<sup>&</sup>lt;sup>17</sup> Breitenfeld, D., Kust, D., Turuk, V., Vucak, I., Buljan, D., Zupanic, M., Lucijanic, M. (2010), "Frederic Chopin and Other Composers Tuberculotics – *Pathography*". Alcoholism **46 (2)**, 101—7.

<sup>&</sup>lt;sup>18</sup> Gomis, M., Sanches, B. (2000), "Music and infectious diseases". Clin Microbiol Infect. 2000 Nov; 6 (11):575—8.

<sup>&</sup>lt;sup>19</sup> Majka, L., Gozdzik, J. (2003), "Cystic fibrosis – a probable cause of Frederic Chopin's suffering and death". J Appl Genet. 2003;**44 (1):**77—84, referring to Sieluzycki (1981).

<sup>&</sup>lt;sup>20</sup> Franzen, C. (2010), "Frederic Chopin, Robert Schumann und Gustav Mahler: Musik und Medizin zwischen Romantik und Moderne", DMW – Deutsche Medizinische Wochenschrift., Dec, 2010. Vol. **135 (51/52),** pp. 2579—2587. Thieme Publishing Group.

<sup>&</sup>lt;sup>21</sup> Ganche, E. (1935), "Souffrances de Frederic Chopin. Essai de médecine et de psychologie". Paris: Mercure de France, p. 115.

<sup>&</sup>lt;sup>22</sup> O'Shea, J. (1987), "Was Frédéric Chopin's illness actually cystic fibrosis?". Med J Aust. Dec 7—21;**147 (11—12**), 586—9

<sup>&</sup>lt;sup>23</sup> Breitenfeld, D., Kust, D., Turuk, V., Vucak, I., Buljan, D., Zupanic, M., Lucijanic, M. (2010), "Frederic Chopin and Other Composers Tuberculotics – *Pathography*". Alcoholism **46 (2)**, 101—7.

<sup>&</sup>lt;sup>24</sup> Erlinger, S. (2010), "Frederic Chopin and Michael Jackson: What could they have in common?", Gastroenterologie Clinique et Biologique 34 (4—5), 246, referring to G. Sand's and F. Liszt's accounts.

<sup>&</sup>lt;sup>25</sup> Kubba, A., Young, M. (1998), "The long suffering of Frederic Chopin", Chest 113 (1), 210—6

<sup>&</sup>lt;sup>26</sup> Majka, L., Gozdzik, J. (2003), "Cystic fibrosis – a probable cause of Frederic Chopin's suffering and death". J Appl Genet. 2003;**44 (1):**77—84, referring to Sieluzycki (1981)."Frederick Chopin's diseases. Their pathogenesis and treatment". Arch Hist Med (Warsz). 1981;**44 (3—4):**237—56 44 (3—4), 237—56.

<sup>&</sup>lt;sup>27</sup> Chopin, F., Scharlitt, B. "Friederich Chopins gesammelte Briefe". Leipzig: Breitkopf & Härtel, 1911, as cited in Franzen, C. (2010), "Frederic Chopin, Robert Schumann und Gustav Mahler: Musik und Medizin zwischen Romantik und Moderne", DMW – Deutsche Medizinische Wochenschrift., Dec, 2010. Vol. **135** (51/52), pp. 2579—2587. Thieme Publishing Group. and in O'Shea,

fully recovers from this ailment and his swollen glands (that were interpreted by some authors as cervical lymphadenopathy<sup>28</sup>) are healed by September 1826 without sequelae. His later episodes of illness tend to take the same course – always a full recovery, but the next strike of a disease follows after some time.

On November 2<sup>nd</sup> 1826, in another letter to Jean Bialoblocki<sup>29</sup>, Chopin writes that he is not going to school and that he finds it a pinnacle of absurdity to rest for six hours a day, while the German and Polish-German doctors have prescribed him as many walks as possible. This letter also gives a glimpse into Chopin's treatment: emetic drinks (upon a prescription by Dr. Malcz) and a diet of oatmeal. Chopin's therapies will be further discussed in Chapter, "".

In 1830, Chopin left Warsaw for a trip, including Vienna, Munich, and Stuttgart, to Paris. One of his Viennese encounters, a professor of music, Václav Würfel (1790 – 1832) suffered from tuberculosis. Chopin's nose swelled embarrassingly with a prolonged cold and at times even forced him to cancel concerts<sup>30</sup>. However, Wilfred (2010) argued that there is no evidence that Chopin, aged twenty-one, was in "poor health or affected by the illness that would plague him in later life"<sup>31</sup>.

In Paris (1831) Chopin had an episode of hemoptysis and fever but recovered very quickly<sup>32</sup>. On Christmas Day, 1831, he wrote to his friend of many years (and once a love interest) Titus Woyciechowski, « [O] utwardly I am cheerful but inside me I am tortured with all sorts of forebodings." Chopin does not associate his premonitions with any particular physical ailment, but subsequent letters speak of ill health with increasing frequency<sup>33</sup>. No known medical records dated 1832 through 1835 shed further light on Chopin's health<sup>34</sup>. He seems to have has a quiet phase for nearly five years and this is probably the happiest period of his life. Various sources show that between autumn of 1835 (following a resort stay in Karlsbad) and autumn of 1838, Chopin has had bouts of bronchitis and suppurative laryngitis. Though those bouts always resolved, they recurred again after some time<sup>35</sup>.

According to those sources, in autumn of 1835, Chopin suffered of cough, fever and hemoptysis<sup>36</sup>. Most likely, his condition was unusually serious at that time and Chopin may have suffered from depression. This was the time when he composed his famous "Funeral March" from his "Sonata in B Flat Minor" and prepared his testament.

In February 1837, Chopin caught an "acute grippe" with high fever and hemoptysis. At the same time he also experienced hallucinations, hearing "knocking on his door and seeing death standing there"<sup>37</sup>. Around that time Chopin met Amantine-Lucile-Aurore Dupin (better known

J. (1987), "Was Frédéric Chopin's illness actually cystic fibrosis?". Med J Aust. Dec 7—21;147 (11—12), 586—9.

<sup>&</sup>lt;sup>28</sup> Kubba, A., Young, M. (1998), "The long suffering of Frederic Chopin", Chest 113 (1), 210—6

<sup>&</sup>lt;sup>29</sup> as cited in Ganche, E. (1935), "Souffrances de Frederic Chopin. Essai de médecine et de psychologie". Paris: Mercure de France, p. 116.

<sup>&</sup>lt;sup>30</sup> O'Shea, J. (1987), "Was Frédéric Chopin's illness actually cystic fibrosis?". Med J Aust. Dec 7—21;**147 (11—12)**, 586—9.

