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Contributors

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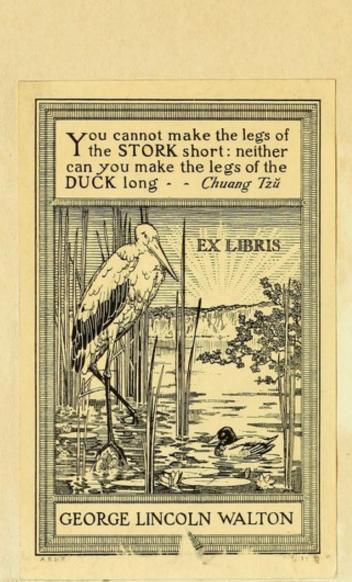
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George L. Walton

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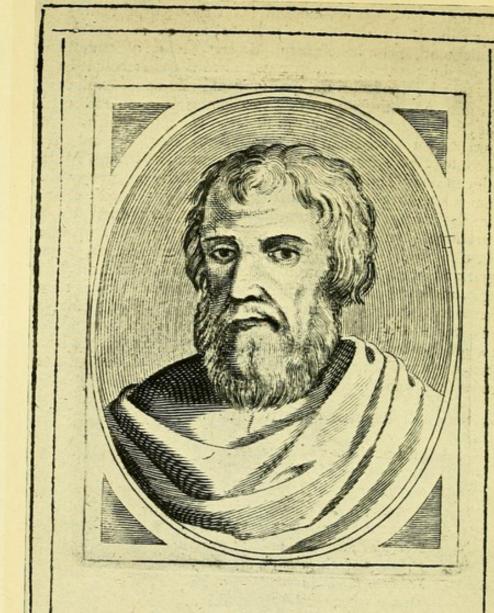
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The Conservation of Youth and Defense of Age

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ARNALDVS Villanouanus.

The Conservation of Youth and Defense of Age

De conservatione juventutis et retardatione senectutis

By Arnaldus of Villa Nova, A. D. 1290
Translated by Dr. Jonas Drummond
A. D. 1544, with Additions from
the Breviarium of Arnaldus

Edited by Charles L. Dana

The Elm Tree Press Woodstock Vermont MDCCCCXII

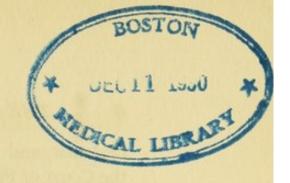
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PREFACE

The "famous clarke and right experte medycyne", Arnaldus of Villa Nova, was a native of Spain and was born about 1265, in the village from which he gets the allocatory part of his name. He was educated at Paris and Montpellier and he became one of the most learned physicians of his time. He was, in the mediaeval way, a fashionable consultant, being a favorite and friend of the contemporary Popes and of the Kings of Spain, Naples and Sicily. He was familiar with all the medical science of the day, and in addition to this he worked in chemistry. He introduced alcohol and alcoholized and medicinal wines to Europe, and he is called one of the fathers of chemical medicine. He also practiced alchemy and astrology, in which sciences he acquired both good and bad repute. He was once imprisoned for a day and his books were at one time burned; yet Pope Clement later approved them and ordered the Universities to preserve them. He made some study of theology under Dominican teachers; and at one period he was active in theological controversies, attacking the errors of the church; yet he incurred no serious penalties, and lived to old age, so that one concludes that he must have been a very clever man. Late in life he was something of a diplomat, and was sent by James II, King of Aragon, to the Court of Philippe le Bel of France.

Arnaldus was an incessant traveler, his services being in demand with the Popes and by the various royalties of Italy and Spain. Besides, he had a restless temperament, a mind eager for knowledge and a zeal for progress in his art.

Despite his activities of body he found time to write a monumental treatise on medicine, besides many works on special medical topics.

He translated about the year 1310, with comments, the celebrated *Regimen Sanitatis Salerni* or Rules of Health as prescribed by the long famous medical school at Salernum. This became one of the popular books of the time and as soon as book-making began was published by many of the presses of Europe. From 1474 to 1500 an edition appeared almost yearly and the number of editions from 1474 to 1846 amounted to two hundred and forty.

Arnaldus was a kind of specialist in the matter of preserving the health, and he was asked to prepare for King James of Spain a treatise on the art of keeping young. The present work on the conservation of youth and the warding off of old age is the result.

Although Arnaldus knew Latin, Greek, Arabic and Hebrew as well as the languages of his day he did not possess an easy style. His translator, Dr. Jonas Drummond, however, a good critic assures me, has turned the work, or a part of it, into smooth and mellow English. He has at any rate enriched the art of spelling with an ingenuity, a fertility of resource and absence of convention and restraint which should delight the simplified spellers of today.

The work we let speak for itself. It contains for the most part counsels that are sound even if obvious. There are in it some "very secret things", yet perhaps nothing that will entirely revolutionize modern hygienic methods.

Arnaldus was a believer in the Galenical pathology. According to this, man has four temperaments, hot, cold, wet and dry. To keep well one must hold these temperaments and the four humors which lie back of them in equilibrium. If one of them gets to be predominant, as when there is an excess of bile, he has a crisis, i. e., he becomes ill.

Now the theory of Arnaldus regarding old age was that the cold and dry humors predominate and deplete the body. It is necessary to antagonize this by stimulating the warm and moist humors, thus restoring the equilibrium. Arnaldus has a special regimen for each temperament and humor.

Old age is prevented by attention to these regimens. But he has also a general regimen applicable to all temperaments, and these are his general laws of health. He advises moderation in all things, a life equally and regularly divided between moderate exercise of the body, physical repose, waking and sleeping, mental work and some kind of amusement. He especially insists on the utility of intellectual diversions; music,

story-telling, theatres, traveling. He is opposed to exclusive or peculiar diets, sharp changes in food and too long or too short intervals between meals. He modifies his regimen, according to the season. The spring favors the warm and humid humors, leading to dangerous repletion, hence the use of purgatives and bitters at this time.

