

Living Earth School of Herbalism Online Lecture Series
Immune Support and the Natural Treatment of Colds and Flu

The following notes supplement the information that was provided in the lecture on the use of herbs for immune stimulation and the treatment of colds and flu.

1. Immune Stimulant Formulations

Immune stimulant formulations are used as a tonic to support our immune system and prevent illness, or to normalize our immune response if it is in a weakened state.

Immune stimulant formulations must include immune stimulant, lymphatic and pungent herbs.

(a) Immune Stimulating Herbs

Immune stimulating herbs do not artificially stimulate the immune response. They are short-term immunomodulators that normalize immune function and initiate a rapid, short-term activation of the immune response. Our immune system will usually adapt to this fairly quickly. With continued use of immune stimulants, the affect tends to drop off after a week or two. Immune stimulants are beneficial both as short-term tonics to improve immune function, and to activate the immune response during an acute infection.

A good immune stimulant formulation should contain at least two or preferably three immune stimulating herbs.

The following immune stimulating herbs work well in immune stimulant formulations:

Boneset Herb (*Eupatorium perfoliatum*)*

This herb is very bitter. It should not exceed 20% in formulations for adults, or 10% in formulations for young children, otherwise the formulation will be too bitter. Boneset is also a mild lymphatic.

Elder Flower (*Sambucus nigra*)

This herb is very mild tasting and works well in formulations for children. Elder is also a mild lymphatic.

Elecampane Root (*Inula helenium*)*

This herb is moderately pungent and bitter. At a proportion of 20-30% it will provide enough heat for the formulation so that another pungent herb will not be required. In formulations for young children it should not exceed 20% otherwise the formulation will be too bitter. Elecampane is also a mild lymphatic.

Plantain Herb (*Plantago* spp.)

This includes common plantain (*P. major*), American plantain (*P. rugellii*), and narrow-leaved plantain (*P. lanceolata*). These herbs have very similar properties and can be used interchangeably in immune stimulating formulations. Plantain is also a good lymphatic.

Pot Marigold Flower (*Calendula officinalis*)

This herb is very astringent and acid. It should not exceed 15% in formulations for adults, or 10% in formulations for young children. Pot marigold is also a good lymphatic.

Purple Coneflower (*Echinacea* spp.)

This includes common purple coneflower leaf and flower (*E. purpurea*), narrow-leaved purple coneflower root (*E. angustifolia*), and pale purple coneflower root (*E. pallida*). These herbs have very similar properties and can be used interchangeably in immune stimulating formulations. The root of common purple coneflower and narrow-leaved purple coneflower have a metallic taste and numbing quality that children often don't like. In formulations for young children they should not exceed 20% otherwise the formulation may be unpalatable. Purple coneflower tincture often contains more than one species and part of the herb. We often use a combination of common purple coneflower leaf and flower with narrow-leaved purple coneflower root. This combination broadens the immune stimulating action and reduces the metallic and numbing quality. When they are used together in this way, collectively they can be included in a higher proportion in formulations for young children. Purple coneflower is also a good lymphatic.

Yarrow Herb (*Achillea millefolium*)*

This herb is very bitter. It should not exceed 20% in formulations for adults, or 10% in formulations for young children, otherwise the formulation will be too bitter.

* It is best not to include more than one of the bitter tasting herbs in a formulation otherwise the formulation may be too bitter, even for many adults.

(b) Lymphatic Herbs

Lymphatic herbs support and stimulate the lymphatic system. This both directly and indirectly supports the immune system and the action of immune stimulating herbs. Many immune stimulants are also lymphatics and many of the lymphatic herbs listed here are also mildly immune stimulating.

A good immune stimulant formulation should contain one good herb that is primarily focussed on supporting the lymphatic system in addition to any lymphatic properties associated with the immune stimulating herbs.

The following lymphatic herbs work well in immune stimulant formulations and are very synergistic with immune stimulating herbs:

Bedstraw Herb (*Galium* spp.)

This includes cleavers herb (*G. aparine*), sweet woodruff herb (*G. odoratum*), and yellow bedstraw herb (*G. verum*). These herbs have very similar properties and can be used interchangeably in immune stimulant formulations. They are also mildly immune stimulating.

Heal-all Herb (*Prunella vulgaris*)

Horsetail Herb (*Equisetum arvense*)

This herb is also mildly immune stimulating.