<sup>&</sup>lt;sup>31</sup> Wilfred, N. (2011), "Chopin's heart", Hektoen Int'l Volume **3**, Issue 1, referring to Long, E. (1956), "A History of the Therapy of Tuberculosis and the Case of Frederic Chopin", Lawrence: University of Kansas Press, 1956.

<sup>&</sup>lt;sup>32</sup> O'Shea, J. (1987), "Was Frédéric Chopin's illness actually cystic fibrosis?". Med J Aust. Dec 7—21;**147 (11—12**), 586—9.

<sup>&</sup>lt;sup>33</sup> Hedley, A. "Selected correspondence of Fryderyk Chopin". London: Heinemann; 1962, as cited in Wilfred, N. (2011), "Chopin's heart", Hektoen Int'l Volume 3, Issue 1.

<sup>&</sup>lt;sup>34</sup> Ganche, E. (1935), "Souffrances de Frederic Chopin. Essai de médecine et de psychologie". Paris: Mercure de France, p. 120.

<sup>35</sup> a) O'Shea, J. (1987), "Was Frédéric Chopin's illness actually cystic fibrosis?". Med J Aust. Dec 7—21;**147 (11—12**), 586—9. b). Chopin F, Scharlitt B. (1911). "Friederich Chopins gesammelte Briefe". Leipzig: Breitkopf & Härtel, as cited by Franzen C (2010), "Frederic Chopin, Robert Schumann und Gustav Mahler: Musik und Medizin zwischen Romantik und Moderne", DMW – Deutsche Medizinische Wochenschrift., Dec, 2010. Vol. **135 (51/52)**, pp. 2579—2587. Thieme Publishing Group.

<sup>&</sup>lt;sup>36</sup> Chopin, F., Scharlitt, B. (1911). "Friederich Chopins gesammelte Briefe". Leipzig: Breitkopf & Härtel, as cited by Franzen C (2010), "Frederic Chopin, Robert Schumann und Gustav Mahler: Musik und Medizin zwischen Romantik und Moderne", DMW – Deutsche Medizinische Wochenschrift., Dec, 2010. Vol. 135 (51/52), pp. 2579—2587. Thieme Publishing Group.

<sup>&</sup>lt;sup>37</sup> Szulc, T. (1999), "Chopin In Paris: The Life And Times Of The Romantic Composer". Da Capo Press, as cited in Caruncho, V. M. & Fernandez, B. F. (2011), "The hallucinations of Frederic Chopin", Medical Humanities **37 (1),** 5—8.

under her artistic name George Sand), a famous French novelist. This acquaintance has evolved into an intimate relationship.

The November 1838 trip to Mallorca together with George Sand and her children became a disaster. This journey was described by Sand in a book "Un hiver à Majorque" (A Winter in Mallorca). According to her, Chopin had all signs of pneumonia and the island inhabitants grew suspicious and distant to the couple, as they believed that Chopin has had a contagious disease. The fact that Sand and Chopin were not married did not help their popularity among Mallorcans either. That is why it was all but impossible to obtain a better dwelling than the one where Chopin and Sand have stayed. Both two-story chambers they occupied at the monastery Sa Cartoixa de Jesús Natzarè in Valldemossa were barely heated and damp. Sand wrote that Chopin coughed up sputum "by the bowlful". That winter Chopin was seen by at least three Mallorcan doctors. As George Sand recollected, the recommended treatment included application of plasters at various intervals during the day and consumption of milk. However, no milk was available there<sup>38</sup> – likely due to the resentment of local inhabitants who did not want to have a potentially contagious patient to be around. In addition of all those hardships and his health continuing to deteriorate, Chopin's piano has got stuck with the Spanish customs, so he did not compose much till the end of December 1838: "Meanwhile my manuscripts are sleeping whereas I cannot sleep" 199

But already by mid-January 1839, Chopin sends the Preludes op. 28 to Fontana with an instruction to pass them to Mr. Pleyel, a music publisher<sup>40</sup>. A very productive phase followed and Chopin wrote, corrected or finalized during his stay on Mallorca following works, to name a few: Polonaise in C-minor, op. 40, Mazurka in E-minor, op. 41 no. 2, Scherzo in C-sharp minor, op. 39 (drafts), Nocturne in G-minor, op. 37, no., Tarantella op. 43 (draft), and Sonata in B flat minor, op. 35<sup>41</sup>. Most of those pieces were done by Chopin which has not yet fully recovered from the disease on "a poor Mallorcan piano..."<sup>42</sup>

Later in 1838 he experienced pulmonary problems again<sup>43</sup>. After three months on the island, Chopin and Sand with her children left Mallorca on the 13<sup>th</sup> of February 1839. On their way back to Paris, in Marcel, Chopin recovered, at least for a while. His strength was back, there were no more hemoptysis and he started to gain weight again<sup>44</sup>. Nevertheless the very same author, referring to G. Sand, says that for the next few years, Chopin continued to have cough bouts with dyspnea and intermittent fevers. Sand's recollections show that he was then never absolutely well and experienced a slow progressive decline in his health.

Chopin was successfully treated with 'oats and honey' and often "courses of belladonna. which he continued to take through most of his life"<sup>45</sup>. Belladonna has centuries-long history of use as a medicine<sup>46</sup>, however it is not clear who, when, and for what purpose exactly prescribed or recommended it to the pianist. Kuzemko (1994) argues that a diet may have had a positive influence

<sup>&</sup>lt;sup>38</sup> O'Shea, J. (1987), "Was Frédéric Chopin's illness actually cystic fibrosis?". Med J Aust. Dec 7—21;**147 (11—12)**, 586—9.

<sup>&</sup>lt;sup>39</sup> Letter to Fontana on December. 14, 1838 in Niecks, Vol. II, p. 27.

<sup>&</sup>lt;sup>40</sup> Letter to Fontana on January, 12, 1839 in Niecks, Vol. II, pp. 30—31.

<sup>&</sup>lt;sup>41</sup> Adamczyk-Schmid, B. (1986—1990), "Les variantes du texte de Frédéric Chopin dans les manuscrits musicaux de la collection d'Anne-Marie Boutroux de Ferrà's Collection in Valldemossa" in: "Chopin Studies" **3**, The International Musicological Symposium "Chopin and Romanticism" Warsaw, 17—23 October 1986, Warsaw 1990, {Adamczyk-Schmid 1990}, cited by Institute Chopin (PL), retrieved on August 18, 2014 from http://www.chopin.pl/majorca.en.html#8.