Arnaldus advises the free ventilation of houses, recommends wood fires rather than those of charcoal "whose fumes distil a dangerous vapor." He prescribes proper clothing; and he is very advanced in oral hygiene for he thinks that the mouth should be thoroughly washed after each meal. He advocates a system of hydrotherapy, and the daily cleansing of the skin; a well-functioning skin is for him a guaranty against every disease.

When the temperaments are out of equilibrium, something more is needed than regimen and Arnaldus prescribes his medicines. These are chiefly warm aromatic drinks, ptisanes, concoctions of herbs that act chiefly on the kidneys, skin and bowels, cleansing and regenerating the body.

His remedies are largely vegetable; but he was especially expert in preparing and prescribing medicinal wines. His *eau d'or* or water of gold is a very secret and highly esteemed preparation. It contained no gold but consisted of rectified spirits specially aromaticized. His mixtures must have had some of the qualities of the modern cocktail, of which Arnaldus may be said to be the inventor.

All the measures for the conservation of youth indicated above are not given in this treatise; but are referred to or implied. They are given in detail in his Treatise on Hygiene, or in his *Regimen Sanitatis Salerni*, both written earlier in life.

Arnaldus in his book gave, besides general advice, many prescriptions and many details as to the use of special foods and drinks. Having gone over these, however, in the original, I am of the opinion that they are too technical or obscure for a modern lay treatise. A few prescriptions and special comments on food and drink, given under the head of *Sermones*, are added to Drummond's work, not using, however, the immortal orthoëpics of that author. His book was published about 1544.

The learned translator, Dr. Drummond, an English physician of the early sixteenth century, is unknown to fame. His name is not in the Dictionary of National Biography, but he uses English ingeniously, and has translated the text correctly so far as he went. He is not quite fair to Arnaldus, however, in that he does not give us the whole of the original text.

The special interest of the treatise of Arnaldus lies in its being the matured advice of an erudite, experienced and popular physician of the thirteenth, sometimes called the greatest of centuries. And it also gives a good illustration of early sixteenth century English writing, spelling and book-making, before the time of Shakespeare, and at a period when there was a freedom from restraint which writers now do not possess.

The English work is very rare. No copy has been in the market for thirty years. The present edition follows closely the type and spelling of the original copy now in the British Museum.

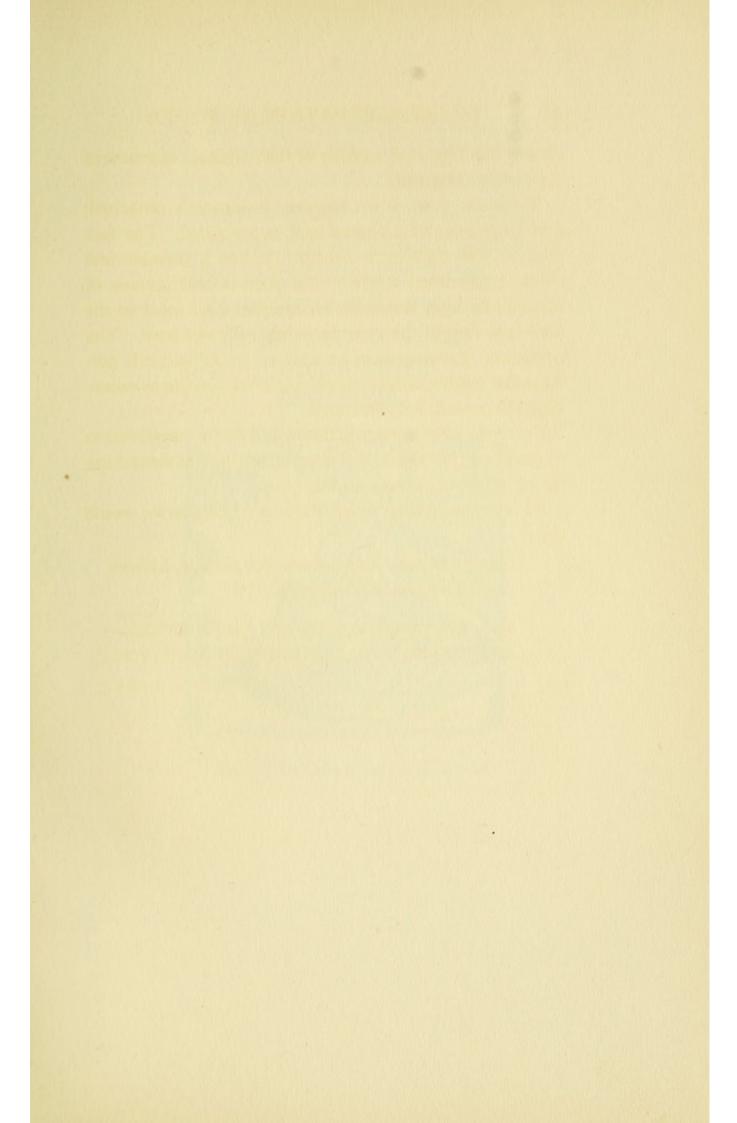
These are days when hygiene is earnestly preached, and, with somewhat abated zeal, is practiced. The fact that in the thirteenth century it was a popular and much appreciated study by the doctors and laymen of the middle ages deserves recognition, and most of the doctrines taught then can be safely followed now. The periodical starving cure as advised by Arnaldus is perhaps the method which modern science accepts as especially efficacious and advanced.

