

AN  
INAUGURAL DISSERTATION

ON  
*Blood Letting  
and its  
Therapeutic effects*

SUBMITTED TO THE  
PRESIDENT, BOARD OF TRUSTEES, AND MEDICAL FACULTY  
OF THE

**University of Nashville,**

FOR THE DEGREE OF  
**DOCTOR OF MEDICINE.**

BY

*Benjamin W. Hyford*

OF

*Tennessee*

1856

W. T. BERRY & CO.,  
BOOKSELLERS AND STATIONERS,  
NASHVILLE, TENN.

I feel my inability, to  
write anything new.  
But in obedience to a  
time honored custom, I  
propose to give my views,  
upon the subject of Blood  
letting, which may be divi-  
ded into, "General," and  
"Local," Bleeding.

"General," Blood letting is  
divided into, "Venesection,"  
and "Arteriotomy,"

When we abstract Blood  
by opening a vein, it is  
called Venesection.  
This mode of abstracting  
Blood is most generally  
used, and it is seldom nec-  
essary to resort to any other.

2

In this practice, we make choice of the vein at the bend of the elbow, because it is more convenient for the Practitioner, with more ease and less danger to the Patient. Yet we meet with Individuals, whose veins are so small, or so deep at that point, that we cannot obtain a sufficient quantity of Blood, in such cases we are compelled to resort to other places, or other modes, of which "Arteriotomy," is one.

This track of Blood-letting is not resorted to except in urgent cases.

as for instance, Apoplexy,  
 Phrenitis &c. though by  
 this mode we make a  
 more direct impression  
 on a violent disease, of  
 any important Organ  
 than we can produce  
 by Venesection.

The other modes of  
 Bleeding are, Cupping,  
 Leeching, and Scarification.

Cupping is the most  
 generally practiced  
 mode of "Local" Bleeding,  
 and is preferable, if there  
 is no tenderness of the  
 part, and if we can ap-  
 ply the Cupping Glass,  
 with these exceptions

We can always extract  
the desired amount  
of Blood.

In the above remarks  
I allude to adults,  
for in the case of child-  
-ren, Leeches, are to  
be preferred, because  
of their easy application,  
and they alarm the child  
less than cupping.

Scarification is  
sometimes necessary  
to relieve the Engorge-  
-ment of certain parts  
where it would be diffi-  
-cult to apply either  
cupping or Leeches,  
for instance the "Throat,"

5

Since &c, and is a very convenient mode of relieving Congestion in such cases.

The first Effects of Blood Letting is Tranquilising. It Takes from the System its natural Stimuli, and in consequence it lessens the Heart's Action. By so doing, we directly lessen the quantity and quality of the Blood.

The Secondary Effect of Bleeding is transient, and sometimes the nature of a disease is such, that a "Reaction",

6  
Takes place, which is  
indicated by an oppress-  
ed Pulse and general  
glow of the Face:

This reaction is fre-  
quently so powerful,  
that it requires free  
depletion to subdue the  
Pulse to its natural state.

In the enjoyment of good  
health, the Blood Vessels  
are in a certain state  
of Tension, by which  
the Force of the System  
is kept up. Bleeding  
most generally relaxes  
the Tension of the Blood  
Vessels, and debility en-  
sues, under these circum-

9  
- Hence, taking Blood  
is decidedly Sedative  
The Train of Symptoms  
attending loss of Blood  
are generally uniform,  
After a certain Amount  
has been extracted, a  
slight degree of Dizziness  
is felt, sometimes a  
ringing in the Ears, the  
Respiration is more or  
less hurried, the Pulse  
becomes enfeebled, the  
Face pale, and moist  
with perspiration, and  
there is more or less Sick-  
-ness at the Stomach, and  
sometimes unconsciousness.

These effects Combined



indicate the impairment  
of the Brain, resulting  
from the extraction of  
its natural and need-  
ful Stimulus. And in  
consequence of this con-  
dition of the System,  
Respiration suffers to a  
greater or less extent.

These effects differ  
in some individuals  
and under some cir-  
cumstances, according  
to climate, and the many  
causes, which have a  
tendency to impair or  
improve the health of  
Persons.

With regard to the

9  
Posture, most favorable  
to produce the desired  
effect by Bleeding, I  
think the erect position  
is preferable, for when  
the Patient is in this  
posture, Gravitation less-  
ens the Compressed Brain.  
and we approach Syncopy  
much sooner. we also lessen  
the Tension of Blood ves-  
sels, and the action of the  
Heart, much sooner than  
we could in a horizon-  
tal position.

I greatly prefer a large  
Orifice to a small one,  
because if we bleed  
from a small orifice,

10  
The Blood dribbles away slowly, and the System can adopt itself to the Change, and we make less impression upon the disease. But when we bleed from a large Orifice we abstract the Blood so fast, that the Vitality of the System is subdued much sooner, for the same reason, Arteriotomy will produce an effect sooner than Venisection, because it is a direct Drain upon the Circulating Mass.

The indications for Blood Letting are very

10  
Numerous, and of much  
importance to the old  
Physician as well as  
the young. We are guided  
very much by Pyrexia, by  
the quality of the Pulse,  
by the importance of the  
organ affected, by the in-  
tensity of the Inflammation  
in what manner soever  
it may be measured,  
by the Period or Stage of  
the disease, by the Age  
and Sex, and general  
Condition of the Patient,  
and frequently by the ordinary  
Character, and Course of  
the disease, when Inflam-  
-ation happens to be, or to

Accompany an Epidemic  
 disorder. It is not one of  
 these Circumstances alone,  
 But several of them, that  
 we have to take into ac-  
 -count in most Cases.