<sup>&</sup>lt;sup>42</sup> Sand, G., Letter to Mme Marliani, January 15, 1839 in Niecks, Vol. II, pp.31—32.

<sup>&</sup>lt;sup>43</sup> Sand, G. "Winter in Majorca". Graves, R., transl. 1956:135—45, as cited in Kuzemko, J. (1994), "Chopin's illnesses". J Roy Soc Med **87**, 769—772.

<sup>&</sup>lt;sup>44</sup> O'Shea, J. (1987), "Was Frédéric Chopin's illness actually cystic fibrosis?". Med J Aust. Dec 7—21;**147 (11—12**), 586—9.

<sup>&</sup>lt;sup>45</sup> Kuzemko, J. (1994), "Chopin's illnesses". J Roy Soc Med **87**, 769—772.

<sup>&</sup>lt;sup>46</sup> Ebadi, M. (2007). "[битая ссылка] Pharmacodynamic Basis of Herbal Medicine". CRC Press. p. 203. [битая ссылка] ISBN [битая ссылка] 9780849370502.

on the course of Chopin's disease, citing the composer's letter to his parents from Berlin, written on September, 27, 1828<sup>47</sup>: "I am quite well... as long as I avoid meats, sauces, soups"<sup>48</sup>. However, this very same letter is quoted differently by another source (text in bald – VW):

"I am quite well, and have seen all that [was] to be seen. I shall soon be with you again. In a week, from the day after tomorrow, we shall embrace [...] I count among the great events of my visit here the second dinner with the scientists, which took place the day before the conclusion of the Congress, and was really very lively and entertaining. Several very fair convivial songs were sung, in which all the company joined more or less heartily. Zelter conducted, and a large golden cup, standing on a red pedestal, in front of him, as a sign of his exalted musical merits, appeared to give him much satisfaction. The dishes were better that day than usual, they say, "because the scientists have been principally occupied during their sittings with the improvement of meats, sauces, soups, etc..."

It is beyond of scope of this study to assess the biographic precision of both sources and to define which translation conveys a better sense of Chopin's letters (they were originally written in French). Both sources do not specify whether that "quite well" description referred to Chopin's digestive or respiratory issues. However, according to the authors in favor of the cystic fibrosis version, those gastrointestinal symptoms were not new for Chopin. Yet during his early adolescence he developed intolerance to 'fatty foods' which resulted in recurrent prolonged episodes of diarrhea and weight loss<sup>50</sup>.

The slow decline of Chopin's health continued for the next four years until (in winter 1843/44) he become severely cachectic and so weak, that he could no longer go upstairs by himself and had to be carried up<sup>51</sup>. 22 June 1849 Chopin had two episodes of hemoptysis in one night<sup>52</sup> (according to Chopin's letter to his friend Grzymala, as cited by Ganche, p.78). At that point he had less than four months to live.

<sup>&</sup>lt;sup>47</sup> Kuzemko, J. (1994), "Chopin's illnesses". J Roy Soc Med **87**, 769—772.

<sup>&</sup>lt;sup>48</sup> Kuzemko, J. (1994), the same as above.

<sup>&</sup>lt;sup>49</sup> Karasowski, M. (1906), "Frederic Chopin: His Life and Letters".

<sup>&</sup>lt;sup>50</sup> a) Marek G. (1978) "Chopin". New York, 1978:15, cited in Kuzemko, J. (1994), "Chopin's illnesses". J Roy Soc Med **87**, 769—772. b). Majka, L., Gozdzik, J. (2003), "Cystic fibrosis – a probable cause of Frederic Chopin's suffering and death". J Appl Genet. 2003;**44** (1):77—84,

<sup>&</sup>lt;sup>51</sup> Franken, F.H. (1959), "Das Leben grosser Musiker im Spiegel der Medizin: Schubert, Chopin, Mendelssohn", Stuttgart, **as cited in** Böhme, G. (1981), "Medizinische Portrats berühmter Komponisten: Wolfgang Amadeus Mozart, Ludwig van Beethoven, Carl Maria von Weber, Frederic Chopin, Peter Iljitsch Tschaikowski, Bela Bartok". (German Edition), G. Fischer.

<sup>&</sup>lt;sup>52</sup> According to Chopin's letter to his friend Grzymala, as cited in Ganche, E. (1935), "Souffrances de Frederic Chopin. Essai de médecine et de psychologie". Paris: Mercure de France, p.78.

#### 1.4 Family anamnesis

Some scholars, especially those in favor of the cystic fibrosis hypothesis find the genetic disposition of the Chopin's family problematic<sup>53</sup>. Both his father and two of his sisters – Emilia and Ludwika – had reportedly had pulmonary symptoms. Other authors view the family health as quite robust. For example, Myslakowski (2010) underscores the fact that Chopin's mother, father and one sister (Izabella) have lived well into their 70s, which is about 30 years more than the average life expectancy at that time<sup>54</sup>. This view of Chopin's family is echoed by Neumayr (2007) who suggests that the Chopins enjoyed a good health and fully dismisses a possibility of a genetic disorder<sup>55</sup>, without addressing, for instance, an existing possibility of Chopin being a "mosaic" gene defect carrier with variable phenotypic expressions<sup>56</sup>. In fact, it is difficult now to draw a valid conclusion about the true health status of Chopin's immediate family, and more so for the distant relatives. While an extensive, tedious research work was done for the paternal side of Chopin's family shortly after the World War II, little, if anything, is known about his maternal ancestors<sup>57</sup>. Many documents that could have helped an evaluation of genetic patterns in Chopin's family are either lost – such as birth and death records – or intentionally destroyed (for example, personal letters) or, most likely, never existed (detailed medical histories).

Also the life expectancy might not be that informative as an indicator of health, because by definition it is an arithmetic mean. An age-specific death rate or median life duration of the population could be more helpful for such evaluation. Indeed, according to the data of the National French Institute of Demographic Studies, the average life expectancy in France in 1810 – the year Chopin was born – was thirty-seven<sup>58</sup>. That figure was already a part of an increasing trend – the life expectancy at the time when Chopin's parents were born, was even lower – twenty-five to thirty years. Based on those figures alone, one may arrive to a conclusion that even Chopin himself has lived quite a long life – that is, almost ten percent longer than an average French citizen! Of course, such conclusion would be certainly misleading. Two factors influenced the life expectancy in the early 1800s greatly: the neonatal mortality and Napoleonic wars. The wars took their toll, claiming many lives of younger men, thus decreasing the average life expectancy. At the same time, many children died at an early age, but as soon the child lived up to the age of ten; his or her chances to reach a very advanced age were improved greatly. Actually, as soon as a child survived to the age of twenty, his/her life expectancy was nearly equal to the average life expectancy in the twentieth century.