Stinging Nettle Herb (*Urtica dioica*)

This herb is also mildly immune stimulating.

(c) Pungent Herbs

These are warming herbs that act as a catalyst for the formulation as a whole by stimulating general circulation, thereby increasing the ability of the constituents of the herbs in the formulation to reach the cells and tissues where they are required. The level of pungency of these herbs varies considerably. As a result, the appropriate proportion of each of these herbs in a formulation varies. For each herb, too little will reduce their effectiveness, whereas too much can make a formulation too hot and irritating.

A good immune stimulant formulation should contain one pungent herb at a proportion that will provide just the right amount of heat for the formulation as a whole.

The following pungent herbs work well in immune stimulant formulations:

Cayenne Fruit (*Capsicum annuum*)

This is a very pungent herb. In immune stimulating formulations it should be included at a proportion of 1% in formulations for children, 1-2% in formulations for adults.

Cinnamon Bark (*Cinnamomum verum*)

In immune stimulating formulations this herb should be included at a proportion of 10% in formulations for children, 10-15% in formulations for adults. Cinnamon is an excellent herb to include in formulations for children to improve the flavour.

Elecampane Root (*Inula helenium*)

If this herb is included as one of the immune stimulants in the formulation, it is not necessary to include another pungent herb. To provide the right amount of heat in an immune stimulating formulation, elecampane should be included at a proportion of 20% in formulations for children, 25-30% in formulations for adults.

Ginger Rhizome (*Zingiber officinale*)

In immune stimulating formulations this herb should be included at a proportion of 10% in formulations for children, 10-15% in formulations for adults. Ginger is mildly immune stimulating. It also helps to improve the flavour of formulations for children, although not as well as cinnamon.

(d) Example Formulations

The following charts include excellent examples of immune stimulating formulations and how each herb benefits the formulation. The first is an example of an adult formulation, the second is an example of a formulation that is suitable for children:

Adult Formulation

Herb	%	Immune		Lymphatic		% of Required Heat
		Good	Mild	Good	Mild	
Boneset herb	20	✓			✓	
Plantain herb	25	✓		✓		
Purple coneflower root/leaf/flower	25	✓		✓		
Cleavers herb	20		✓	✓		
Ginger rhizome	10					100

Children's Formulation

Herb	%	Immune		Lymphatic		% of Required Heat
		Good	Mild	Good	Mild	
Elder Flower	25	✓			✓	
Plantain herb	20	✓		✓		
Purple coneflower root/leaf/flower	25	✓		✓		
Stinging nettle herb	20		✓	✓		
Cinnamon bark	10					100

(e) Dosages

It is difficult to provide a complete range of dosages for herbal products as there are so many different forms and potencies. In general, the best way to use herbs is in the form of tinctures made from fresh herbs. The next best way is tinctures made from dried herbs; then teas. Capsules are only acceptable if they contain dried extracts of herbs. Capsules and tablets made from ground up crude herb powders are not recommended.

When making a tea for medicinal purposes, the typical amount of herb required for an adult is 2-3 teaspoons of the whole formulation per cup of tea for chronic doses. If any of the herbs you are using are roots, rhizomes, twigs or bark, they should be coarsely ground with a mortar and pestle before steeping them. The herbs should be steeped in a covered container for 15-20 minutes. Do not steep them in plastic or metal containers.

With tinctures, the dosage for an adult varies depending the potency. If you are making a formulation with tinctures of different potencies, usually the dosage of the whole formulation will be the same as the largest recommended dosage for the tinctures used in the formulation. Typically, the dosages given are the chronic dosages for a 55-70 kg (125-150 lb) adult. The dosages are affected by weight, amount of body fat and metabolic rate. In general, the dosage for infants (0-1 years) is 20% the adult dose; for toddlers (1-3 years) is 40% the adult dose; for young children (3-7 years) is 60% the adult dose; for older children (7-13 years) is 80% the adult dose; for adolescents (13+ years) is 100% the adult dose; for adults who weigh more than 70 kg (150 lb) is 120% the adult dose; for seniors is 80% the adult dose.

(f) Protocols

Herbs should almost always be taken on an empty stomach to maximize the efficiency of their assimilation. The best times to take them are 10-15 minutes before meals. The next best option is 20-30 minutes before bed. It is preferable to hold them in our mouth for 20-30 seconds before swallowing (especially tinctures) as some of their constituents absorb better in our mouth than deeper in our digestive tract. It is essential that we take the minimum number of doses required per day. If we forget to take a dose at the appropriate time, then we should take it at a less ideal time (such as after a meal) rather than miss a dose.