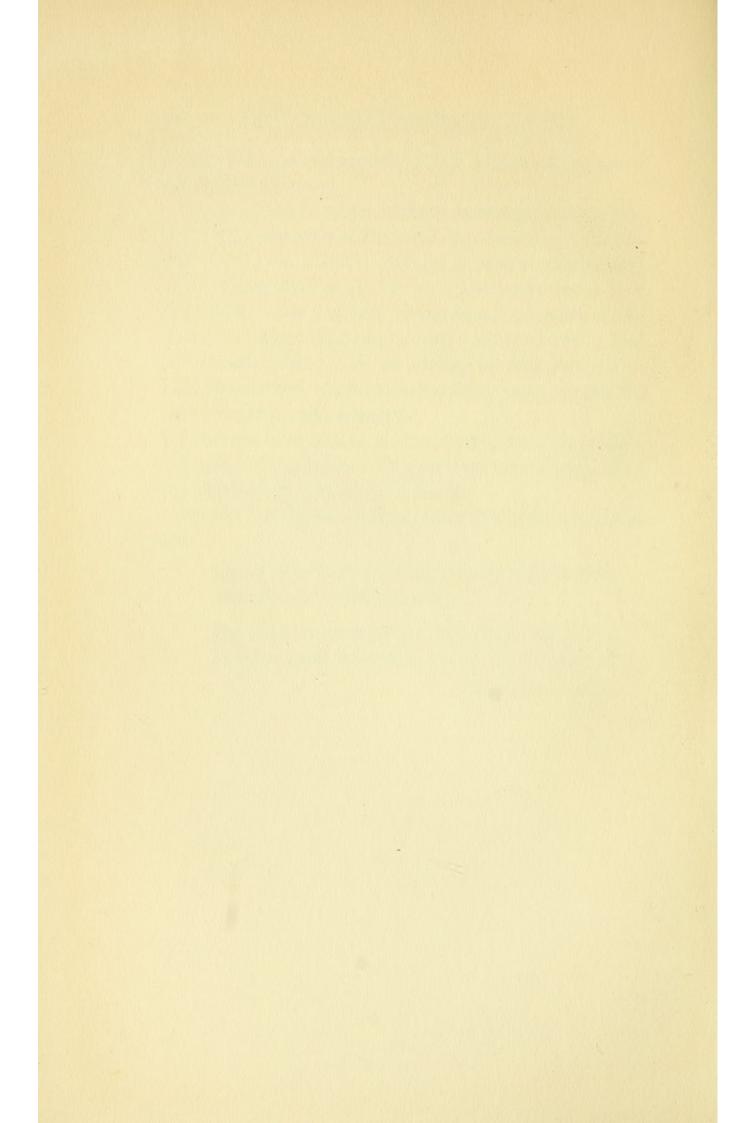
Everyone over sixteen is interested in the conservation of youth and the defence of age and so there is something for all grown-up people in this book.

As was the custom in the days of Arnaldus we would say:

- "Quem prudens lector mercare et perlege, habebis Ingentes parva divitias pretic."
- "Buy this, prudent reader, and read it through, And you shall have huge riches for a little sum."

CHARLES L. DANA





There is a newe

Boke, called the defence of age/ and recovery of youth/transla ted out of the famous Clarke and ryght experte medy, cyne Arnold de Poua Tilla/very profeta, ble for all men to knowe.



Title page of Drummond's original book



Tunto the noble and bertuous nip La dp Marget dowgles, Nice, nnto the moste noble a crysten, pipnce Henry f. viii. kpng of Englande cof Iraucc, defender of f fayth, a under god supremenced of f Ehurche of Englande, syster unto the moste noble a chipsten prynce James, kpnge of Scottes doughter, unto the noble contie Archebald Erle of Anguyshe, Jonas Diunnde her umble ser; uptor desueth grace and helthe.

Sand vertuous Ladylhyp to small a boke, were it not so that I am purposed to recompence your Ladylhyp, with a greater, so that this maye fauourably be received (which to beleve) the very no blenes, and gentylnes that is in you per swadeth me, also I hope that he wyl con spoer rather the herte of the gruer, then the gyst it selfe which althoughit be but small in quatite, yet it is great in effecte a this done, I shall despre god entrerly to preserve your Ladyshyps noblenes.

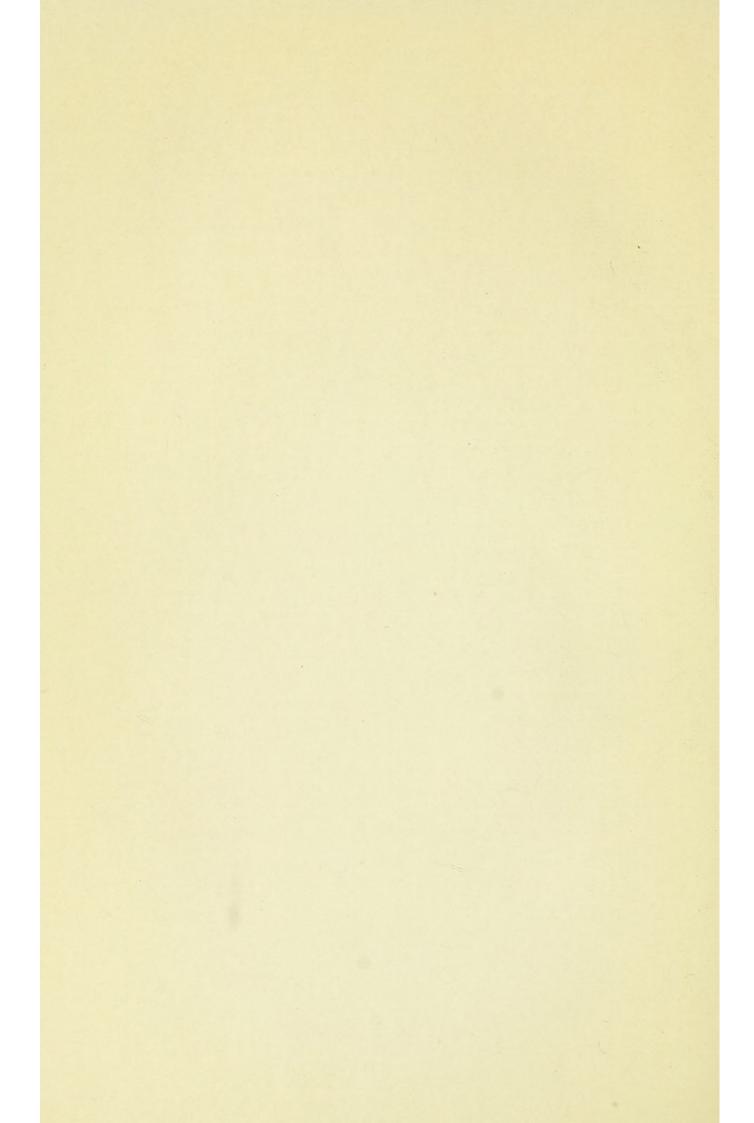
Dedication of Drummond's book



the coleruacio of youth and withstanding of age, con splitch in the mainteninge of the powies, the sprites, a the natural heate of the body in they; state and temperancy: a in the coforting and repayinge of they m beinge defective. For so longe as the powies, the sprinces