Hence the presumption that the Chopins were such a healthy kin, that their life duration was double of that of an average European of their time – may be wrong. While several members of the family lived well into their seventies, the others died at an early age (for example, one or more

<sup>&</sup>lt;sup>53</sup> Such as Majka, L., Gozdzik, J. (2003), "Cystic fibrosis – a probable cause of Frederic Chopin's suffering and death". J Appl Genet. 2003;**44** (1):77—84.

<sup>&</sup>lt;sup>54</sup> a). Mysakowski, P. (2010), "*Fryderyk Chopin: The Origins*". The Fryderyk Chopin Institute. b). Myslakowski, P. (2010), "*Was Chopin born 200 years ago*?". Magazyn Chopin.

<sup>&</sup>lt;sup>55</sup> Neumayr, A. (2007), "Berümte Komponisten im Spiegel der Medizin" Ibera; Auflage: überarb. Neuaufl. (19. November 2007).

<sup>&</sup>lt;sup>56</sup> Kumar, V., Becker, T., Jansen, S., van Barneveld, A., Boztug, K., Wölfl, S., Tümmler, B. and Stanke, F. (2008), "Expression levels of FAS are regulated through an evolutionary conserved element in intron 2, which modulates cystic fibrosis disease severity", Genes and Immunity., Aug, 2008. Vol. **9 (8)**, pp. 689—696. Nature Publishing Group.

<sup>&</sup>lt;sup>57</sup> Baur, E.G. (2012), "Chopin". DTV Deutscher Taschenbuch.

<sup>&</sup>lt;sup>58</sup> Retrieved from http://www.ined.fr/en/everything\_about\_population/graph\_month/life\_expectancy\_france/ on February 10 2014).

siblings of Chopin's mother see Appendix). Those early childhood deaths might well be attributable to innate pathological processes, including genetic defects, but at least equally well – to a lack of basic hygiene or insufficient health care in the 19th century Europe.

#### **Parents**

Nicolas Chopin (Mikolay Chopyn, Nicolai Choppe) was Frederic Chopin's father. French by origin, he was born on April 15, 1771 in Maraiville-sur-Madon. He died on the 3rd of May, 1844 in Warsaw. His parents were Francois Chopin and Marguerite Delfin<sup>59</sup>. A pipe smoker<sup>60</sup>, he was prone to develop infrequent respiratory tract infections and became very ill on at least two documented occasions<sup>61</sup>. Nicholas Chopin's presumable cause of death was lung disease (allegedly tuberculosis) at the age of 73<sup>62</sup>. He was buried in the catacombs of the Powązki Cemetery on May 6, 1844. In 1948, after the catacombs' destruction, Nicolas' and his wife Justyna's coffins was transferred to a new grave at the back of the church of St. Charles Borromeo, where they remain to this day. A thorough anthropological examination was undertaken on the occasion of exhumation, which may allow establishing Nicolas and Justyna's appearance.

Tekla Justyna Krzyzanowska (Justyna de Krzyżanowskie, as in F. Chopin's baptismal record), Frederic Chopin's mother was of Polish origin. Her exact date of birth is unknown, but it must have occurred shortly before September 14, 1782, the date she was christened at the parish church of Izbica, receiving the Christian names of Tekla Justyna, She died on October 1, 1861<sup>63</sup>. Throughout her whole life, Chopin's mother reportedly remained in good health<sup>64</sup>. Tekla Justyna's parents were Jakub Krzyżanowski (ca. 1729—1805) and Antonina Kołomińska; both most likely came from the noble class. Justyna was born at least ten years after her parents were married and had at least two elder siblings: brother Wincenty, born in 1775, who died in infancy, and his sister Marianna, born in 1780. Some unverified sources (amateur genealogy forums) mention other siblings of Tekla Justyna, who died as young children, but no documented evidence was found in this respect.

Jakub Krzyżanowski, the maternal grandfather of Chopin was most notably acting as a manager of the royal estate. As the archive records show, Jakub was repeatedly involved into quarrels and legal issues over property and money. The family has also frequently changed their place of residence, most likely due to "mixed relations to their employers". Perhaps this could possibly be seen as a sign of an instable mental state, maybe even a disorder. It is difficult to draw a conclusion now, when no direct evidence may exist. Jakub died in Świętosławice on the 29<sup>th</sup> of October 1805 at the age of 76. The cause of death was "dropsy", a major death factor in those times. In modern terms a dropsy (a hydropsy) is a generalized edema, most notably related to a right heart failure. Mercury was frequently prescribed to treat dropsy at the time of Jakub's death – due to its diuretic effects. As a toxic substance, mercury may have widely contributed to lethality, too<sup>65</sup>.

<sup>&</sup>lt;sup>59</sup> Hazard, J. (2005), "The adventures of doctor Jean Matuszinski, friend of Frederic Chopin, from Warsaw in 1808 to Paris in 1842", Hist Sci Med. 39 (2), 161—8.

<sup>&</sup>lt;sup>60</sup> Kuzemko, J. (1994), "Chopin's illnesses". J Roy Soc Med **87**, 769—772.

<sup>&</sup>lt;sup>61</sup> Karasowski, M. (1938) "Frederic Chopin: His Life and Letters". 3<sup>rd</sup> edn. p. 9, as cited in Kuzemko, J. (1994), "Chopin's illnesses". J Roy Soc Med 87, 769—772.

<sup>&</sup>lt;sup>62</sup> Caruncho, V. M., Fernandez, B. F. (2011), "The hallucinations of Frederic Chopin", Medical Humanities 37 (1), 5—8.

<sup>&</sup>lt;sup>63</sup> Niecks, F. (1889) "The Life of Chopin". Novelle, as cited in Kuzemko, J. (1994), "Chopin's illnesses", J Roy Soc Med **87**, 769—772.

<sup>&</sup>lt;sup>64</sup> [битая ссылка] Mysłakowski, P., [битая ссылка] A. Sikorski (January 2006), The Frederic Chopin Institute. Retrieved Jan 26, 2014 from [битая ссылка] http://web.archive.org/web/20101022022619/http://en.chopin.nifc.pl/chopin/persons/detail/id/6362).

<sup>4</sup> from [битая ссылка] http://web.archive.org/web/20101022022619/http://en.chopin.nifc.pl/chopin/persons/detail/id/6362).