And what I have now to  
 say must needs be very  
 general.

By Pyrexia, we mean  
 Fever, and the Febrile  
 Symptom, yet we must  
 know whether the Pyrexia  
 is brought about by In-  
 -flammation or not, and  
 if not, we generally resort  
 to other means of Subdu-  
 -ing the Pyrexia. It is often  
 the case that we have

A high degree of Pyrexia,  
 without any inflammation  
 as in the case of an  
 Ague Fit, the reaction  
 producing Pyrexia in  
 a high degree, yet we  
 do not often bleed in  
 such cases, in fact never  
 unless some important  
 organ is involved by the  
 amount of Congestion, But  
 when this is the case, it is  
 very important to perform  
 the operation and should  
 not be omitted, Congestion  
 and the importance of the  
 organ affected are ad-  
 ditional indications,  
 Pyrexia admonishes us

To search after other indications, and confirms us, that Blood Letting is right and should be performed if they are to be found, a considerable amount of Fever, may arise from local inflammation, and yet the known course of the disease, or the nature of the part affected, may render the abstraction of Blood unnecessary, and therefore improper.

The quality of the Pulse more often directs us in our judgement, although we are by no means to be

Wholly directed by this, But  
 it requires Practice, and  
 an intelligent mind to  
 appreciate the information,  
 And to obtain the know-  
 -edge we should have, and  
 which is requisite to form-  
 -ing a good judgement of  
 the necessity of the Blood  
 Letting

We should understand the  
 qualities of the Pulse, and  
 the qualities we most attend  
 to are, its Quickness, Irregu-  
 -cy, Regularity, Fullness,  
 and Force, it is necessary  
 that we should know the  
 number of beats the heart  
 habitually makes in health.



16

This varies much in different persons, the average number of pulsations, in a healthy adult, are from seventy to seventy five, per minute, But there are persons, who when they are quite well, have a much higher or lower, Pulse than the above standard, Irregularity of the Pulse is a condition, which should be closely noticed, for it is of great importance, and full of meaning, it is of great importance to the Practitioner, and the Causes of it should be attended to, it,

19

may be caused by disease  
<sup>widening</sup> of the Heart, by organic  
disease of the Heart, by  
simple disorder of the  
Stomach, or it may be, main-  
ly the result, of debility, and  
the prelude to the complete  
stoppage of the action of  
the Heart, from Asthenia,  
How important then it must  
be to attend to each of  
these indications, and  
to know whether it arises  
from disease of the Brain,  
of the Heart, of the Stomach  
or by Asthenia.

Another very important  
quality of the Pulse is what  
Authors term the hard

Pulse, it is a Pulse which is  
 very hard of Compression,  
 that is, when you place  
 your finger on an Artery,  
 the Blood does not seem  
 to meet with any re-  
 sistance, when it comes  
 to the finger, or you can  
 scarcely abolish the  
 pulsation. Sometimes it  
 is found to strike a large  
 portion of the finger  
 at the same time, then  
 we say, the Pulse is large  
 or full, as well as hard,  
 It sometimes strikes a  
 very narrow portion of  
 the finger, it is then  
 compared to a Thread,

If at the same time, it is hard, such a Pulse is described as a Wirey Pulse, But it requires an educated finger to discriminate between a hard and a Wirey Pulse, yet some persons never seem to attain the "Fac-  
tus Eruictus."

How are we to make this hard Pulse, a soft one, is a question, which we should always be able to answer, and it is one which we can answer, if it is not caused by a disease of the Heart, Stomach or Brain.

The answer is, by Blood  
 Letting, Provided we see  
 the Patient in time, for  
 the time for Blood Letting  
 may have passed, in  
 case of Inflammation  
 if Supuration has  
 commenced, it is of no  
 importance as a general  
 rule, yet sometimes it is  
 an advantage in such  
 cases. But the Pulse is  
 most usually Full and  
 Hard, in acute Inflam-  
 -ation, and it is in acute  
 Inflammation, the Patient  
 will bear general Bleeding  
 better, than at any other  
 time, and therefore we can

often determine whether or not some Local Pain is caused by inflammation or not, by placing the Patient in the Erect posture, and opening a vein, for if he bear the loss of much Blood, you may be assured that Inflammation is present.

When we bleed in acute Inflammation of an important Organ, we endeavour to effect our purpose as Speedily as possible, and with as little expeniture of the vital Fluid as possible, yet I do not

pretend to say, how much  
 Blood we should take,  
 to do this. But we should  
 always bleed for effect,  
 that is we should bleed  
 from a large Orifice,  
 as I have before said,  
 until the pain is mit-  
 -igated, until Respiration  
 (when the Lungs are affected)  
 becomes easier and  
 deeper, or in affections  
 of the Brain, the Patient  
 emerges from a state of  
 Stupor or Delirium, when  
 this is the case you may  
 be sure, that you are  
 right in Bleeding. But  
 you must keep your

finger upon your  
Patient's wrist, and  
bleed until symptoms  
of impending Synco-  
py appear. Then you had  
better tie up the arm,  
and wait a few  
hours, and repeat  
the bleeding if the  
symptoms, which  
first demanded it  
again become ur-  
gent. Sometimes it  
becomes necessary  
to open a vein in  
each arm.