and temperancy: & in the cofortyng and repayinge of theym bernge defectpue. For so longe as the powers, the sprintes and the naturall heate of mannes body are not debylitate noz wekened, fo longe (I lave) neyther Chall & Chrinic waynkle, for the debylyte of h natural heate decly nyinge to coldenes and daynes throughe the which the fode a noziffhement of the body is corrupted a hyndered: is cause of corrugacyon or wrynklyng of & fkynne. For the meate beynge fyille dygelled in the flomacke, and then shortly after sent in to enery parte of the body, is dygelled agarne of g naturall heate of the fame parte where it is recepued: than pf that this naturall heatebe by any occasion corrupted or destroyed: the foode also is fent to the same place, shall be lyketople 21.ii.

First page of Drummond's book



UHere is a newe

Boke, called the defence of age and recovery of youth transla tedout of the famous Clarke and ryght experte medy-cyne Arnold de Nova Villa very profytable for all men to knowe.





Unto the noble and vertuous my La

dy Marget dowgles, Nice, buto the moste noble & crysten, prynce Henry ye biii. kyng of Englande & of France, defender of ye fayth, & buder god supremeheed of ye Churche of Englande, syster buto the moste noble & chrysten prynce James, kynge of Scottes

doughter, unto the noble coutie Archebald Erle of Anguysshe, Jonas Druumde her vmble seruptor desueth grace and helthe.

Sory I am to offer but your noble, and vertuous Ladyshyp so small a boke, were it not so that I am purposed to recompence your Ladyshyp, with a greater, so that this maye fauourably be received (which to beleve) the very no blenes, and gentylnes that is in you, per swadeth me, also I hope that ye wyl con syder rather the herte of the gyuer, then the gyft it selfe which although it be but small in quatite, yet it is great in effecte & this done, I shall desyre god entyerly to preserve your Ladyshyps noblenes.

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He coseruacio of youth and withstandyng of age, con systeth in the mayntenynge of the powres, the spyrites, &

the naturall heate of the body in theyr stateandtemperancy; & inthe cofortyng and repayrynge of theym beynge defec true. For so longe as the powres, the spyrytes and the naturall heate of man nes body are not debylitate nor weken ed, so longe (I save) neyther shall ye skynne wrynkle, for the debylyte of pe natural heate declynynge to coldenes and drynes throughe the which the fode & norisohement of the body is corrupt ed & hyndered: is cause of corrugacyon or wrynklyng of pe skynne. For the meate beynge fyrste dygested in the stomacke, and then shortly after sent in to enery parte of the body, is dyges ted agayne of ye naturall heate of the same parte, where it is recepued: than pf that this naturall heate be by any

occasion corrupted or destroyed: the foode also is sent to the same place, shall be lykewyse corrupted, & then so ensueth corrugacyo of ye skynne, & hore heares, as ve mave se in ve aun event & aged men, when they be colde & drye, for horenes cometh of ye defecte of naturall heate, the which defendeth the body fro age, age properly doth make ma colde & drye, & therefore they be of lytel blode, and the powres & natural heate in them very weke, & unable to co coctyng&dygestyngof meate, wherfore there increace great plety of humidites and crude rawe humours, & therefore the thre sprytes & the thre digestions in age be decayde, & in the rayneth ye debili te of heate, & this followeth with pecourse of tyme, ye whiche course may be som what let and defeded by Phisicke, & by auopding of suche accidentall causes as do induce age, as sorowe, study, heup nes, desperacion, ouer moch benery, la

bour, trauepl, or rest, & whe age by any of these causes is come, then to amputat or cut awaye the cause by thynges apro priat. And for the preservacyo of the powres, is no better thynge then a spr upe made of wyne and suger, myxte to gyther. iii. partes of wyne, & ii. partes of suger dronke with favre water, or borage water. This sprupe is both meate and drynke, and in it be two thynges confycte togyther, whiche are moste frendly to nature, & when the powres be weke they nede such thynges as may coforte them, both meates, dryn kes, and other spyces, and moystynge medycynes, and this is a very secrete thrnge. Corrugacyon and reuelynge of the skynne require suche thinges, as do clense & make playne & smoth skynne, wt certapne oples, waters, & opnte mentes. Goodlynes and fresshnes of coloure, is by fedinge bpon such meates & drynkes, as do engender good &

laudable blode, & are lyght of dyges tyon, and by such thynges, as do clense ye blode corrupted, and the other powres is, ouermoch euacuacyon, or to often lettynge of blode, or suche other lyke thynges. These thynges may be amen ded with thus, eatynge of chekyns, and chekyn broth, with due rest and slepe, and also with swete and odoryferous

thynges, and suche other lyke.

Thynges engenderynge euyl and rot ten flume, be fruytes, fysshe, all thyn ges made of mylke, & such other, of the whiche be engendred watery hum ours, not dygestyble in the membres, & then in the same membres it causeth horenesse, and wryncles. But amonge all other thynges there is nothynge, the which so strongly doth cause a man to loke oldely, as feare and desperacion. For because in that passyon and ef fectyon, all the natural hete of the body doth resort inwarde, and forsaketh the

outwarde partes, and ye most chefely, when the manes complexyon is disposed to the same, and that is the cause that many beyng toste, turmoyled, and bexed, with this worldly stormes so baynly theyr heer waxe hore, or whyte.