65 Ventura, H., Mehra, M. (2005), "Management of Acute Decompensated Heart Failure". CRC Press, referring to John Blackall,

#### **Siblings**

The older sister, Louise Chopin or Ludwika Marianna Jędrzejewiczowa (April 6, 1807 – October 29, 1855) suffered from recurrent chest infections and died from a respiratory illness at the age of 47 years<sup>66</sup>. She was outlived by her four children. Chopin's second sister, Isabelle Chopin or Justyna Izabella [битая ссылка] Barcińska (born on the 9th of July, 1811, died on the 3rd of June, 1881) had reportedly good health, "led an uneventful life and died at 70 years"<sup>67</sup>. Her marriage to Anthony Barciński remained childless<sup>68</sup>.

The youngest sister, Emily Chopin (aka Emilia Chopin) lived only fourteen and half years long (1812 – 1827). She was described as a frail child; from the early age her health was a subject of concern. She was underweight and suffered from periodic bouts of cough, breathlessness and 'asthma' (episodes of wheeziness). With regards to Emilia's symptoms, which became especially severe when she was about eleven years old, the biographers opinions vary. Some researchers suggest that she started to have hematemesis and consequently died from a massive gastrointestinal hemorrhage, most likely from portal hypertension due to cirrhosis or severe gastric erosion<sup>69</sup>. Yet other biographers consider her symptoms mostly pulmonary, noting Emilia's frequent respiratory infections and syncopes. They refer to Emilia's blood spitting as hemoptysis, not hematemesis, and suggest that she had pneumonia in her terminal phase:

"From her early childhood Emilia's health was a matter of growing concern. Early symptoms of an illness (probably tuberculosis) caused a general weakness of the organism... Despite medical attempts (whose efficiency has been questioned and even accused of having speeded up her death) Emilia's illness quickly developed and she spent her last months coughing with blood and often losing her senses". 70

In a letter to a friend as of March 14<sup>th</sup> 1827, Chopin describes his sister's sufferings that lasted already four weeks. He also describes Emilia's anorexia and the treatment she received:

«...the bloodletting, which was done once, twice, innumerable leeches, vesicle-producing plasters, mustard plasters, and herbs, adventures over adventures. During this whole period of time, she did not eat and was so run down that one could hardly recognize her, and only slowly did she somewhat recuperate."<sup>71</sup>,<sup>72</sup>

Emilia died less than a month later, on the 10<sup>th</sup> of April, 1827. There is no sufficient data to say with confidence whether Emilia's death occurred on the grounds of a pathological process

<sup>1813.</sup> 

<sup>&</sup>lt;sup>66</sup> a). Kuzemko, J. (1994), "Chopin's illnesses". J Roy Soc Med **87**, 769—772. b). Caruncho, V. M., Fernandez, B. F. (2011), "The hallucinations of Frederic Chopin", Medical Humanities **37** (1), 5—8.

<sup>&</sup>lt;sup>67</sup> Kuzemko, J. (1994), "Chopin's illnesses". J Roy Soc Med **87**, 769—772.

<sup>&</sup>lt;sup>68</sup> a). Clavier, A, (1984), "Dans l'entourage de Chopin". vol. **2**, Lens. b). Mysłakowski,, P, Sikorski (2005) A, "Chopinowie. Krąg rodzinno-towarzyski", Warszawa. c). J. Siwkowska (1986—1996) "Nokturn czyli rodzina Fryderyka Chopina i Warszawa w latach 1832—1881" [A Nocturne. Fryderyk Chopin's family in the years 1832—1881], vols. 1—**3**, Warsaw.

<sup>&</sup>lt;sup>69</sup> a). Kuzemko, J. (1994), "*Chopin's illnesses*". J Roy Soc Med **87**, 769—772. b). Marek, G.R., Gordon-Smith M. (1978) "Chopin". New York: Harper & Row, as cited in Caruncho (2011) and Reuben, G. (2003), "*Chopin's serpin*". Hepatology Volume **37**, Issue **2**, 485—8, retrieved on 14 Februar 2014 from [битая ссылка] http://web.archive.org/web/20100312185417/http://en.chopin.nifc.pl/chopin/persons/detail/cat/9/id/6368:

<sup>&</sup>lt;sup>70</sup> a). Ganche, E. (1935), "Souffrances de Frederic Chopin. Essai de médecine et de psychologie". Paris: Mercure de France. b) Myslakowski, P. & Sikorski, A. (2006), "Justyna Chopin".

<sup>&</sup>lt;sup>71</sup> as cited by Ganche, E. (1935), "Souffrances de Frederic Chopin. Essai de médecine et de psychologie". Paris: Mercure de France, p.117.

<sup>&</sup>lt;sup>72</sup> Kuzemko, J. (1994) and Marek G.R., Gordon-Smith M. (1978) "Chopin". New York: Harper & Row, as cited by Caruncho, J. (2010) and Reuben, A. (2003), "*Chopin's serpin*", Hepatology Volume **37**, Issue **2**, 485—8, retrieved on the 14<sup>th</sup> August 2014 from [битая ссылка] http://web.archive.org/web/20100312185417/http://en.chopin.nifc.pl/chopin/persons/detail/cat/9/id/6368:

in her lungs with or without portal hypertension or due to a gastrointestinal disease. Depending on the initial pathology, it is possible that her death was caused by cachexia and anemia, both probably exacerbated by the wrong treatment Though chronic iron deficiency may rarely lead to death directly, a severe (or even moderate) anemia can cause sufficient hypoxia to aggravate underlying comorbidities (in Emilia's case pulmonary and, probably gastrointestinal disorders)<sup>73</sup> and become lethal this way.

Speaking of an exacerbating treatment, bloodletting (or bleeding) was widely practiced at that time and, according to Frederic's accounts, Emilia Chopin underwent this treatment, too. It is important to note that the regular amount of blood extracted on each occasion was substantial: 600 - 1~000 ml. The treatment regime varied and Emilia might lose close to 2 800 ml of blood in three days, or 3 000 ml in 4 days. As much as 6 200 ml of blood could be let over a six day period<sup>74</sup>. In total, Emilia was losing blood – both as a result of her disease and her treatment – at least eight week long. Taking into consideration that patients at that time were regularly bled to syncope<sup>75</sup> and both her nutritional status and food/liquids intake were absolutely inadequate, the cause of death could well be a posthemorrhagic anemia, and not an underlying pulmonary or gastrointestinal disease. With Emilia's prolonged history of treatment with bleedings, an iatrogenic infection, such as hepatitis B virus (HBV), remains a possibility, too. Such infection may have affected the hepatocellular function, interfering with production of thrombopoetin. The resulting thrombocytopenia could additionally contribute to the Emilia's hemorrhages, and, finally, to her death.