Because the action of immune stimulants tends to drop off after a week or two, immune stimulant formulations are pulsed. The formulation is taken 3-4 times per day for one to two weeks and then stopped for one to three weeks. If necessary, it is repeated. The greater the amount of immune stimulation required (i.e. the greater the degree of suspected immune weakness), the larger the number of times the formulation is pulsed and the shorter the amount of time between pulsing. Although we might occasionally pulse as little as once for a period of a week, particularly when giving ourselves a mild boost after an illness, typically the minimum number of pulses is twice for one week with a one week break in between.

2. Cold and Flu Formulations

Cold and flu formulations are used to treat active acute infections of the respiratory tract. They support immune function as well as help the respiratory organs to overcome the infection.

Cold and flu formulations must include immune stimulant, lymphatic and pungent herbs, just like immune stimulating formulations. They also need to include herbs that reduce mucus secretions in the nasal passages, decongest the nasal passages, support the coughing up of mucus from the lungs, help to lower fever, and weaken or kill viruses. Ideally, our formulation should include at least two herbs with each of the above properties, except for the warming herbs. However, we rarely include an herb exclusively for its lymphatic properties as this tends to make it more difficult to include all of the important components of this formulation to a sufficient degree. Since immune stimulants also tend to have some action on the lymphatic system, that is sufficient lymphatic support for these formulations.

(a) Immune Stimulating Herbs

For more information on immune stimulants see the information on these herbs in section 1 (a) above.

A good cold and flu formulation should contain at least two immune stimulating herbs. Many of them have important respiratory properties as well.

The following immune stimulating herbs work well in cold and flu formulations:

Boneset Herb (*Eupatorium perfoliatum*)*

This herb is very bitter. It should not exceed 20% in formulations for adults, or 10% in formulations for young children, otherwise the formulation will be too bitter. Boneset is an excellent herb for reducing mucus secretions in the nasal passages and lowering fever. It also mildly supports the lymphatic system, decongests the nasal passages and supports expectoration from the lungs.

Elder Flower (*Sambucus nigra*)

This herb is very mild tasting and works well in formulations for children. Elder is an excellent herb for reducing mucus secretions in the nasal passages, lowering fever and weakening or killing viruses. It also mildly supports the lymphatic system, decongests the nasal passages and supports expectoration from the lungs.

Elecampane Root (*Inula helenium*)*

This herb is moderately pungent and bitter. At a proportion of 20-30% it will provide enough heat for the formulation so that another pungent herb will not be required. In formulations for young children it should not exceed 20% otherwise the formulation will be too bitter. Elecampane is an excellent herb for supporting expectoration from the lungs. It also mildly supports the lymphatic system and decongests the nasal passages.

Marshmallow Root (*Althaea officinalis*)

In addition to being a good immune stimulant, marshmallow is an excellent herb for supporting expectoration from the lungs and soothing sore throats. It also mildly reduces mucus secretions in the nasal passages and lowers fever.

Plantain Herb (*Plantago* spp.)

This includes common plantain (*P. major*), American plantain (*P. rugellii*), and narrow-leaved plantain (*P. lanceolata*). These herbs have very similar properties and can be used interchangeably in cold and flu formulations. Plantain is an excellent herb for supporting the lymphatic system, reducing mucus secretions in the nasal passages, healing sore throats and lowering fever. It also mildly supports expectoration from the lungs.

Pot Marigold Flower (*Calendula officinalis*)

This herb is very astringent and acid. It should not exceed 15% in formulations for adults, or 10% in formulations for young children. Pot marigold is an excellent herb for supporting the lymphatic system, reducing mucus secretions in the nasal passages, healing sore throats, lowering fever and weakening or killing viruses.

Purple Coneflower (*Echinacea* spp.)

This includes common purple coneflower leaf and flower (*E. purpurea*), narrow-leaved purple coneflower root (*E. angustifolia*), and pale purple coneflower root (*E. pallida*). These herbs have very similar properties and can be used interchangeably in cold and flu formulations. The root of common purple coneflower and narrow-leaved purple coneflower have a metallic taste and numbing quality that children often don't like. In formulations for young children they should not exceed 20% otherwise the formulation may be unpalatable. Purple coneflower is an excellent herb for supporting the lymphatic system and weakening or killing viruses. Common purple coneflower leaf and flower, but not the root of any of these species, is also an excellent herb for reducing mucus secretions in the nasal passages, healing sore throats and lowering fever.