Adome thynges that do resyste or put away these causes, are chosen the ioyce of Pomegranate, & chefely golde, & the ioyce of Borage, & of fumytorye, & specyally grene and puryfyed, and ye bertue of the rote of Playntayne and

suche other.

The rotten fleume is destroyed with the vse of Myrabolanes composed, and Aloe rosatum, and Agaryke, thynges to be had at the Apothecaries. And ye wherwith properly both melancolye & fleume be expelled out of the body, is Eleborus niger, called in Englysshe Beares foote, prepared by a certayne maner unto few knowen. For in the rectifying of ye malycyousnesse of this herbe, standeth all the secrete of his operacyon, for by hym a man shal be altered from eugl coplexion to good, and it restoreth youth agayne, but it is not convenyent for delycate bodyes and noble complexyons, & therfore I wyl say lytel of hym. Beware ye never en termedle with this herbe, without the adupsement and counceyll of some experte and well learned Physycyon.

Also Dianthos composed with sug er, the whiche properly doth consume the fleume and melancoly being in the heed, and it tarieth and letteth the hore heres coroborateth and strengneth the censes, and prologeth the lyfe, & chefely when a quatite of it is disolved in aqua vita wel and craftely made, & somtyme it is disolved in wyne, & lyeth in it. ii. or. iii dayes, & then strayned, & so vsed conveniently, accordyng to the counceyll of a Physycyon.

Other thynges also there be, whiche

quycken & maketh lusty ye body, as Diacameron, Mirabolany, Chebuly composed, which by theyr property do consume and waste the flematycke sup erfluptyes of the stomacke & do com forte hym, and do clarify the blode and be of great force agaynst melancoly, and thuse of those do comforte youth, and causeth a man to waxe yonge agayne, & defendeth a man from hore heares. also the decoction of sene with Diabor aginatum, & the whey of gotes mylke and such other. And one of the chefe thyngs, wherby age is defended and pouth prolonged, is once in a moneth to have a bomyte, to expel the fleuma tyke humour, and once in a weke to re cepue aclyster, and specyally that com posed of the ionce of Mercury, walwort elder, and bete wthalfe an ounce of pero pegara, the whiche is a great secrete.

And also subiction made with Peropigra, or Cassia fistula, and the iopce

of fresshe Roses, preparate with sugre, is a goodly easer of nature, mynystred wysely, and it is blessyd medycyne to make a man soluble, and therwith also it comforteth the pryncypal membres. in man, and altereth the eurll dyspo sicion of man to good, it openeth opil ations or stoppynges. It comforteth the herte, and clenseth it, and to speke of the prayse of this medycyne wolde re quyre a longe processe. Other thynges also destroyinge and consumpng the humours, which cause age are those temperate Spyces knowen to every body, Cloues, Cinamome, Liquiryce, and such other, but most pryncypally, when they are conficte & incorporate with good wyne, and so (beyng fyrst somwhat watered) recepued and dron ken.

Also it is not unknowen, howe that pylles made of myrrha, be of an excellent goodnesse in the conservacyon of

helth & lyfe, for it withstandeth putre faction rectifieth and sincereth that whi ch is redy to putrefaction, wherfore this Myrrha is confycte with suche thynges as deade bodyes are incered with all, to defende the corse from putrefaction. And the fore sayd spyced wyne, when it is recepued of man, it spredeth it selfe abrode in ye partes of the body, and comforteth all the partes of the body, and dryeth by the superfluous humy dyties of the body, also the powder of the same spyces bsed with meate, profyteth wonderfully.

Mowebeit, yf the man be of a dry dysposycyon, then shall it be nedefull to adiopne to these spyces, some more temperate thynge, as the ioyce of Pom egranates, Rose water, Sugre, Lyck eryce, Resyns, and such lyke. Diaca meron restoreth dygestyon, loste and comforteth it, and Trifera passeth all declynynge somwhat more to calidite.

The naturall hete then & the meate compng to the membres beyng decap ed or corrupted, which become of put rpfped colour, furthwith ensueth corru gacyon, and olde lokynge as ve may se in such as are scaby, in any parte of theyr body, for that parte beynge en fected, it semeth rynkled and olde sky nne. The infection beyng once departed agapne, the skynne sheweth it selfe favre, smothe, and vongly, and to those golde preparate is souerayne, & the wyne of Pomegranate, and this is specyal good for the lepry. And this wyne of granates taken and recepued howe pe lyst, hath properte to extenate the hu mours, and to alaye the hete of the lyuer, and to comforte all partes of mans body offended with heate, and it is good agaynst wekenes of herte, fortyfyeth the mouth of the stomacke, & comfor= teth the herte. Also Mirabolani Re bult conditi be very good both in hote B. ii.

and colde dyseases they comforte the stomacke, and dryeth by the superfluous moystenes of the same, and besydes this they helpe the melancolicke people, they clarefy and make clere the blode, and the spyrytes, neyther is there any thynge more excellent for that purpose

then these.

Also borage wyne made (in tyme that grapes be gathered & pressed) with must is pryncipally good for mel ancoly, faynte herted, and mad people, for it clenseth the blode, & taketh away eugl fantasies, and comforteth all the regetyue power, and encountreth all corrupcion. The electuarye also of the Myrabolans bsed, is a thynge ryght often proued and alowed, to the conser uacion of helth, and prolongynge of the lyfe, and to waxe yonge agayne, for it conforteth the stomacke, & maketh it apte & lusty, & consumeth ye watry nesse lefte of the fore fode, & the bse

of this electuarye withstandeth age, & causeth man to lyue longe by the help

of god.

Agayne certayn suffumigations and sauours made of convenyent thynges, and accordinge as the man nedeth, is

very profytable.