<sup>&</sup>lt;sup>73</sup> Harper, J., Besa, E., Conrad, M., Sacher, R., Schick, P. (2013), "*Iron Deficiency Anemia*", Medscape, retrieved from http://emedicine.medscape.com/article/202333-overview#showall on Tuesday, February 11, 2014.

<sup>&</sup>lt;sup>74</sup> a). Ogle, J. (1891), "Concerning bloodletting", The Lancet **137** (**3532**), 1029—1032. b). Turk, J. L., Allen, E. (1983), "Bleeding and cupping", Ann R Coll Surg Engl **65** (**2**), 128 – 131.

<sup>&</sup>lt;sup>75</sup> Turk, J. L., Allen, E. (1983), the same as above.

#### 1.5 Social history

#### Living arrangements

Chopin's living arrangements varied greatly. Reportedly, he had never owned a house himself and lived in rented accommodations, at times sharing them with friends. It is likely that many of his dwellings have helped to an exacerbation of Chopin's pulmonary symptoms and progression of disease:

- Fireplaces and cooking stoves are all known sources of irritants of the upper airways
- Cold damp dwellings (for example, the one on Mallorca).
- Mold and fungae are regularly present in damp settings and may have contributed to Chopin's cough bouts, too (Szpilczynski) discussed Chopin's allergic predisposition in 1961<sup>76</sup>).

#### Marital status / Children

While known for having had numerous sexual relationships – some of them lasted for years – Chopin was never married and no biological children are known.

#### Drug use

Though the composer did not like wine, he occasionally got drunk, likely on social grounds or as an effort of self-medication for his bouts of melancholy<sup>77</sup>. Chopin detested tobacco smoke which made him cough. However, chronic passive smoking was an important factor influencing his lung disease. Throughout the most of his life he was surrounded by many cigar and pipe smokers such as George Sand, Liszt and his father Nicolas, to name a few<sup>78</sup>. Fair to note, the adverse effects of tobacco smoking on health were not widely known at that time. A century after Chopin's time, in the 1920s, a German internist F. Lickint has published the results of his scientific investigations of health issues related to alcohol and tobacco, describing lung cancer and stomach ulcer associated with prolonged smoking<sup>79</sup>.

As brief Chopin's recreational drugs list is, as ample was his usage of medications. He frequently took opiates<sup>80</sup>. One such remedy, laudanum, is known to contain [битая ссылка] morphine, codeine, [битая ссылка] morphinan, thebaine, papaverine, and noscapine (narcotine). Laudanum is a [битая ссылка] tincture of [битая ссылка] opium containing approximately 10% powdered opium [битая ссылка] by weight (the equivalent of 1% [битая ссылка] morphine). In the nineteenth century laudanum was widely used "against many ailments"<sup>81</sup>. Opium was used not only as laudanum tincture and not only as a single medication. It was a part of numerous prescriptions and well as home remedies. It was mixed with virtually anything available: sugar, alcohol, mercury, hashish, cayenne pepper, ether, chloroform, belladonna and so on<sup>82</sup>. Chopin's attending physicians have most likely recommended laudanum – and not another tincture – not only

<sup>&</sup>lt;sup>76</sup> Szpilszynski, S. (1961) "War Chopin Allergiker?". Ciba-Symposium **9 (6):** 283—289.

<sup>&</sup>lt;sup>77</sup> Ganche, E. (1935), "Souffrances de Frederic Chopin. Essai de médecine et de psychologie". Paris: Mercure de France, p.136.

<sup>&</sup>lt;sup>78</sup> Kuzemko, J. (1994), "Chopin's illnesses". J Roy Soc Med **87**, 769—772.

<sup>&</sup>lt;sup>79</sup> Haustein, K. (2004), "Fritz Lickint (1898—1960): Ein Leben als Aufklärer über die Gefahren des Tabaks". Suchtmed **6 (3):** pp. 249—55.

<sup>&</sup>lt;sup>80</sup> Eigeldinger, J.J. (1986) "Chopin Pianist and Teacher as Seen by his Pupils". 3rd edn. Cambridge, UK: Cambridge University Press, as cited in Caruncho, V. M. & Fernandez, B. F. (2011), "The hallucinations of Frederic Chopin", Medical Humanities 37 (1), 5—8.

<sup>&</sup>lt;sup>81</sup> The same as above.

<sup>&</sup>lt;sup>82</sup> Hodgson, B. (2001) "In the Arms of Morpheus: The Tragic History of Laudanum, Morphine, And Patent Medicines". Diane Pub Co.

due to analgesic and antitussive effects of this medication, or to control Chopin's frequent diarrhea, or to alleviate his sleep problems, but also because laudanum was a strong emetic. Emetics were popular, (as one can see on the example of Emilia's treatment) since medieval times they were deemed important as "body cleansers" The emetic treatment is further discussed in Chapter. As Chopin had a pre-existing pulmonary condition, the use of opium tincture was especially dangerous due to the risk of a respiratory depression, even at therapeutic doses Opium is also known for releasing histamine from skin and muscle. Histamine, in turn, plays a primary role in the respiratory system as a bronchoconstrictor.

The composer's dependence on opium<sup>86</sup> may explain its frequent use. A number of Chopin's symptoms can be found on the vast list of opium side effects: drowsiness, headache, malaise, CNS depression, insomnia, mental depression, nausea, vomiting, anorexia, stomach cramps, neuromuscular and skeletal weakness.

Ganche (1935) lists other medications and remedies prescribed to Chopin: foxglove (digitalis), monkshood (aconite), creosote, protioduret <of mercury>, jelly lichen (collema), gum water (diluted acacia sap that was a popular prescription for phthisis<sup>87</sup>). Most of those remedies are known for their toxicity, but little is known on how Chopin's treatment may have influenced his symptoms. Caruncho and Fernandez (2011) discussed opium toxicity as a possible reason for Chopin's mental problems, only to dismiss it on the grounds that the symptoms (particularly hallucinations) were present before Chopin began receiving the treatment on a regular basis and that the hallucination pattern differed from that of toxicity. The authors point out that the exact treatment chronology remains unknown. Chances are, the symptoms' onset might, in fact, have preceded or coincided with Chopin's treatment. Certainly, a simultaneous occurrence does not equal to causality, but it is possible that at least some of Chopin's pathology might be explained with toxic effects of the remedies he was treated with<sup>88</sup>.