Yarrow Herb (*Achillea millefolium*)*

This herb is very bitter. It should not exceed 20% in formulations for adults, or 10% in formulations for young children, otherwise the formulation will be too bitter. Yarrow is an excellent herb for reducing mucus secretions in the nasal passages, healing sore throats, lowering fever and weakening or killing viruses. It also mildly decongests the nasal passages.

* It is best not to include more than one of the bitter tasting herbs in a formulation otherwise the formulation may be too bitter, even for many adults.

(b) Respiratory Herbs

Many of the immune stimulating herbs also have respiratory properties. For more information on those herbs see the section 2 (a) above.

A good cold and flu formulation should contain at least two herbs that reduce mucus secretions in the nasal passages (anticatarrhals), two herbs that decongest the nasal passages (decongestants), and two herbs that support expectoration from the lungs (expectorants). Since colds and flu are viral infections, we also need at least two herbs that weaken or kill viruses (antivirals). There are many properties that must be included in these formulations and the majority of the herbs must be at a proportion of 20% or higher, therefore it is essential that we choose herbs with two or more of the properties that we need.

The following are additional respiratory herbs that work well in cold and flu formulations that were not included in the section on immune stimulants above:

Anise Seed (*Pimpinella anisum*)

This is an excellent herb for supporting expectoration from the lungs. It also mildly reduces mucus secretions and decongests the nasal passages. Anise helps to improve the flavour of formulations for children, although not as well as cinnamon, mint and thyme.

Blue Vervain Herb (*Verbena hastata*)*

This herb is moderately bitter. It should not exceed 30% in formulations for adults, or 20% in formulations for young children, otherwise the formulation will be too bitter. Blue vervain is an excellent herb for reducing mucus secretions in the nasal passages, lowering fever and weakening or killing viruses. It also mildly supports the lymphatic system, decongests the nasal passages and supports expectoration from the lungs.

Hyssop Herb (*Hyssopus officinalis*)

This is an excellent herb for reducing mucus secretions in the nasal passages, supporting expectoration from the lungs, lowering fever and weakening or killing viruses. It also mildly decongests the nasal passages.

Mint Herb (*Mentha* spp.)

This includes peppermint herb (*M. x piperita*), spearmint herb (*M. spicata*), and wild mint herb (*M. arvensis*). These herbs have very similar properties and can be used interchangeably in cold and flu formulations. They are excellent herbs for reducing mucus secretions and decongesting the nasal passages, supporting expectoration from the lungs, lowering fever and weakening or killing viruses. These mint species are also excellent herbs to include in formulations for children to improve the flavour.

Mullein Herb (*Verbascum thapsus*)

This is an excellent herb for reducing mucus secretions in the nasal passages, supporting expectoration from the lungs and weakening or killing viruses. It also mildly decongests the nasal passages and lowers fever.

Oregano Herb (*Origanum vulgare*) and Wild Bergamot Herb (*Monarda fistulosa*)

These herbs have very similar properties and can be used interchangeably in cold and flu formulations. They are moderately pungent. To provide the right amount of heat in a cold or flu formulation, they should be included at a proportion of 20% in formulations for children, 25-30% in formulations for adults. Oregano and wild bergamot are excellent herbs for reducing mucus secretions and decongesting the nasal passages, supporting expectoration from the lungs and weakening or killing viruses. They also mildly help reduce fever. Oregano and wild bergamot also help to improve the flavour of formulations for children, although not as well as cinnamon, mint and thyme.

Using oregano essential oil for the treatment of colds and flu has become popular in the last decade. Contrary to popular belief, it is too strong and irritating to be used for this purpose. However, oregano essential oil can be added as a warming catalyst to a tincture formulation. Used in this way, the recommended amount is 4-5 drops per 50 ml of tincture, and no other warming herbs should be included in the formulation.

Thyme Herb (*Thymus vulgaris*)

This herb is mildly pungent. If it is included in a formulation the proportion of the main pungent herb in the formulation should be reduced by about 25%. Thyme is an excellent herb for reducing mucus secretions in the nasal passages, supporting expectoration from the lungs, lowering fever and weakening or killing viruses. It also mildly decongests the nasal passages. Thyme is also an excellent herb to include in formulations for children to improve the flavour.