Wathynge also temperatly without any great sweatyng so yt onely the skynne be mundefped and clensed from fylthynes, is holesome and profytable. for therby ye powres are opened, and the superfluous humidities lurkynge within the skynne, be wasted and dry TET DE

But the use of good wyne in the whiche such spyces, as we have spoken of before, have ben steped, and the ver tue of theym in it resolued, temperatly taken with a lytell water myxte ther= with in due season, shall passe and enter into all the hydde wayes of the body, and it shall drye by all the eurll

humpdyties, & comforteth all the inwarde partes, & perfectely doth open all maner of opilaction or stoppynge, the whiche is secrete for the aparycyon or openynge of places opilat, or stop= ped, causeth ye lyuely spyryts to rune throughout every parte of the body, and causeth the naturall heate for to waxe stronge, and to be of great force, but opilacion or stopping causeth the con trary, for the naturall hete beyng con culcate, or strangled, not hauping the fre passage throughe euery parte, is therby debylytate and wekened, and so not suffyeyent and myghtye to seperate the pure from the unpure, wherup on the superfluous humpdyties rotten & putrefped be in the body moche in creased, and thereby consequently ensueth wrynkelinge of the flesshe and skynne, and age at hande.

I An other also stronge meane there is to defende age, and to recouer youth

agarne, by abstruence, and convengent for bearrnge of your quantyte of meate, bn to such tyme as the body be brought very lowe, and made very spare, and then to restore, and norpsshe it agapne with laudable, holesome, and good fode. whiche hath a propertye, to engender cleare and pure blode. To

This popute also do they observe the whiche make fat Oxen: whose fles she the more it waxeth lean and bare, pe more also dothe it be come tender and ponge, and the better afterwarde do they lyke and batten, and ye may al so se the practyse of this in suche as be lately recouered from syckenesse.

But to be shorte, he pt wyll refranne age, and conserue youth, let hym not be neclygent in chosyng of his meate, that it be suche, as maye brede good, cleare, fat, thycke and viscous blode, and then

may he withstande well age.

I And when that suche humpdytes,

or moystenesse, whiche are in the body, and crude humoures are increased in man, then hath he nede of such thynges whiche do extenate and exiccat those superfluous moystenes, and such thynges as may dygest the crude or rawe humours, syncere and depure the hole body.

Amonge other thynges, suche as waxe aged, have great nede of calefactyon, and humpstation, that is to saye, warmynge, and moystynge, of both equally, by meates, and drynkes, and medycynes convenyent, by exercyse,

and gladnesse.

Adome that he maye kepe his body in suche temperancy, that he may lyue without ye horryble dauger of greuous syckenes, and the better able to serue almyghty God, to whom be all honoure.

IJIAIS.

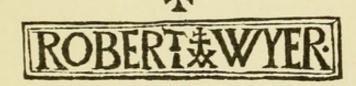
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Ther dwellenge in saent
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the segme of saent
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besede Charen=
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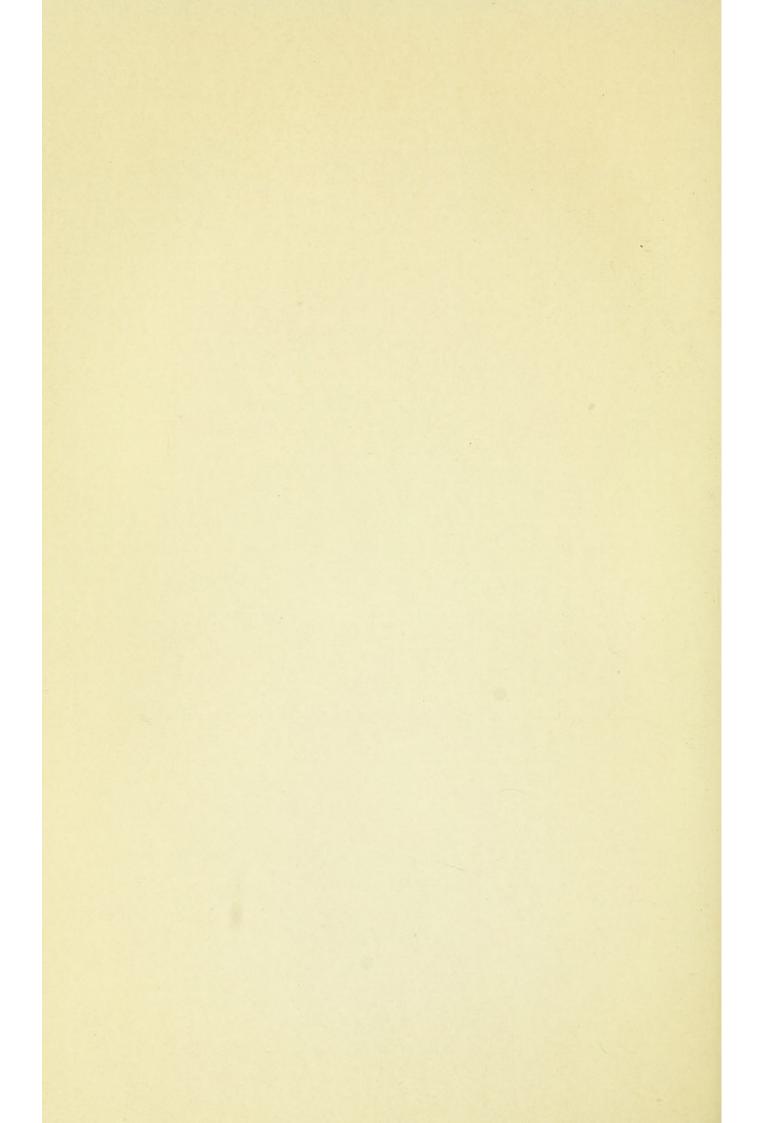
and humrstation, that is to save, wars mynge, and moystynge, of both equally, by meates, and drynkes, and medycynes convenyent, by evercyse, and gladnesse. Once that he maye kepe his body in such temperancy, that he may lyue with out & horryble dauger of greuous sycke nes, and the better able to serue always ty God, to whom be all honoure.