#### Foreign travel

At various periods of his life Chopin has visited geographic areas that today are known as Germany, Poland, France, Austria, United Kingdom, and Spain<sup>89</sup>. Following diseases were present in those parts of Europe in the 19th century and/or caused outbreaks of a significant importance:

- typhus
- scarlatina
- measles
- smallpox
- cholera
- smallpox
- tuberculosis
- influenza

<sup>&</sup>lt;sup>83</sup> Museum of the Royal Pharmaceutical Society, 2007, retrieved from [битая ссылка] http://www.rpharms.com/museum-pdfs/d-melancholiaandmania.pdf on February 13, 2014)

<sup>&</sup>lt;sup>84</sup> "Opium tincture drug information", from the Merck Manual for health care professionals. Retrieved from [битая ссылка] http://www.merckmanuals.com/professional/lexicomp/opium%20tincture.html on 13 Feb 2014.

<sup>&</sup>lt;sup>85</sup> Da Costa, J.L., Tock E.P., Boey H.K. (1971), "Lung disease with chronic obstruction in opium smokers in Singapore. Clinical, electrocardiographic, radiological, functional and pathological features", Thorax., Sep, 1971. Vol. **26 (5)**, pp. 555—571.

<sup>&</sup>lt;sup>86</sup> Breitenfeld, D., Kust, D., Turuk, V., Vucak, I., Buljan, D., Zupanic, M., Lucijanic, M. (2010), "Frederic Chopin and Other Composers Tuberculotics – Pathography". Alcoholism **46 (2)**, 101—7.

<sup>&</sup>lt;sup>87</sup> Long, E. (1956) "A History of the Therapy of Tuberculosis and the Case of Frederic Chopin". Lawrence: University of Kansas Press, p.10.

<sup>88</sup> Caruncho, V. M., Fernandez, B. F. (2011), "The hallucinations of Frederic Chopin". Medical Humanities 37 (1), 5—8.

<sup>&</sup>lt;sup>89</sup> Baur, E.G. (2012), "Chopin" DTV Deutscher Taschenbuch.

However, the course of Chopin's disease does not match the spread and the magnitude of those epidemics. For instance, neither his gastrointestinal symptoms nor his pulmonary problems were aggravated or first present at the times of cholera or influenza outbreaks, respectively.

#### **Exposure to environmental pathogens**

With an exception of a regular exposure to biomass (wood) home heating and passive smoking (as many of Chopin's friends and family were heavy smokers), no particular environmental exposures are known.

#### 1.6 Review of systems

According to ample verbal and visual evidence Chopin had asthenic habitus. In his travel passport, used for the journey to England in 1837, his height is stated as 170 cm<sup>90</sup>, weight – 50 kg<sup>91</sup> at some points – in 1835, and, probably, in 1838, too – dropping below 45 kg<sup>92</sup>. Both parameters substantially deviate from population averages (see Appendix). Chopin's body mass index (BMI) varied between 16 and 17, which is considered underweight (normal range BMI ranges between 18.5 and 24.9). A number of sources depict Chopin's poor exercise tolerance and failure to gain weight<sup>93</sup>.

#### Musculoskeletal system

What reliable evidence might help to assess Chopin's appearance from a clinical viewpoint? Obviously, various verbal and graphic depictions are always to some extent subjective and may sometimes be rather a telltale of their creator, not so their object. Various portraits, inclusive photographs are consistent in portraying of asthenic, thin-faced man. The written sources convey an image of a man who is 'whiskerless, beardless, fair of hair, and pale and thin of face ... <and has> a prominent aquiline nose<sup>94</sup>. But it is barely possible to draw a clinically relevant conclusion based on something as trivial as a caricature<sup>95</sup>. For example, based on a sketch by P. Vairdot, Kuzemko (1994) suggests that Chopin has probably had emphysema, since he become apparently barrel-chested in his early thirties. However, that very sketch – as fairly pointed out by other researchers – shows Chopin with a disproportionally giant head, too.

The other authors describe Chopin as having "thin, long and barely muscular limbs, very slender, delicate hands<sup>96</sup>. Those extraordinary thin limbs might probably be interpreted as an early sign of emaciation<sup>97</sup>. Almost all observers noted the extreme thinness of his limbs. Here is one fact that let us think that Chopin may, indeed, have had a distorted musculoskeletal development that goes beyond a mere asthenic habitus. While travelling in horse-drawn carriages, Chopin feared he may fracture his frail limbs<sup>98</sup>. Both Erlinger (2010) and O'Shea (1987) hypothesize that this could be due to his pulmonary hypertrophic osteoarthropathy, that manifested itself by painful swelling of distal joints and soft tissue<sup>99</sup>, <sup>100</sup>. Quite evidently (see Appendix 10.7, "Postmortem hand cast"), Chopin did not have digital clubbing (finger clubbing). Though finger clubbing is most commonly seen in patients with bronchiectasis (as well as in those with cystic fibrosis and

<sup>&</sup>lt;sup>90</sup> Böhme, G. (1981), "Medizinische Portrats berühmter Komponisten: Wolfgang Amadeus Mozart, Ludwig van Beethoven, Carl Maria von Weber, Frederic Chopin, Peter Iljitsch Tschaikowski, Bela Bartok". (German Edition), G. Fischer.

<sup>&</sup>lt;sup>91</sup> Wüst, H. W. (2007), "Frederic Chopin". Bouvier Verlag.

<sup>&</sup>lt;sup>92</sup> O'Shea, J. (1993) "Music and Medicine". London: JM Dent, p.140, as cited by Kuzemko, 1994.

<sup>&</sup>lt;sup>93</sup> Erlinger, S. (2010), "Frederic Chopin and Michael Jackson: What could they have in common?", Gastroenterologie Clinique et Biologique **34 (4—5),** 246—249.

<sup>&</sup>lt;sup>94</sup> Bone, A. (1848) "Sir James Hedderick". Glasgow: Sterling, 73—4, as cited by Kuzemko, 1994.

<sup>95</sup> O'Shea, J. (1987), "Was Frédéric Chopin's illness actually cystic fibrosis?". Med J Aust. Dec 7—21;147 (11—12), 586—9, referring to a 1844 sketch by Pauline Viardot (s. Appendix 3),

<sup>&</sup>lt;sup>96</sup> Böhme, G. (1981), "Medizinische Portrats berühmter Komponisten: Wolfgang Amadeus Mozart, Ludwig van Beethoven, Carl Maria von Weber, Frederic Chopin, Peter Iljitsch Tschaikowski, Bela Bartok". (German Edition), G. Fischer.

<sup>&</sup>lt;sup>97</sup> Liszt, F. as cited in O'Shea, J. (1987), "Was Frédéric Chopin's illness actually cystic fibrosis?". Med J Aust. Dec 7—21;147 (11—12), 586—9.

<sup>98</sup> O'Shea, J. (1987), "Was Frédéric Chopin's illness actually cystic fibrosis?". Med J Aust. Dec 7—21;147 (11—12), 586—9.