(c) Pungent Herbs

For more information on pungent herbs see the information on these herbs in section 1 (c) on immune stimulating formulations above.

A good cold or flu formulation should contain one pungent herb at a proportion that will provide just the right amount of heat for the formulation as a whole.

The following pungent herbs work well in cold and flu formulations:

Cayenne Fruit (*Capsicum annuum*)

This is a very pungent herb. In cold and flu formulations it should be included at a proportion of 1% in formulations for children, 1-2% in formulations for adults. Cayenne is also an excellent herb for decongesting the nasal passages and supporting expectoration from the lungs.

Cinnamon Bark (*Cinnamomum verum*)

In cold and flu formulations this herb should be included at a proportion of 10% in formulations for children, 10-15% in formulations for adults. Cinnamon is an excellent herb for reducing mucus secretions in the nasal passages, soothing a sore throat and weakening or killing viruses. It also mildly decongests the nasal passages and supports expectoration from the lungs. Cinnamon is an excellent herb to include in formulations for children to improve the flavour.

Elecampane Root (*Inula helenium*)

If this herb is included as one of the immune stimulant and respiratory herbs in the formulation, it is not necessary to include another pungent herb. To provide the right amount of heat in a cold or flu formulation, elecampane should be included at a proportion of 20% in formulations for children, 25-30% in formulations for adults. For more information see the section on elecampane in 'Immune Stimulating Herbs' above.

Ginger Rhizome (*Zingiber officinale*)

In cold and flu formulations this herb should be included at a proportion of 10% in formulations for children, 10-15% in formulations for adults. Ginger is an excellent herb for supporting expectoration from the lungs. It also mildly stimulates the immune system, decongests the nasal passages and weakens or kills viruses. Ginger also helps to improve the flavour of formulations for children, although not as well as cinnamon, mint and thyme.

Oregano Herb (*Origanum vulgare*) and Wild Bergamot Herb (*Monarda fistulosa*)

If either of these herbs are included as one of the respiratory herbs in the formulation, it is not necessary to include another pungent herb. To provide the right amount of heat in a cold or flu formulation, they should be included at a proportion of 20% in formulations for children, 25-30% in formulations for adults. Oregano and wild bergamot also help to improve the flavour of formulations for children, although not as well as cinnamon, mint and thyme. For more information see the section on these herbs in section 2 (b) above.

(d) Example Formulations

The following charts include excellent examples of cold and flu formulations and how each herb benefits the formulation:

Adult Formulation

Herb	%	Immune		Lymphatic		Anticatarrhal		Decongestant		Expectorant		Fever		Antiviral		% Heat
		Good	Mild	Good	Mild	Good	Mild	Good	Mild	Good	Mild	Good	Mild			
Purple coneflower r/lf	20	✓		✓			✓						✓	✓		
Elder flower	20	✓			✓	✓			✓		✓	✓		✓		
Elecampane root	20	✓			✓				✓	✓						75
Plantain herb	20	✓		✓		✓					✓	✓				
Thyme herb	20					✓			✓	✓		✓		✓		25

Children's Formulation

Herb	%	Immune		Lymphatic		Anticatarrhal		Decongestant		Expectorant		Fever		Antiviral		% Heat
		Good	Mild	Good	Mild	Good	Mild	Good	Mild	Good	Mild	Good	Mild			
Elder flower	25	✓			✓	✓			✓		✓	✓		✓		
Plantain herb	20	✓		✓		✓					✓	✓				
Purple coneflower r/lf	20	✓		✓			✓						✓	✓		
Spearmint herb	25					✓		✓		✓		✓		✓		
Ginger rhizome	10		✓						✓	✓					✓	100

(e) Dosages

In cold, flu and other acute formulations we usually increase the unit dose by about 50% compared to chronic dosages. For more information see section 1 (e) on 'Dosages' above.

(f) Protocols

In the treatment of colds, flu and other acute conditions, just as we increase the unit dosage, we also increase the frequency of the dosage by about 50% as well. Therefore cold and flu formulations are taken about 6-8 times per day, depending on the severity of the symptoms. It is also essential to begin taking the formulation as soon as possible after the symptoms begin and continue taking them until 2-3 days after the symptoms have completely resolved. For more information see section 1 (f) on 'Protocols' above.