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Colophon of Drummond's book



. Appendix

Containing further Notes from the Conservatio and Extracts from the Breviarium

Honey of the color of gold is good for the digestion of the aged. Regimen Sanitatis

THE CONSERVATIO

The following is a translation of part of the *Conservatio* which was not given by Drummond. It contains an introduction and a selection from his royal medicaments. The prescriptions call for the use of herbs still used to some extent at the present day. They consist mainly of aromatics, spices, wine, oil and laxatives.

Dianthus This is the ordinary red garden pink. It is used as an aromatic for making syrups.

Cheboly is one of the varieties of the myrobalanus.

Borage (Borago officinalis) is a European annual. It is still used in infusions as a demulcent, cooling and diaphoretic drink.

Bear's Foot (Polymnia uvedalia) is a plant to which great virtues have been attributed.

Myrobalanus This is an East India fruit in high repute with the Arabians and esteemed for its primary laxative and secondary astringent properties.

Mercury (Mercurialis annua) This is a European herb employed from ancient times as a purgative diuretic and emmenagogue.

Agaric is the fungus of the genus Agaricus. It was used as a purgative; in recent times for night sweats.

THE ROYAL MEDICAMENTS

We have now come to the end of this brief investigation of the principles which determine the proper regime to be followed, for prolonging youth and retarding the advent of old age with all its inconveniences. It remains for us now to set down one by one a few prescriptions which are called "the royal medicaments." These have been summarily mentioned in the course of the preceding treatise, and the reader has already been referred, in connection with them, to the standard works, both practical and theoretical, dealing with the various branches of the medical art. The prescriptions that we specify here below are those which usage has more generally adopted, and those which modern scientific investigation considers most effective.

Prescription for oenocrocus and eleocrocus. This compound restores tranquillity of mind and cheerfulness. Take a small quantity of saffron and put it in a large bag of very thin linen. Place this bag in a cloth-strainer or else in a linen sac. Pour either wine or oil over it so that it will absorb the essence of the saffron. Repeat the operation as often as you please until the liquid has drawn from the saffron the required color and flavor. Spices, if desired, may be added at pleasure.

Prescription for a steam-bath. Put a decoction of rosemary plants and of rosemary flowers in a tub of steaming water. This vapor bath will rejuvenate you and you will be like the eagle of Biblical memory. You may also use stoecas, and sage, and camomile. Washing your feet in a decoction of camomile opens up and clears the brain. Such baths are very strengthening and relieving.

Prescription for an electuary which will be found helpful to those afflicted with melancholy, to those who rave, to those suffering from jaundice; to the wrinkled and the withered; to the hypochrondriac; for excessive heat in the extremities; for yellowness of the eyes and premature hoariness; for stomach and heart troubles. R: myrobalans, six drachms; fruit of terminalia, three drachms; ind., one ounce and one-half; emblic and belleric, each six drachms; mastic, one drachm; aniseed and fennel, each one drachm; spike, cloves, aloes, each one-half drachm; honey, three ounces; sugar as much as is necessary. This is the electuary called the Arabic trifera.

Prescriptions for the hiera pikra. The properties of this medicine are well known, and the etymology of the term tells us of its good qualities. However the hiera pikra made up of six ingredients is very sluggish, and, unless a great quantity of it is administered, it remains in the intestines, on account of its sluggishness, and simply moves the feces without ridding the bowels of them. But the hiera which is compounded with sixteen ingredients is efficacious in small quantity — one drachm to two and one-half; - it reaches even to the remotest parts of the intestines, relieves them, and causes an abundant evacuation. In the composition of this latter hiera are found the drugs that produce the results claimed for by the "sublime" medicaments, that is laxation, and relief of all the principal organs. R: cinnamon, spike, andropogon schaenantus, cassia lignea, white balm-tree, fruit of the balsam-tree, worm-wood, cuscuta epithymi, turpeth, agaric, colocynthe, mastic, each two scruples; aloes in quantity equal to the total weight of the preceding; honey, scummed and strained, as much as is needed.

ON THE DEFENSE OF AGE THROUGH THE CARE OF THE BRAIN

The arrangement of the brain, which is the seat of the "spiritus animalis", is not to be slighted. Its functions indeed are disposed, as are the functions of the stomach, to fulfill in the highest measure the things for which it was created. When a part of the body performs that natural operation assigned to it by the blessed Lord, it is healthy; whereas illness or weakness is nothing else than an interference with the due operation peculiar to an organ. From this fact comes the great attention given by every man to anticipating permanent illness, either in avoiding that which causes the damage, or removing the damage itself.

With this digression, which is not without its aptness, let us return to our original subject; and we will note that the substance of the brain is created cold and humid; and for this reason the phlegmatic humor is concentrated in most people in very large quantities around it, especially in those people in whom the other parts of the body are of such nature and condition that they transmit it to the substance they use. Therefore in those most

subject to this condition, the hair of the face grows white more early than that of other parts of the body and on some heads more rapidly than others, and the traces of old age appear. Our whole problem, in a word, consists in reducing the existing humor and in removing those things which produce it. On the temples and front part of the face the hair grows white more rapidly than elsewhere; since there, more of the crude vapor reaches, by which the matter which produces old age is made subtle and the more ready to penetrate to the roots and substance of that hair.

We must know further the construction of the brain and its functions in relation to its whole substance; for these functions derive their aptitudes from these things that belong to the kind of living work they do. The functions are four, motorial, natural or automatic, of coördination and of feeling. So the movements of the parts of the body have a relation to the differents parts of the brain. And this is very important knowledge; for if a person knows the arrangement of the brain, the active and passive consequences of its simple and complex operations, it is not difficult to reach accurate conclusions concerning them. This much however must be borne in mind: great sleepiness is the symptom of much phlegmatic humor; and sleep itself, which is the resting of all sensitive and animal functions, is a great producer of phlegm; choleric and acute and stalwart minds are little addicted to sleep, much addicted to dreaming; they have keen wit, grow gray haired late in life and have great boldness.