<sup>&</sup>lt;sup>99</sup> Erlinger, S. (2010), "Frederic Chopin and Michael Jackson: What could they have in common?", Gastroenterologie Clinique et Biologique **34 (4—5)**, 246—249.

<sup>&</sup>lt;sup>100</sup> O'Shea, J. (1987), "Was Frédéric Chopin's illness actually cystic fibrosis?". Med J Aust. Dec 7—21;**147 (11—12)**, 586—9.

bronchial carcinoma) and not commonly seen in patients with pulmonary tuberculosis<sup>101</sup>, this sign is neither specific nor particularly sensitive for lung pathology<sup>102</sup> and cannot be reliably used for a differential diagnosis in Chopin's case.

Throughout most of his adult life, Chopin frequently suffered of pain in the ankles, feet and hands<sup>103</sup>. During the terminal phase of his illness, he also developed severe pain in his wrists and ankles, which was relieved partially by massage and sometimes worsened at cold and wet weather. The hot weather was also poorly tolerated: according to O'Shea (1987), Chopin had frequently experienced prostration and hyperhidrosis in summer<sup>104</sup>. As mentioned above, at least once in his life – namely in winter of 1826 – Chopin had nodal swelling that Kubba and Young, referring to Chopin's letter dated February 12, 1826 to his friend, physician Jan Bialoblocki<sup>105</sup>, regarded as a cervical lymphadenopathy. Cervical lymphadenitis is a common (about 15%) manifestation of extrapulmonary tuberculosis, especially in patients with compromised immune system<sup>106</sup>. A nodal regression is possible indeed, but only under chemotherapy<sup>107</sup>. Other infections or neoplasia, and rarely, drug reactions may also cause a nodal enlargement that in some cases can resolve untreated<sup>108</sup>.

#### **Respiratory system**

Chopin's lung problems are dated back to his adolescence with prolonged episodes of cough and lymphadenopathy. There are reports of Chopin's repeated exacerbations of nasal infection with substantial blockage of air passage (i.e. a possibility of polyps), pulmonary infections with productive cough, hemoptysis and recurrent fevers, later chronic dyspnea<sup>109</sup>. O'Shea (1987) and Kuzemko (1994) citing G. Sand argue that a cavitating lesion was not found during an auscultation of Chopin's chest (by Dr. Papet)<sup>110</sup>.

The bouts of cough and dyspnea accompanied Chopin throughout most of his adult life. Long (1956) describes the episodes of hemoptysis consisted of blood streaking purulent sputum as "a picture of bronchiectasis or chronic bronchitis" Two noteworthy facts about the course of his disease: first, despite of his repeated bouts of cough and periods when his condition was very serious, virtually each time Chopin was able to recover fully, relatively quickly, and without sequelae. Between the bouts, he seemed to be practically disease-free. For instance, the years between about around1833—1835 seem to have been the happiest ones for Chopin. He had won a great appraisal as a composer and a pianist and his health seemed to be good. At least two supporting documents are quoted by Leichtentritt (1905). One compatriot of Chopin, Mr.

<sup>&</sup>lt;sup>101</sup> a). Cheng, T. O. (1998), "Chopin's Illness Revisited", CHEST Journal **114 (6),** 1796. b). Cheng, T. O. (1998), "Chopin's Illness", CHEST Journal **114 (2),** 654, referreing to the Merck Manual.

<sup>&</sup>lt;sup>102</sup> Kuzemko, J. (1994), "Chopin's illnesses". J Roy Soc Med **87**, 769—772.

<sup>&</sup>lt;sup>103</sup> Kuzemko, J. (1994), the same as above.

<sup>&</sup>lt;sup>104</sup> O'Shea, J. (1987), "Was Frédéric Chopin's illness actually cystic fibrosis?". Med J Aust. Dec 7—21;**147 (11—12**), 586—9.

<sup>&</sup>lt;sup>105</sup> Chopin, F., Scharlitt, B. (1911) "Friederich Chopins gesammelte Briefe". Leipzig: Breitkopf & Härtel, as cited by Franzen, C. (2010), "Frederic Chopin, Robert Schumann und Gustav Mahler: Musik und Medizin zwischen Romantik und Moderne", DMW – Deutsche Medizinische Wochenschrift., Dec, 2010. Vol. 135 (51/52), pp. 2579—2587. Thieme Publishing Group. and by O'Shea, J. (1987) in "Was Frédéric Chopin's illness actually cystic fibrosis?", Med J Aust. Dec 7—21;147 (11—12), 586—9.

<sup>&</sup>lt;sup>106</sup> Eyselbergs, M., Snoeckx, A., Op de Beeck, B., Spinhoven, J. M., Parizel, P.M. (2011), "*Cervical tuberculous lymphadenitis*", JBR-BTR **94** (3), 120 – 121.

<sup>&</sup>lt;sup>107</sup> Polesky, A., Grove, W., Bhatia, G. (2005), "Peripheral Tuberculous Lymphadenitis", Medicine 84 (6), 350—362.

<sup>&</sup>lt;sup>108</sup> Ferrer, R. (1998), "Lymphadenopathy: differential diagnosis and evaluation". Am Fam Physician **58 (6),** 1313 – 1320.

<sup>&</sup>lt;sup>109</sup> Breitenfeld, D., Kust, D., Turuk, V., Vucak, I., Buljan, D., Zupanic, M., Lucijanic, M. (2010), "Frederic Chopin and Other Composers Tuberculotics – Pathography". Alcoholism **46 (2)**, 101—7.

<sup>&</sup>lt;sup>110</sup> Sand, G. (1838) "Histoire de ma vie". Vol XX.:155.

<sup>&</sup>lt;sup>111</sup> Long, E. (1956) "A History of the Therapy of Tuberculosis and the Case of Frederic Chopin". Lawrence: University of Kansas Press, 1956, p. 20, a picture of brochniectasis or chronic bronchitis.

Orlowski, wrote in 1834 that Chopin's was healthy and vigorous. Similarly, Chopin's intimate friend, physician Jan Matuszyński, 1834, who shared dwellings with Chopin, and could observe him daily, did not report anything pathological, rather vice versa: "He [Chopin] became strong and big, I hardly recognize him<sup>112</sup>.

<sup>&</sup>lt;sup>112</sup> Leichtentritt, H., Reimann, H., ed. (1905) "Berühmte Musiker: Lebens- und Charakterbilder. Einführung in die Werke des Meisters. Chopin". "HARMONIE" Verlagsgesellschaft für Literatur und Kunst, p. 62.

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