And such people are subject in youth to dangerous illnesses, but if they survive them in the age of vigor they live to greater age than usual and in exceptionally good health. Now all dryness tends to remove from decay and corruption; hence arises a certain custom of eating a great deal of salt, and many men who know have recommended placing salt in bread. Salt moreover and all diuretics, acids and cleansers are solvents and dispellers of the phlegmatic humor and and other watery substances. That is why they enter into the subject of this book; Moreover those who are closest to nature are best qualified to study such diseases; and the astrologer in many things agrees with the doctor and so what he says is not to be disregarded.

Arnaldus then procedes to tell how cold and moist humors are to be controlled.

And to conclude let us say that the medical science deals with a noble being and that it is a necessary art: that it was created for the preservation of good health, and for the protection of the life of man who is the worthiest of creatures; that no physician should be ignorant of nature and that he should always be consulted before anything is done in connection with the treatment of maladies. And so now this treatise is complete; and the whole book is also complete, with thanks and benedictions to the Lord and to the glory of his most serene majesty Robert, King of Jerusalem and of Sicily, to whose sway may all nations become subject.

THE BREVIARIUM

ARNALDUS ON THE CAUSES AND CURE OF HEADACHES

Arnaldus wrote a treatise on medicine which he called the Breviarium. It was one of his important works and was held as high authority. The purpose of the work is told in the following Prologue:

PROLOGUE

After the death of Master Johan Casamida, of blessed memory, professor of medicinal science, my most respected master and beloved teacher, I made up my mind to compile a certain book on the practice of medicine. which I should call a Breviarium, in four books, in which, with God's help, I should treat as best I might on symptoms, causes and cures of all the diseases that affect the human body; and therein I should bring together for rich and poor alike the treatments of divers physicians and teachers, which might be useful to the universality of ailing people. I will give special prominence there to the treatments of my own teacher in medicine and to all these that I myself have put to test; as well as including there all the others, without envy or malice, which in the days of my life I have seen, and all teachers whatsoever, men and women, even the simple-minded and untutored ones.

Arnaldus' list of diseases of the brain was small. There was epilepsy, phrenzy, apoplexy, somnolence and insomnia, but the various kinds of headaches included also what would come now under the head of meningitis, brain humors, etc. Headache is dealt with at very great length therefore. There were eleven kinds of headaches.

- 1 Headache from exposure to cold (grip-headache).
- 2 Headache from over-heating (congestive).
- 3 Headache from blood poisoning (toxic).
- 4 Headache from excess of phlegmatic humor in the brain, with profuse nasal discharge (catharral).
- 5 Headache from black bile (ex melancholia, bilious).
- 6 Migraine (hemicrania).
- 7 Headache from excess of phlegm in the stomach (dyspeptic).
- 8 Headache from black bile in the stomach (another form of bilious headache).
- 9 Headache from yellow bile in the stomach (another form of dyspeptic headache).
- 10 Headache from congestion of the stomach and liver (dyspepsia, sour stomach).
- 11 Headache from bile in the head (another form of bilious headache).

Headache in General. In as much as all nerves originate in the brain and as the latter is the root of all consciousness (as Galenus says in the Tekne), we must consider disorders of the brain as a most important and impressive subject. The brain in fact is frequently disturbed by many sorts of diseases, arising from the humors located within it, or coming from the stomach or other sources, now from the distemper (distemperantia) of cold air or from heat (such as the heat from the sun), now from a draught of air and other causes of this sort, concerning which, God willing, I shall speak below.

When the brain has been distended (inflatum) or compressed (conflatum) by the distemper of cold air, it spreads its humors (just like a sponge full of water when squeezed) through the other parts of the body; but if on the other hand it has been dried up (shrivelled) by the distemper of hot air, or by the heat of the sun, it attracts (like a cupping glass) the humors from the other parts of the body to itself and then spreads them through these same members. And this has usually been the cause of divers diseases, for we see many people falling sick from these causes, since from the rheum descending from the brain come catarrhs, hoarseness, coriza, ear and toothache, paralysis, quinsy, peripneumonia, consumption and many other diseases; and oftentimes it comes about that the patient suddenly succumbs to some one of the above mentioned ailments, so that the skilled physician, in dealing with sufferings of the brain, must be prompt and attentive in controlling this rheum, whenever practicable, less the patient become subject to these mortal ailments or diseases, for as Aristotle says in the De Animalibus: The brain is exposed to many causes of rheum, since it is like an inverted tree (i.e. with branches extending in in all directions).

Headache Due to Draughts. Headache resulting from exposure to a draught of cold air presents the following symptoms: the patients will admit that they have been affected by wind or snow or some other kind of cold air: the whole head aches with cold (with a chill?); the nostrils are obstructed and almost clear fluid is emitted through them. There is coughing. Sometimes there is inability to speak and almost all parts of the body are affected with a certain weariness.

Let a headache of this sort be treated by the following inhalation. Recipe: powdered laurel leaves, pennyroyal, bettony, rosemary, ginger, narcissus, southerwood (abrotanum), each one handful. Boil this in red wine of the best quality in a covered pot so that the fumes cannot escape. Let the patient, well covered in bed, inhale the fumes through mouth and nose, when the wine is hot; let the feet, shins, and the arms up to the shoulders, be washed in it. On the head, place a poultice of ground papain, mixed in said hot wine, or of pulverized mustard and pennyroyal, mixed in the same way.

Here is another remedy which I derived from a certain Saracen: Take two or three bricks and heat red hot, pour on them the best red wine and let the patient with head covered inhale fumes through nose and mouth. All the better if in the hot wine are mixed the above mentioned herbs. In case of need, two or three applications daily. I have had excellent success with this treatment.

The air of the sick-room should be kept artificially warm with charcoal fires.

The food should be served hot and seasoned with hot spices.

If the cold should be accompanied with coughing, apply the remedies to be indicated, God willing, in my chapter on coughing. I will say here however that the patient should drink sweet, fragrant wine, diluted with water from a decoction of pennyroyal, thyme, raisins and laurel leaves.

